An analysis of export support measures with special reference to South Africa; and the impact of the General Export Incentive Scheme.

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Abstract

South Africa, in common with many other developing countries, embarked on an import substitution policy to promote development and industrialisation. Although initially successful, it was recognised in the late 1960s that the scope for further import substitution was limited and that alternative development strategies should be embarked upon. Unfortunately, the years of import substitution resulted in high levels of protection and consequently an anti-export bias.

In 1972, under the leadership of Dr Reynders, a commission found that South Africa should embark upon a policy of export promotion. In 1980 a new form of export incentive was introduced, viz. Category A and B. Category A incentives were aimed at neutralising the effects of import substitution and compensated exporters fifty per cent of the duty payable on inputs, regardless of whether the inputs were imported or not. Category B incentives compensated exporters for the consequences of cost increasing on non-intermediate inputs because of the import substitution policy and was calculated on the value added. Exporters also enjoyed various grants and tax breaks to enable them to undertake export marketing.

The schemes were unsuccessful and were replace by a General Export Incentive Scheme (GEIS) in 1990. The main aim of the GEIS was to encourage the export of manufactured products. With the means of an econometric model, the success of GEIS is evaluated on a sectoral basis.

GEIS brought with it rent seeking, corruption, lobbying, and threats of countervailing duties. In addition to the enormous costs, exceeding R6 billion, there were other bureaucratic costs. In general, the GEIS was not successful. The sectors that did benefit from receiving GEIS benefits were the tobacco industry, footwear, furniture, metal products, and electrical machinery. In most cases, exporters would have exported with or without GEIS. GEIS was simply a windfall. Policy-makers failed to recognise the dynamics of exporting. GEIS contributed neither to additional exports, export capacity nor to a sustained competitive advantage.

List of abbreviations

470,03	South Africa's Duty Drawback Scheme
521	South Africa's Duty Refunding Scheme
AR	autoregression techniques
ASEAN	Association of South-East Asian Nations
BTI	Board of Trade and Industry
BTT	Board of Tariffs and Trade
C.i.f.	cost, insurance and freight
CGIC	Credit Guarantee Insurance Corporation of Africa Ltd
CI	competitive indicator
CSS	Central Statistical Service
DEIC	Dutch East India Company
DTI	Department of Trade and Industry
EEP	Export Enhancement Programme
EMA	Export Marketing Assistance
EPR	Effective Protection Rate
EPZ	Export Processing Zone
EU	European Union
F.o.b.	free on board
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEIS	General Export Incentive Scheme
GNP	Gross National Product
HS	Harmonised System
IDC	Industrial Development Corporation of South Africa Limited
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification
ITO	International Trade Organisation
Mercosur	Southern Common Market (Latin America)
MFA	Multi Fibre Agreement
MNC	Multi-national company
Nedlac	The National Economic Development and Labour Council
nes	not elsewhere specified
NIC	Newly Industrialised Country
NPR	Nominal Protection Rate
NTDB	National Trade Data Base
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
RCA	revealed comparative advantage
REER	Real Effective Exchange Rate
SAFTO	South African Foreign Trade Organisation
SALMA	South African Lumber Millers Association
SAP	Structural Adjustment Programme
SCM	Agreement on Subsidies and Countervailing Measures
SIC	The South African Standard Industrial Classifications

SITC	Standard International Trade Classification
TPEA	Timber Product Exporters Association
TRIM	Trade-related Investment Measures
TRIP	Trade-related Aspects of Intellectual Property Rights

Contents

1. Introduction

"*But no amount of support from government can bring success unless businesses are ready to show their worth on the highly competitive international markets that are now open to them.*" Nelson Mandela (1994)[1]. Government however, has made significant financial contributions to South Africa's export drive since the early 1980s and especially with the introduction of GEIS in 1990. With more pressure on the fiscus, it is necessary to evaluate the impact and success that the allocation of these scarce resources has had on the South African economy. GEIS can be termed a success only if it resulted in export growth, which in turn contributed to economic growth and therefore satisfied more wants with finite resources.

The trade policy and development strategy debate has raged on for the past few decades and has been the subject of many comprehensive empirical and analytical investigations. Though the jury may still be out, it would seem that an outward-oriented strategy favouring export promotion could be associated with higher growth economies. Since the end of World War II, many nations have embarked on import substitution policies, while others have been outward in their approach to development and embraced export promotion strategies.

South Africa always has been and still is heavily dependent on foreign trade for its economic development and growth. There has been a long history of import substitution development with the strategy beginning in the 1920s. South Africa's growth rate in general and in the manufacturing sector in particular has deteriorated markedly since the 1970s. Although it is generally accepted that the effective tariffs are too high and detrimental to an export-led growth, the social costs of abolishing protection instantaneously (or even over a phased period) can be high. Many governments, including the South African government, therefore preferred the option of providing exporters with assistance that will enable them to compete in world markets. At the same time the assistance can be set at levels that will entice businesses to overcome their lack of export orientation and to become accustomed to international competition.

It is generally acknowledged that any improvement in the economy will have to be preceded by an improvement in the manufacturing sector. South Africa's failure to join the international growth trend was largely self-inflicted, the result of disastrous political circumstances

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[1] Nelson Mandela, November 1994, at the President's Award for Export Achievement.

(apartheid, and the conflict, isolation and sanctions it engendered, poor economic management, too much dirigism and low domestic confidence). There were massive capital outflows. The policies aimed at developing industries and later self-sufficiency, contributed to an anti-export bias. Protection made sales in the domestic market more profitable than exports. It also contributed to increased cost of inputs. These affected domestic producers and exporters alike placing them at a competitive disadvantage vis-à-vis foreign exporters who have access to inputs at world prices.

The anti-export bias is not the only problem faced by South African producers in foreign markets. Apart from the adverse influences, mainly of a cost-increasing nature, exerted by import substitution on exporters, manufacturers are at a disadvantage vis-à-vis transport, distance from the major markets, deficient knowledge and experience in export marketing, and lack of economies of scale. In a sense, the arguments for export development assistance by governments are akin to those raised for protection against imports and embodied in the infant industry argument for tariff protection.

Since the Report of the Commission of Enquiry into the Export Trade of South Africa in 1972 (Reynders Commission), the accent in South Africa has increasingly shifted to foreign trade promotion activities, in the hope of accelerated growth in the manufacturing sector. This laid the foundation for the institution of a system of export incentives, in the latter part of the 1970s and 1980s. The system of export incentives that became known as Categories A (input compensation), B (added value), C (general), and D (tax concession in respect of marketing expenditure), enabled some manufacturing industries to penetrate the export market successfully. With the sanctions campaign during the 1980s, South Africa went through a difficult period. The country was shaken by the suspension of loans in 1985 and subsequent the debt standstill and the other problems that followed. Despite the sanctions campaign and largely because of the debt crisis South Africa continued to expand its exports and was successful in diversifying to markets that had not been served for a number of years.

By the late-1980s, in spite of switching the country's policies and strategies from the protection of local industry and subsequently to the promotion of the exports of manufactured goods, South Africa's manufacturing industry remained more geared to import replacement than international marketing. The Board of Trade and Industry (RSA, 1986) calculated that the average competitive disadvantage of South African manufacturing industry on the value added component of the sales price was approximately 17 per cent in that year. Against this,

the Board calculated the average rate of nominal export assistance for all sectors for the period 1982 - 1985 was approximately 7 per cent (RSA, 1986). Taking inflation and foreign exchange effects into account, the Board concluded that the current average effective rate of assistance on all exports was inadequate. The Board further concluded that selectivity concerning export assistance was called for to ensure those available resources are applied to the best advantage. It was believed that this should comprise measures aimed at the movement of resources from lower to higher productivity uses to improve the country's international competitiveness and thus economic development and growth.

Therefore, in 1990, the Government introduced a new scheme, the General Export Incentive Scheme or GEIS. The aim of the scheme was to encourage the export of manufactured products rather than raw or semi-processed products. In 1992, it was estimated that South African manufacturing costs were 15 per cent higher than the Organisation for Economic Co-operation and Development (OECD) average. This was mainly because South African manufacturing firms had to pay 24 per cent more for their inputs than their OECD counterparts (Hatty and Lockwood, 1992).

1.1 The aim and purpose of this study

To determine the impact that GEIS has had on the South African economy, it was necessary firstly to examine the theoretical foundations of the various trade policy options and how they impacted on the industrial policy and economic growth; secondly to study the evolution of trade policy in South Africa with special reference to the government's export promotional activities and instruments, and thirdly to quantitatively analyse the impact of GEIS on South Africa's level of exports.

1.2 Methodology and outline

This study employed various research methods and techniques. Literature, applicable speeches, and official government documents were extensively consulted. In addition, trade policy experts, individual exporters and manufacturers were interviewed. The main bulk of the study however comprises sectoral analyses around which a trade model is built and econometrically tested.

Chapter 2 looks at the trade policy debate including the present international trading conditions under which trade policy must be formulated. The causes and benefits of globalisation and liberalisation are analysed. The policies of import substitution and export

promotion are compared and evaluated. Various international studies are examined and the issue of causality of economic growth and export growth is considered.

In Chapter 3 the historic position of South Africa's trade and export promotion policies are considered, briefly looking at the South African economy from 1652 until 1972 when the Reynders Commission proposed a policy of export promotion. The pre-1990 export incentives are described and evaluated, as is the South African and international economic conditions leading to the 1990 export promotional incentives. Finally GEIS, EMA, the sectoral support schemes, and the other export support measures are discussed.

Chapter 4 discusses the rationale, definition, and impact of subsidies. Subsidies have played an important role in South African industrial policy. This is compared to other countries and the impact it has had on those economies. Negotiations, mainly under the auspices of the General Agreement on Tariffs and Trade (GATT), which have taken place since the end of World War II, have contributed to the liberalisation of international trade. Although much of this liberalisation focused on reducing tariff and non-tariff barriers, there have been restrictions regulating the extent to which governments were allowed to subsidise manufacturing in general and exports in particular. Nevertheless, subsidies remain popular policy instruments and are provided by most countries. The Uruguay Round of GATT nearly floundered because of disagreements in the negotiations on agricultural subsidies. The rules governing the use of subsidies had been formalised by the Uruguay Round of GATT and the economic consequences of both domestic and export subsidies are discussed fully. For various reasons, including the fact that it was not permissible in terms of the WTO rules, it has been decided to eliminate GEIS in 1997.

The question now arises, if the Categories A and B schemes were ineffective in promoting export, what was the impact of the GEIS? "As early as 1776, Adam Smith condemned export bounties as another wasteful expedient of the mercantile system." (Hufbauer and Erb, 1984:45). To determine the impact that GEIS has had on exports, it was necessary to build a simple model and test the results empirically. Besides the level of the incentive, the level of exports is influenced by a number of other factors such as foreign demand, export prices, exchange rates, relative inflation rates and spare capacity. An empirical analysis of GEIS and export growth relationship is carried out in Chapter 5. Using econometric techniques, export functions are determined for each of 26 manufacturing sectors. Will South Africa's efforts to market manufactured goods internationally flounder if financial support from government

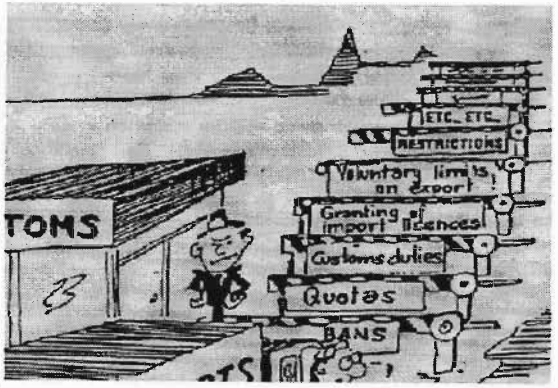
should cease? What impact has GEIS had on exporters and how it has contributed to the export drive? An econometric model aggregated at the three-digit SIC level is developed and tested to determine which factors influence South African exports and how effective GEIS was.

Chapter 6 contains the summary of the findings of this study and the conclusions that are drawn. It also contains recommendations pertaining to future trade policy and export promotion. Should government therefore rather concentrate on removing the obstacles and the anti-export bias that exporters face or should government leave exporters "to show their worth on the highly competitive international markets that are now open to them."[2]

1.3 Conclusion

The mercantilists believed in promoting trade to create a trade surplus for its sake, holding the view that the trade surplus would maximise national wealth. All too many people still maintain this view, it is commonly considered patriotic to export and disloyal to import. Governments promote exports for a variety of reasons. Firstly, so that hard currency is available for imports of capital and other economic goods. Secondly, through feedback effects, exports may stimulate growth. As President Mandela[2] put it: "*We are all agreed on the critical role of exports in generating sustained economic growth. We are one that a vibrant export industry is vital for meeting our primary objective, a better life for all South Africans.*" Exports affect employment, productivity, and innovation. GEIS was an expensive scheme. The impact GEIS has had on the manufacturing industry and the economy is evaluated per manufacturing sector.

Figure 1-1 Problems faced by exporters



Source: Engineering News

[2] Nelson Mandela, November 1994 at the Presidents Award for Export Achievement.

2. The trade policy debate

Although the trade policy debate is only part of the whole economic debate, it can be argued that much of economic development policy revolves around trade policy. Received neo-classical wisdom is that government's role should be limited to provide an infrastructure, promote market efficiency and maintain a stable macro-economic policy. Economists, perhaps except for the anarchists, would agree with this view, although they disagree on which trade strategies will enable high growth and develop industrial potential.

The past two decades have seen turbulent international economic conditions as well as international trade policy making. There have been large swings in the terms of trade and the emergence of new industrial exporting countries. Further, there has been the formation and strengthening of trade blocs. Global markets are seen as the epitome of the information age. Instantaneous transmission of data results in immediate transfer of capital, material, and other resources to wherever the yields seem most advantageous. The success of the Newly Industrialised Countries (NICs), such as Japan, Taiwan, and South Korea, has been attributed by many politicians and economists to the success of exports of manufactured products. (This fact has been disputed and is debated in section 2.4.1.)

Another factor has been the tremendous increase in the volumes of trade. Since the end of World War II, the growth of trade has exceeded the growth of output. "In virtually every year of the post-war period, the growth of world merchandise trade has exceeded the growth of world merchandise output. Overall, the volume of world merchandise trade is estimated to have increased at an average annual rate of slightly more than six per cent during the period 1950-1994, compared with close to four per cent growth of world output. This means on average that each 10 per cent increase in world output has been associated with a 16 per cent increase in world trade. During those 45 years, world merchandise output has multiplied five times and world trade has multiplied 14 times, both in real terms." (WTO, 1996). The WTO estimated that world trade would grow eight per cent in 1995 while world output, measured in terms of gross domestic product, would grow three per cent (Wall Street Journal, 15 Nov 1995).

Table 2-1 Growth of world trade and output, 1870-1990, (Average annual growth rate, percentage)

	1870-1913	1950-1960	1960-1970	1970-1980	1980-1990
World Trade	3,9	6,5	8,3	5,2	3,7
World GDP	2,5	4,2	5,3	3,6	2,8
Difference	1,4	2,3	3,0	1,6	0,9

Source: World Investment Report, 1994.

Table 2-1 shows that world trade is clearly growing faster than world GDPs, and countries are integrating. The past few years have seen a great liberalisation in trade. With the fall of the Berlin wall, democratic governments replaced autocratic and autarkic governments. Many Latin American countries have also followed more liberal economic policies for most of this decade. Partly due to increased globalisation and partly due to pressure from organisations such as the World Bank and the IMF, developing countries too, are following more liberal policies (Holden, 1992). Developing countries have moved to reform partly as result of other country's successes and partly as result of recognising their failures (Bhagwati, 1996). Dornbusch (1992) identifies four reasons why liberalisation has taken place: anti-statism, poor economic performance, World Bank pressure, and the evidence of success of liberalisation.

This new climate has allowed for the successful conclusion of the Uruguay Round of GATT and the formation of the new WTO. These institutions should further contribute to liberal trade reforms on a multilateral basis. The future trade policy debates will also be affected by the development of trade blocs. Spurred by the success of the European Union (EU), more trade blocs seem to form. [3]

2.1 Background to the debate

Trade policy debates revolve around the appropriate degree of trade management: whether to promote a country's exports or protect local industries from foreign competition. In other words, whether they should have an outward or inward oriented economy. Since Adam Smith, there has been a protracted debate regarding which measures to improve growth are best. South Africa has followed the route of many developing countries in trying to maximise growth.

Most developing countries view industrialisation as an important part of their overall development strategy (Du Plessis, 1994). Hirsch (1993: vi) echoes this view: "Industrialisation is an indispensable key to economic development and rising living standards." Industrialised countries seem to enjoy a higher standard of living than those countries that are more agricultural or mining oriented. Many governments believe, therefore, to improve the quality of life of their citizens, it is necessary to industrialise. Davis (1994) and

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[3] North American Free Trade Association (NAFTA), Association of South East Asian Nations (ASEAN), and Mercado Comon del Sur (Mercosur).

Bond (1991) have challenged this view. The National Economic Development and Labour Council (Nedlac) has taken the following position: "Each constituency in Nedlac has the same broad goals of creating jobs, economic growth, equity and participation by civil society in the political and economic reconstruction process." (Nedlac, 1996). Rodrik (1992:310) states: "The issue is not whether industrialization is good per se; but whether government intervention is desirable to alter the speed and character of industrialization likely to result naturally." This study will assume that industrialisation will contribute to growth of the economy and probably also to employment and therefore is beneficial. Industrialisation is consequently a goal of trade policy. (See also section 2.2.)

"The trade policy of a country, in the narrow sense, comprises all the measures bearing directly on trade" (RSA, 1972:96)[4]. Each instrument used affects more than one sector of the economy. The Industrial Development Corporation (IDC, 1990) warned that their recommendations would have to be implemented completely and warned against selective implementation. "Virtually every government action can be regarded as a subsidy for someone. And virtually all such actions can impact on exports." (Snape, 1988:3). Economic policies therefore have to be carefully drafted to avoid undesirable consequences.

The trade debate centres on three questions: What is the link between outward-oriented economies and economic growth and development; how are trade regimes and growth defined and measured; and what are the appropriate instruments for achieving an outward oriented economy?

2.1.1.1 Globalisation

"Globalization and liberalization are powerful forces reshaping the world economy. They are forces created by market realities that few countries now deny. The market, it is agreed, determines how the world is to be for better or for worse" (Ricupero, 1996).

After the Industrial Revolution, products were developed for national consumption. As specialisation advanced and technology improved, so firms outgrew their national boundaries and began to sell their products internationally. "A New World economy slowly emerged as the potential gains from innovation coincided with and reinforced the spread of the markets." (World Investment Report, 1994). Technology is encouraging the international integration

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[4] Commission of inquiry into the Export Trade of the Republic of South Africa. 1972. Aka the Reynders Commision.

process. Transport technology has contributed to reducing the travelling time and the costs of moving both goods and people between countries. Together with this, communications and information technologies have also developed at exponential speed. Transaction costs for doing business across national boundaries have therefore been reduced.

Prior to World War I, the worlds developed nations exports as a share of their GDP was substantial. Due to the Great Depression and increased protectionism of the inter-war period, the proportion of exports declined. Table 2-2 clearly shows that since the end of World War II, exports of both developed and developing countries have increased. Between the early 1950s and early 1970s global output of manufactures quadrupled, whilst world trade in manufacturing expanded eightfold. Technology and liberalisation affected the financial markets and contributed to their internationalisation.

Table 2-2 Exports as a share of GDP of selected countries, 1913, 1950, 1973 and 1992.

Country	1913	1950	1973	1992
France	13,9	10,6	14,4	17,5
Germany	17,5	8,5	19,7	24,0
Japan	12,3	4,7	8,9	9,2
United Kingdom	20,9	14,4	16,4	18,2
United States	6,1	3,6	3,6	7,1
Developing Countries		16,5	17,8	19,8

Source: World Investment Report, 1994.

There has also been a growth in the number of transnational corporations (TNC), and direct foreign investment (DFI) and world trade is becoming increasingly dominated by TNCs. It has been estimated that intra-firm exports by transnational parent firms and by foreign affiliates represent a third of world trade, while the exports of transnational corporations and their affiliated firms to unaffiliated firms represent just less than a third of world trade. The growth of TNC exports has doubled in the past decade. However, inter-industry trade between developing and industrialised countries still dominate. (World Investment Directory, 1995:127).

2.1.1.2 Liberalisation

Impetus was given to trade liberalisation with the conclusion of the Uruguay Round of GATT in late-1993 and its adoption in Marrakech on 15 April 1994. This agreement not only consolidated liberalisation achieved by previous rounds of negotiation, but also liberalised factors such as government procurement and trade in services. Besides the Uruguay Round, many countries have embarked on unilateral liberalisation, while others have been persuaded to adopt policies that are more liberal by institutions such as the World Bank and the IMF. Generally, liberal trade regimes have replaced government controls and direct intervention,

while quantitative restrictions have been replaced by tariffs. These have opened the various countries' economies to international trade. Many countries recognised as Dornbusch (1992) pointed out, that during the 1960s and 1970s neither quotas nor tariffs prevented imports.

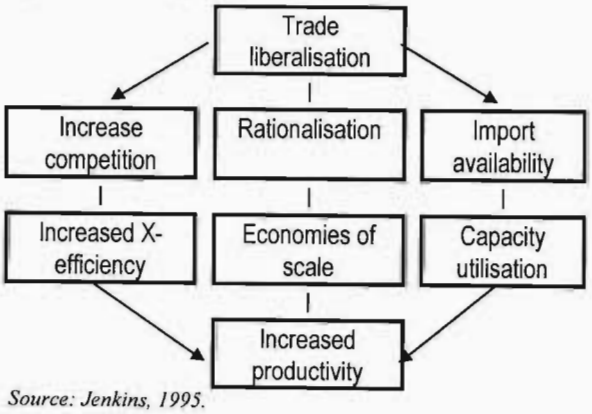
Liberalisation includes any action that would make a trade regime more neutral. It reduces the bias towards primary production for the domestic market and against exports. This is achieved primarily through the reduction of tariff and non-tariff barriers. Bell (1992:3) argues that liberalisation "also includes direct export promotion measures, such as export subsidies, which clearly also increase the incentive to export relative to production for the home market. Furthermore such acts are generally accompanied by currency devaluation, which is seen as a crucial instrument of trade liberalization. The principle attributes of trade liberalization thus are relaxation of QRs, reduction of tariffs, devaluation, and export promotion measures."

The relationship between liberalisation and exports has not received the same academic evaluation of that received by exports and growth. A priori analysis indicates that liberalisation increases trade and consequently increases all exports. It is difficult to define what a "liberalisation episode" would be and hence evaluate this relationship empirically. However, liberalisation would tend to reduce the export-bias and consequently provide a boost to exports. (Greenaway and Sapsford, 1994).

Protectionist regimes incur static costs, which, although low relative to the GDP, when added to the costs of operating at inefficient scales of output and monopoly pricing, can be significant. Rent seeking and corruption add to a high cost manufacturing structure. (Holden, 1992)

Jenkins (1995) identifies three theoretical arguments why trade liberalisation improves productivity. These arguments are graphically illustrated in Figure 2-1 below:

Figure 2-1 Linkages between trade and liberalisation



Source: Jenkins, 1995.

Firstly, the 'import discipline argument' hypothesis that trade liberalisation puts more pressure on domestic manufacturers who respond by increasing their efficiency. Secondly, trade liberalisation may lead to larger markets for domestic manufacturers through exports and will expand production and take advantage of economies of scale. Thirdly, manufacturers can source products internationally and therefore at competitive (lower) prices. Manufacturers will also be able to adapt production processes to make use of inputs that are not readily available in the domestic market.

If governments are to develop a sustainable approach to globalisation, it is important to achieve macroeconomic stability and attach importance to institutions building. The United Nations Conference on Trade and Development (UNCTAD, 1996) suggests that sweeping liberalisation of import regimes should not proceed but go together with enhanced export capacity and performance and secondly that exchange rates should be maintained at realistic levels as an over-appreciated exchange rate will reduce the competitiveness of export industries and therefore should be avoided by dampening portfolio investment inflows through an appropriate pacing and sequencing of the liberalisation of the capital account.

2.2 Exports, growth, employment and industrialisation

Greenaway (1993) has described the foreign trade sector as having a crucial role to play in economic development, and it has been called the 'engine' or 'handmaiden' of growth. Numerous studies have been undertaken to establish what the links are between exports and economic growth, employment, industrialisation and economic development. Contemporary governments use similar arguments to promote exports as those used by the mercantilists and dispelled by Adam Smith two hundred years ago. Sophisticated presentations using examples of the successes of export-oriented countries, such as Korea and Taiwan, reinforce these ideas.

International trade allows countries to exploit their comparative advantages. Adam Smith is credited with the idea of absolute advantage, where a nation exports an item if it is the world's low cost producer. David Ricardo expanded this notion to that of comparative advantage. He recognised that a nation will allocate its resources to industries where they are relatively more productive. A nation's welfare will increase if it imports a good, even though it is the low cost producer, but is relatively more productive producing other products. Trade cannot therefore be a "zero-sum game" where one country benefits at the expense of another. Therefore countries will become "better off" in terms of consuming at a higher output level, if they specialise in those activities that they can manufacture relatively cheaper in an international

sense. The ideal Pareto optimal scenario is only achieved when international market forces are allowed to determine relative prices in the domestic economy. Under these conditions, resources are most efficiently allocated. This in turn results in a better economic performance as countries will specialise in their respective comparative advantages. Eli Heckscher and Bertil Ohlin expanded on this to develop a theory to explain the patterns of trade and what type of products (labour or capital intensive products) a country would export. Wolfgang Stolper and Paul Samuelson proved that under certain assumptions various sectors will benefit while others will lose. Nations gain factor-based comparative advantages in industries that make use of the factors of which they have a relative abundance. "Government's have, rightly or wrongly, implemented various policies designed to improve comparative advantage in factor costs. Examples are the reduction of interest rates, efforts to hold down wage costs, devaluation that seeks to affect comparative prices, subsidies, special depreciation allowances, and export financing addressed to specific sectors. Each in its own way, and over differing time horizons, aims to lower relative costs of the nation's firms compared to those of international rivals." (Porter, 1990:627). Countries will therefore benefit and increase their welfare if they export products in which they have a comparative advantage and import goods from other countries in which they in turn have a comparative disadvantage.

In modern society, autarkic policies are sure to fail. It is doubtful whether any sophisticated country can be self-sufficient nowadays. Therefore, unless the country receives donations from others, it needs to export to import products it cannot produce. "Globalisation is inevitable. Spurred by reduced transport costs and advances in communications and other technologies, globalisation has fostered greater interdependence and cross-border linkages between the countries of the world. Countries that seek to delink, and opt instead for isolationism, risk paying a high price in future economic growth. In response to the trade and foreign investment opportunities resulting from globalisation, a large and growing number of developing countries have embarked on liberalising their trade and foreign investment regimes, as well as adapting their economic structures and strengthening their export capacity." (UNCTAD, 1996:3).

2.3 Import substitution v export promotion

For many years, politicians and economists have debated which policies should be used to develop an economy. Traditionally, two main schools of economists have emerged advocating alternative foreign trade strategies. The Neo-classical (neo-liberal) school (mainly in favour of

neutral or export promotion policies) pursues a policy of free trade with minimum government intervention, while industrial strategists (structualists) propose government intervention (Pack and Westphal, 1986). The neo-classicists rely heavily on traditional economic analysis, emphasising the importance of efficient resource allocation. The industrial strategists, on the other hand, see growth as a series of structural changes in the economy that results in the economy gradual moving away from predominately primary producing agricultural economies to industrial economies (Liang, 1990).

The debate has oscillated: First with the import substitution favouring economists such as Nurske, Prebisch, Singer and Chenery dominating (Krueger, 1984:137). After World War II there was a general atmosphere of export pessimism. Two potentially conflicting diagnoses were proposed as to why import substitution was a more suitable policy to follow for growth. Firstly, Prebisch (1952) reasoned that since the terms of trade of primary products were declining as the incomes of developed countries increased, the value/volume of primary products would decrease relative to manufactured products. Industrialists in the developing countries would respond to the exogenous price shift by industrialising. He therefore reasoned that neither tariff protection nor industrial subsidies would be necessary. The Prebisch-Singer thesis of secular decline in terms of trade for primary exporters implied that market forces can work to the disadvantage of the poorer countries and favour more advanced industrial countries. (Singer and Ansari, 1988). Nurske (1959) on the other hand argued that since foreign markets would not be able to absorb manufactured imports from developing countries on a sufficient scale as developing countries grew, governments would intervene to protect their economies. Few exporters of primary commodities have sufficient levels of domestic demand to influence the world market price of their products. In many instances, exporters of primary raw materials are dependent on the revenues generated by commodity exports to finance imports of other commodities including energy and food products used to satisfy domestic consumption. As such, the value of commodity imports into consuming markets represents a smaller proportion of total imports. Price fluctuations relating to the commodity imports have a less significant impact on a diversified importing (developed countries) economy than for the exporters (developing countries) which have greater reliance on fewer products as revenue sources.

The neo-liberals (including Baldwin, Krueger and Balassa) argued that countries that opened up their economies to foreign competition did better economically than those following import substitution policies. In countries with neutral trade regimes, exports were

concentrated in a few sectors in which there was a comparative advantage. Exporting contributed to greater efficiency in the use of resources. As a strategy, it is considered far better and more successful in promoting industrialisation. The structuralists argued against this. They maintained that in a world of free trade, the existing divisions of labour would be reproduced. Developing countries would face a decline in exports (in value terms) and would rely on the developed countries for the manufactured goods that they would import at increasing prices. (Hirsch, 1993:14). Neo-liberals criticised the views of the structuralists as being protectionist. This encouraged inefficiency and caused the cost of production in the domestic economy to increase. An anti-export bias was created as domestic manufacturers preferred to earn rents in the domestic economy than to earn profits in the international economy (Hirsch, 1993). Singer (1988) pointed out that critics of import substitution tended to disregard or underestimate the importance of a previous phase of import substitution as providing the necessary base for export-led growth.

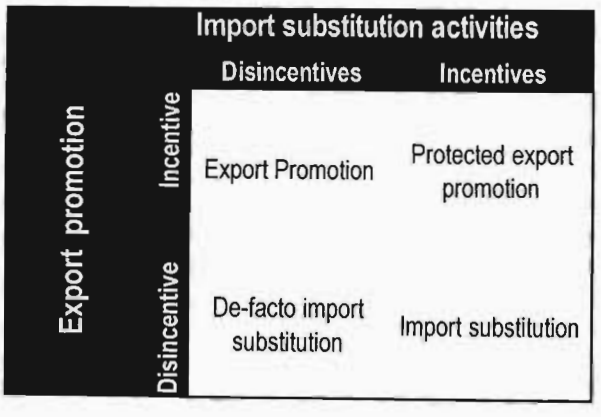
With historic hind-sight the export pessimism following World War II was unjustified as world trade grew faster than world income, and countries that followed an export promotion policy (Hong Kong, Singapore, South Korea and Taiwan) grew faster than those following import substitution strategies. Bhagwati (1990) proposed the following reasons why an export promotion policy is preferable to import substitution; firstly, there is a more efficient allocation of resources, secondly, there is less directly unproductive profit seeking and rent seeking activities. Thus while the static costs of import substitution generally remain low, the real effective protection offered to local producers is much higher. Early literature equated industrialisation and the policy of import substitution. (Singer, 1988). Policy makers used the "infant industry" argument to justify their import substitution policies. These policies relied on considerable state intervention especially high levels of tariff and other non-tariff barriers. This intervention has contributed to bureaucratic inefficiencies and corruption. Further it has spurred the development of high-cost inefficient industries. A further problem of import substitution policies is that they tend to over value the currency. This adversely affects what normally would have been competitive industries from exporting. Further, an overvalued currency also discourages direct foreign investment. "Just as Nurkse's (1959) pessimism about the prospects for international trade were invalidated by the high growth of the 50s and 60s, it is to be hoped that events in the 90s will not invalidate the prospects for, and results of present day liberalisation" (Holden, 1992:249).

Winters (1991:213) argues that a country large in any one market, will be worse off under an export promotion trade regime, while import substitution will improve the terms of trade. This factor might encourage import substitution rather than export promotion. Under these conditions a country should impose an optimum tariff and choose import substitution or export promotion. Where there is a lack of information import substitution is preferred, as export promotion requires considerable knowledge of international markets. Importing countries tend to get resentful of imports and impose additional restrictions. Using export promotion policies, a country is more likely to feel international shocks than under import substitution policies.

Export promotion is superior to import substitution where countries can use their comparative advantage as only countries with export promotion policies can exploit their comparative advantages. There are opportunities for specialisation. Economies with export promotion regimes have to have more regard for market signals, they are more flexible and therefore adapt better to exogenous shocks. Resource allocation is more efficient with neutral trade incentives, where exports are not penalised. Export promotion policies tend to be more transparent and their administration is easier. Import substitution policies tend to give more scope to rent seeking than export promotional policies. However, highly targeted export promotion policies may also attract rent seeking. This was certainly the case with GEIS.

Although import substitution and export promotion policies are generally seen as two alternatives and mutually exclusive policies, Liang (1990) has developed a typology that acknowledges that both policies can be in operation at the same time in the same country. He uses the following grid to illustrate his typology:

Figure 2-2 Liang's Typology



Source: Liang, 1990.

Milner (1995) used Liang's model to show that besides pure import substitution and export promotion policies, mixed import substitution and export promotion policies might seek to create a pro-tradables bias rather than neutrality. Attention needs to be given to the endogenous effect of the prices of non-tradables and how these will affect the relative price of tradables.

The neo-structualist school on the other hand accepted international integration and export promotion, but rejected the notion of simply opening the economy up to international competition. They maintain that export growth is conducive to long-term growth, but allowing the laws of comparative advantage to operate will not result in the emergence of a suitable growth pattern. There were other means to improve trade performance than opening up the economy to international competition. Improvements in factors such as productivity would be advantageous. Market failures that occur as a result of the opening up of the economy are not conducive to the export growth of manufactured goods. Neo-structuralists maintained that the neo-classical economists misread the economic history of the NICs. Factors that the neo-structualists believed contributed to the success of the NICs were the degree of industrialisation they enjoyed at the time prior to their outward development and the degree to which the international trading environment has changed. They argue that liberalisation, which may have positive consequences for one country, will not necessarily have the same impact on another country (Hirsch, 1993).

2.3.1 A case for export promotion

Firms in the international market-place will be forced to become more competitive through becoming more efficient, improve productivity and use innovation to improve products and their marketability. International trade allows a nation to raise its productivity by doing away with the need to produce all goods and services itself. This allows specialisation in those industries and segments in which its firms are relatively more productive and import those products and services where its firms are less productive than foreign rivals, thereby raising average productivity. Aw and Hwang (1994) found that firms subject to foreign competition are likely to be more efficient in their use of inputs. Further, exporting firms were also found to act as conduits for the informal inflow of foreign technology and thus could generate higher productivity. They conclude that government policies promoting exporters at the expense of domestic market-firms may be more justified if the performance differences between the two

groups of firms are explained by their productivity differences rather than resource differences.

Trade also affects employment. As trade patterns change, so must the demand for both capital and labour change by sector. Employment declines in sectors where the country imports and increases in the sectors in which the country exports. Thus when the Corn Laws were repealed in the United Kingdom, demand for farm labour fell but demand for labour for industry increased. Problems do occur in the labour market when skills from one sector are not transferable to the growing sector (Vanston, 1995). Clearly, a country must export. What should be exported, should be determined by comparative advantage. The view that South Africa should export has been contested by Gelb (1991); arguing that "neo-liberal export orientated growth" is a continuation of the capital and raw material intensive path which South Africa used in the past and which resulted in high unemployment. Although there may be a trickle down effect that may benefit some workers, the benefits of reinvestment and rising productivity will accrue to the large corporations. Governments do for various reasons support their export industries. Therefore, all governments support their industry to keep the playing field level and in order not to lose export market-share. In South Africa's case industries were losing market share not so much because they faced unfair subsidised competition, but rather due to structural problems caused in the economy by years of protection.

In countries that have followed import substitution policies, firms and industries can easily establish themselves and remain profitable under the protective import regime. However after the *easy* phase is over, relative costs rise due to loss of economies of scale, especially in small economies. Often import substitution industries are relatively capital intensive. Therefore the domestic resource cost of saving foreign exchange under a protective trade regime will exceed the domestic resource cost of earning foreign exchange through exports (Balassa, 1977). If there are similar (neutral) incentives to selling in the local market and foreign markets, firms will exploit both the local and export markets. This will result in a better allocation of resources according to comparative advantage. Firms that enjoy a comparative advantage will manufacture and export. The country will import goods that it does not manufacture because it does not have a comparative advantage. This, will in turn, allow firms to achieve greater capacity utilisation. Because the firm will be able to import or buy locally, its input prices will be competitive (lower). The firms will also be able to exploit economies of scale since factories will be the optimum size. The volume of production will be determined by the

marginal cost. Firms involved in the international market place will also be exposed to the latest technology. This will also reduce the marginal cost of production. Firms will therefore be producing at a maximum profit level and will be able to reinvest and diversify into other areas of comparative advantage. Although an export-oriented policy cannot ensure maximum employment in the short term, it will ensure maximum growth and should result in a better growth performance than policies favouring import-substitution.

2.4 International comparative trade policy experiences

Post World War II saw import substitution tried extensively in developing countries, especially in Latin America. Studies of these economies are in general rather discouraging, partly because of poor design of the import substitution policies: "the strength of protection rarely seemed to reflect the externalities stemming from industries, barriers tended to proliferate, bureaucracies grew, and new industries were discouraged as protection tending to go to existing industries." (Winters, 1991:214). Import substitution regimes enjoyed early successes in reducing imports and foreign exchange outflows. Once the *easy* stage was over, opportunities for growth eventually ran out. The bureaucracy grew as more controls were introduced to maintain the growth by stimulating intermediate and capital goods production and rent seeking activities increased.

However, it is difficult to make international comparisons without undertaking a comprehensive study. Results of international studies of trade policies that have been undertaken seem contradictory and results are sometimes achieved with simplistic reasoning. Without comparative studies, it is all too easy to make a number of assumptions and present elegant theoretical arguments (Hirsch, 1993).

Although many studies have been done to determine the effect of a county's trade policy on the level of development and its growth, and many of these studies have shown a positive correlation between growth and trade policy, there are many problems. Harrison and Revenga (1995) suggest that most studies do not use tariffs as an indicator of trade policy and point to econometric problems present in many of the studies. Frankel and Romer (1996) propose that geographical characteristics influence trade. Baldwin and Seghezza (1996) criticise the various studies for not identifying the economic mechanisms by which trade and growth is linked. They find that domestic protection depresses investment and thereby depresses growth. Conclusive evidence is difficult to obtain as many industrialising countries exhibit fluctuating trade regimes over time (Harrison 1995).

Export promotion policies seem to have worked better. Growth in countries such as South Korea, Taiwan, and Hong Kong, affirm the success of export-oriented policies. Singer (1988) claimed that the success of economies such as Korea could be ascribed to the fact that policies were carefully and conscientiously inter-linked. Import substitution and export promotion policies were adopted as alternative phases with shifting industrialisation between the sectors. After the import substitution phase, capacity had been created. Export promotion policies were introduced to exploit the international marketing potential that had been built up during the import substitution phase.

There are numerous definitions and classifications of the various policies governments employ to determine the environment under which firms trade, or do not trade, internationally. The terms "inward" and "outward" imply a strict dichotomy of policy alternatives. In reality a continuum of development policies exists from which governments can choose.

Empirically, it is difficult to summarise the effect of a trade strategy or trade orientation on the economy or development. Consequently, different analysts approach the issue in different ways. In addition, there is a problem identifying which trade policy reforms have taken place and the extent to which they have taken place and how to measure the results. This is because:

- Export and import sectors are not clearly definable;
- There are multi-product sectors with different instruments of protection applied on each product;
- Developing countries often have import replacement and export promotion instruments co-existing simultaneously. Government reacts to short-term pressure (fiscal constraints) with additional protection which often leads to higher protection - the actual and intended effects of the policy may be quite different; and
- Trade strategy will alter over time. This makes it difficult firstly, to decide which strategy is operating, and secondly in identifying causality between trade strategy and economic performance.

Theoretical analysis has demonstrated that one can link:

- Trade strategy and export growth;
- Export growth and economic growth;
- Trade strategy and export growth; and

- Trade strategy and economic development.

Various studies have been undertaken in an attempt to clear up the problems of identifying a trade policy reform and measuring the effects.[5]

2.4.1 Cross-country trade strategy studies

Greenaway and Nam (1987) used multiple indicators to classify countries to analysis the impact of trade policies. The following criteria were used: **Strong outward orientation** (SOO) where there are a complete absence of trade controls; **moderately outward orientation** (MOO) where there are limited uses of direct controls, relatively low import barriers and some incentive to export, with overall incentives tending toward neutrality or a slight bias toward production for the home market; **moderately inward orientation** (MIO) where the overall incentive structure distinctly favours production for the home market, with a clear anti-export bias, with relatively high rates of protection, widespread use of direct controls and an overvalued exchange rate; and **strong inward orientation** (SIO) implies very high rates of effective protection, pervasive use of direct controls, strong disincentives to the export sector and significant overvaluation of the exchange rate. (Greenaway and Nam, 1988)

This classification is judgmental especially between MOO and MIO. However, from an analysis of the table giving macroeconomic performance of countries grouped by trade orientation below, it appears that there is evidence of correlation between the countries' development strategy and growth of real GDP.

Table 2-3 Macro-economic performance of countries grouped by trade orientation.

Country Development strategy	Annual average growth of real GDP		Annual average growth of real per capita GNP		Annual average growth of merchandise exports		Average gross domestic savings rate.		Average gross foreign savings rate.		Annual average incremental capital output ratio.		Average debt service as a percentage of exports.	
	1963 1973	1973 1985	1963 1973	1973 1985	1963 1973	1973 1985	1963 1973	1973 1985	1963 1973	1973 1985	1963 1973	1973 1985	1963 1973	1973 1985
Strongly outward	9,5	7,7	6,9	5,9	10,8	11,2	13,0	31,4	9,5	-2,0	2,5	4,5	4,1	5,9
Moderately outward	7,6	4,3	4,9	1,7	8,8	8,6	20,0	20,6	1,4	-2,3	2,5	5,0	7,5	20,9
Outward oriented	7,9	5,0	5,2	2,5	9,4	9,8	19,0	23,4	2,5	-2,3	2,5	4,9	6,2	13,5
Moderately inward	6,8	4,7	3,9	1,8	14,1	5,5	22,9	24,1	1,7	-2,2	3,3	6,2	11,3	29,0
Strongly inward	4,1	2,5	1,6	-0,1	2,2	1,4	15,0	17,9	2,4	0,2	5,2	8,7	16,5	21,1
Inward oriented	5,2	5,2	2,7	1,0	1,0	2,5	17,6	21,2	2,1	-1,1	4,1	7,0	14,2	25,6

Note: Averages are weighted by each country's share in the group total for each indicator.
Source: Greenaway and Nam, 1987.

[5]These include Greenaway and Nam (1987), the World Bank's (1987) Development Report, Michaely (1991), Helleiner (1990), Greenaway (1993). Table 2-4 lists a selection of studies undertaken and the effect that exports have on growth.

Clearly, countries that can be classified as open tend to grow faster than those countries that protect their industries. However, Rodrik (1994) demonstrates that South Korea and Taiwan's growth were more a result of an investment boom that took place in both countries. With a relatively well-educated work force, good returns on capital and by subsidising and co-ordinating investment decisions, an even larger increase on the return on capital was achieved. Rodrik explained that the outward orientation of the economy was as a result of the increase in demand for imported goods.

Table 2-4 A selection of empirical studies on the relationship between export growth and economic growth

		Methodology				
Study	Data-set	Economic Growth	Export Growth	Technique	Other variable	Conclusion
Michaely (1977a)	Cross-section 41 countries Ave. of 1950-73	Per capita GNP growth	Growth in export share	Rank correlation	None	Support for export growth hypothesis Threshold effect
Balassa (1978)	Cross-section 22 countries Ave. of 1956-67 and 1967-73	GNP growth	Export growth or real export growth	Rank correlation OLS Production function	Labour force growth Domestic investment and foreign investment/output	Support for export growth hypothesis
Williamson (1978)	Time series 1954-74 one country	Change in GDP	Lagged exports	OLS linear models	Country dummies Direct investment and foreign investment/output	Support for export growth hypothesis
Fajana (1979)	Cross-section 31 countries Ave. of 1964-73	GDP growth	Export shares or export change/output	OLS	Trade balance Current account	Support for export growth hypothesis Threshold effect
Tyler (1981)	Cross section 73 countries Ave. of 1960-78	GDP growth	Export growth	OLS Production function	Labour force growth rate Capital growth rate	Support for export growth hypothesis
Feder (1983)	Cross-section 10 countries Ave. of 1973-79	GDP growth	Export growth	OLS	Labour force growth Ratio to output of domestic investment	Limited support for export growth causing economic growth
Kavoussi (1984)	Time series 1950-8137 countries	GDP growth	Lagged real export growth	Rank Correlation OLS Production function	Lagged GNP (GD)) growth Real domestic investment growth	Support for export growth hypothesis threshold effect
Balassa (1984)	Cross-section	GNP growth	Real export growth	OLS Production function	Labour input growth Capital input growth Growth in industrial production	Support for export growth hypothesis
Jung & Marshall (1985)	Time series 1950-8137 countries	Real GNP (or GDP) growth	Real export growth	Maximum likelihood Simultaneous linear functions	Lagged GNP (GDP) growth	Limited support for export growth causing economic growth
Moschos (1989)	Cross-section	Real GDP growth	Real export growth	Granger causality OLS Production function	Labour force growth Real domestic investment growth	Support for export growth hypothesis Threshold effect
Salvatore (1989)	Time series 1963-73,73-85 26 countries in 4 groups by trade policy orientation	Real GDP growth	Real export growth	OLS Production	Labour input growth Capital input growth Growth in industrial production	Support for export hypothesis

Source: Jung and Marshall (1985), Greenaway and Sapsford (1994)

2.4.2 Causality: economic growth and export growth

Since exports are a component of GDP, it follows that by definition an increase in exports will result in an increase in the GDP. However, what is more important is the causal relationship between export and economic growth. Does an economy grow and then its export growth will follow or does growth follow an increase in exports?

Holden (1990) found that for the period 1947 to 1987, there was bi-directional causality between exports and growth in manufacturing in South Africa. Exports influenced manufacturing growth and manufacturing growth in turn influenced export growth. This bi-directionality occurred only later. From 1947 to 1970, growth of manufacturing output promoted growth in export output.

Ghartey (1993) found that export growth causes economic growth in Taiwan. The same was however not true in the United States or Japan. He used quarterly data with base years of 1982, 1985, and 1986 for the U.S., Japan, and Taiwan, that were drawn from national publications. His analysis indicated that Taiwan's relatively open economy and severe shortage of natural resources caused it to rely on exports for economic growth. In the USA, the relatively closed economy and abundant resources meant that economic growth causes export growth. In Japan, a relatively closed economy and scarce resources produce a feedback causal relationship between exports and economic growth. The finding that Japan's terms of trade cause export growth suggest those devaluation policies or the imposition of tariffs improves that country's export performance.

Ukpolo (1994) found a positive relationship between economic growth and the growth of non-fuel primary exports in some low-income African countries. His results show that a 1 per cent change in the growth rate of non-fuel primary product exports yields an approximately 0,1 per cent average gain in the expected growth rate among the eight countries. However, the export promotion hypothesis is not strongly supported for exports of manufactured goods. While there is a positive link between manufactured exports and growth in five of the countries, most of the findings are not statistically significant at the 10 per cent level.

Amoateng and Amoaka-Adu (1996) examined the causality between export revenue and economic growth in 35 African countries by introducing external debt servicing as a third variable in the export-economic growth analysis. Granger's causality was used to analyse the interrelationship between exports, GNP growth, and foreign debt servicing over the period 1971-90, World Bank data, World Debt Tables, and IMF International Financial Statistics found that there was a feedback or bi-directional causality between external debt servicing, economic growth, and exports, and therefore supported the export-driven GDP growth and GDP growth-led export promotion hypotheses.

These studies show that although it cannot be stated conclusively that exports cause growth, it will be difficult for an economy to grow without exports. Trade and particularly exports form an important component of growth.

2.4.3 Government intervention v the free market

As has been defined above, a strongly outward oriented policy is one where there are no direct controls at all. Few countries, if any, can be classified as having no direct controls affecting trade. As has already been discussed, all economic decisions by government have an impact on some other sector. It is doubtful whether there are any economies today that are totally free from government intervention. It is difficult to determine empirically whether government intervention is a better policy to follow or not. Hong Kong has been successful following a laissez-faire approach while Singapore has followed more interventionist policies. Other countries such as Korea and Taiwan have followed a middle of the road approach. (Krueger, 1985).

Firstly, the government's interference with the market mechanism undermines the achievement of a "pareto optimum". Secondly, governments' actions, no matter how sincere, will always benefit certain sectors which will lead to rent seeking behaviour amongst firms. Thirdly, the success of export-driven economies is overwhelming. Although there are problems with various studies undertaken, the weight of the evidence strongly supports a neutral or export oriented trade regime.

Successful exporting countries have tended to use incentives rather than direct controls. The incentives were provided across the board to all industries rather than specifically. This would tend to enhance the theory that the market knows best and is better at choosing "winners" than bureaucrats.

2.5 International trade and growth in South Africa

South Africa has followed a typical pattern of development. A self-sufficient agricultural base developed, with the help of gold and diamond mining, into a manufacturing-based economy. The policy of import substitution, although it has contributed to the economic development of many countries, including South Africa (RSA, 1972), is an inferior policy in the long run.

It has been argued that policies that are suitable for one country or region will not be suitable for another. South Africa has flirted with the idea of an outward policy. Nevertheless for

various reasons, South Africa has maintained a dé facto import substitution policy. Although there have been various subsidies in place to encourage exports the incentives given to import substitution firms have been greater than those given for export production.

Bell (1995) points out that due to WTO commitments, South Africa was forced to embark on import liberalisation which rather than strengthen the trade account, "...will increase the already heavy burden falling on export expansion." Since there are limits to faster export growth, and import liberalisation tends to increase the import/GDP ratio, South Africa may require further effective import substitution, which he argues are not incompatible with the policy of export-oriented industrialisation.

The history of South African trade policy and the use of import substitution will be discussed later in Chapter 3.

As we approach the end of the millennium, the pendulum has now clearly swung in favour of promoting open international markets, there are those who are still partial to protecting their countries' economies. Although the causal link between economic growth on the one hand, and export growth on the other, is not conclusive or straightforward to interpret, the evidence certainly points to a positive link between exports and development. This debate goes to the very heart of the broad economic debate. As is often the case, there are fundamental problems of measurement, statistical pitfalls and matters of interpretation. Although the relationship between growth and trade may vary between countries, there are many alternative views in the way in which a trade regime influences trade performance and there are conflicting attitudes regarding the appropriate role of government policy and market forces.

Greenaway and Reed (1990) identify three possible responses to the empirical evidence. Firstly, a nihilist view, which states that empirics can prove nothing. Secondly, an agnostic view, where causality does not matter. In this case, the evidence of a relationship between growth and exports is sufficient to recommend policies promoting an outward orientation. Finally, although there may be no empirical proof to positively support outward orientation, "the evidence linking inward orientation and growth is seriously wanting". Nevertheless, there is agreement that outward orientation certainly appears to be associated with better economic growth.

2.6 Conclusion

As will be shown in chapter 3, South Africa followed a policy of import substitution from the 1920s. This has distorted the South African economy. Export subsidies were used to neutralise these distortions and set South Africa on an outward development path as a second-best alternative. Chapter 4 analysis the use of subsidies while Chapter 5 looks at the impact of GEIS on the level of South African exports.

Clearly, the first-best trade policy option for any country would be a neutral trade regime, where neither import substitution nor export promotion policies are favoured. This will result in an ideal allocation of resources. Indeed if all countries followed this option, global welfare would be maximised as countries would produce products in which they have a comparative advantage and import all other products.

3. Historical perspective on South African trade policy

Even before South Africa was first "discovered" by Bartholomew Dais in 1488 and more particularly after it was "settled" by Jan van Riebeeck in 1652, its existence was based on trading. South Africa's early colonisation was undertaken by one of the first TNCs, the Dutch East India Company. Although the history of South Africa's import replacement is well documented, the same is not true for South Africa's export policy before 1972. Yet, despite this long history of trade and the openness of the South African economy, very little active trade policy developed over the years. Official export policy is sparse and the only evidence is scattered in the speeches of Ministers and Government Officials, and in Hansard. It is important to analyse and appraise what policy measures were taken and why those particular policies were taken to evaluate present and future economic policy. "In economic affairs, as in others, to know where society is going, it is necessary to know the road on which it is travelling and why it has taken that road rather than another. The speed at which it will continue to travel in future will depend on the extent to which it will continue to enjoy any of the special advantages of the past or will, by new effort and good fortune, be able to overcome the obstacles to advance which lie ahead." (Frankel, 1944)

Although there is general agreement as to the phases into which we can divide South Africa's economic history, there is disagreement when they began. The first period under colonist control was marked by self-sufficiency. The agricultural sector was by far the most dominant, although it only supplied the needs of the local inhabitants and the ships travelling between Europe and the East. Very little mining activity took place before 1852, though there was copper mining in Namaqualand. Manufacturing only provided for the basic needs of the local inhabitants and was limited to activities such as bakeries, furniture manufacture, and very basic agricultural implements. As can be expected the infrastructure was poor and undeveloped.

The trade policy prior to 1806 favoured firstly the Dutch East India Company (DEIC), and later British trade and shipping. There were prohibitive restrictions on trade with other countries. Customs issues dominated the trade policy debate, indeed much of the political debate, during the second half of the nineteenth century. Customs duties were a source of revenue and as the two inland Republics wished to share in the customs revenue generated by the two coastal Colonies. The distribution of this revenue was hotly debated.

The economy began to make its first structural change with the discovery of diamonds in 1868 and gold in 1886. "Economically this country had slumbered peacefully for over two centuries" (Botha, 1973). The mining sector developed rapidly from 1868 to approximately 1910 when the Union of South Africa was formed. After 1910, the development of manufacturing began. This phenomenon was given further emphasis by World War I. However the poor infrastructure still continued to hamper trade development. The fundamentals of an import substitution policy were beginning to manifest. The main exports were raw materials and precious metals. Imperial thinking frowned on any beneficiating in South Africa.

With the establishment of Representative Government in the Cape in 1855, a more liberal trade policy was adopted. The Cape Customs Tariff Act, which abolished discrimination of the origin of the product, was pasted. The main purpose however of this Act was to raise revenue. Similar instruments were established in Natal, the OFS and the ZAR. Eventually a Customs Union was established from 1889 on, and a Political Union in 1910. South Africa was one of the first countries explicitly to adopt an import substitution policy to promote industrialisation. Although 1924 is generally considered the year in which the Union of South Africa adopted a policy of encouraging the growth of industry by means of protection, there were moves before this. In 1910, the Cullinan Commission[6] recommended protection "in the best interest of the country as a whole that adequate protection should be given to agricultural and industrial undertakings". The first Customs Act of 1914 embodied many of this Commission's recommendations. The Board of Trade and Industry was created in 1921. After the National Party and the Labour Party coalition won the 1924 General Election, Hertzog immediately began to promote the manufacturing sector using an import substitution policy. To achieve this he reconstituted the Board of Trade and Industry. In 1925, the Board of Trade and Industry revised the Customs Tariff Act that included an important role for the Board of Trade and Industry.

During the 1920s the arguments favouring protection were: Firstly, the maintenance of protection of industries, such as fruit canning which was established during World War I; Secondly, the poor-white problem could be solved by employment creation; and Finally, the realisation that gold would eventually be mined out and that secondary industry had to be

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[6]The Commission on the Conditions of Trade and Industry

created. (Hobart Houghton and Dagut, 1973) There was opposition to the envisaged policy and fears that protection would increase costs in South Africa. In addition, it was feared the scarcity of skilled labour would be exacerbated and would be diverted into protected industries. JH Hofmeyr stated that the country should develop either agriculture or secondary industry. He felt South Africa ran a great risk of trying to develop both and eventually achieving neither. He maintained agriculture was the appropriate sector. (Botha, 1973)

In 1928 Iscor was established as a state-owned company. Although the 1932 rise in the gold price stimulated the South African economy, it did not contribute to further development of the manufacturing sector that remained undiversified until the outbreak of World War II. Agriculture and mining remained the most important sectors. The policy of protection did, however, protect South Africa against the full impact of the Great Depression. Again, the protection policy favoured British goods that received a rebate of 25 per cent ad valorem. As gold, diamonds, and even wool were earning sufficient foreign revenue, there were no reasons to promote exports during this period. Although by developing country standards, the tariff-based protection has been moderate, it has been accompanied by a wide range of quantitative restrictions. In 1934, the Government appointed the Customs Tariff Commission that concluded that the protection enjoyed by industry at the time had reached the limit the country could bear. Further, because of the potential of exports of primary products and the increased economic nationalism of the time, it recommended that the Board of Trade and Industry investigate all industries that had been granted protection and determine where protection could be removed or reduced. However, in 1935 the Holloway Commission, which was appointed to revise the protection policy, came out in favour of protection, provided cost and price structures remained on a par with the major trading nations.

Table 3-1 GDP at factor costs(current value), the contribution of the various economic sectors thereto and the population of South Africa for various years.

Year	GDP		Percentage contribution of main economic sectors to GDP				Population
	Nearest R million	Growth rate	Primary sector %	Secondary sector %	Other %	Total %	(Nearest Million)
1911	300	-	48,7	5,4	45,9	100	6,0
1915	307	0,06	-	-	-	-	-
1920	558	12,07	40,5	9,9	49,6	100	6,9
1925	537	-0,8	-	-	-	-	-
1930	551	0,5	29,8	13,3	56,9	100	-
1935	688	4,5	-	-	-	-	9,6
1940	987	7,5	31,5	16,7	51,8	100	-
1945	1515	8,9	-	-	-	-	11,4

Source: Department of Statistics as cited by Reynders Commission, (RSA,1972).

During this period South Africa became more self-sufficient. Primary products made a smaller contribution to the GDP while the secondary sector, which included manufacturing, increased its contribution to the GDP. Manufacturing expanded and various manufactured goods were produced.

World War II helped diversify the manufacturing base further. This occurred firstly, because there was a need to supply the war machine, and secondly, because of the isolation it was not possible to obtain imports from Europe for local consumption. This laid the foundation for the future development of South African industry in the post war period. Toward the end of the war, in 1943, the Minister of Trade and Industry requested the Board of Trade and Industry to investigate what adjustments would be required after the war. In this report, (Board of Trade and Industry Report number 282), it was recommended that as little protection be given as possible and that the future of industry should not be secured by means of protection but rather by increased productivity. The return of the National Party to government under Malan in 1948 saw the reintroduction of a policy of import substitution. This contributed considerably to the growth of the economy in general and the manufacturing sector in particular. In 1957, the Viljoen Commission[7] found that the policy of providing protection by means of moderate customs duties should be continued and that subsidies be granted in certain cases. Quantitative import controls were not favoured because of the high degree of protection given.

Table 3-2 Average rate of growth of South Africa's GDP and average contribution of the various sectors of the economy to the GDP 1940-70

	1940-50 %	1950-60 %	1960-69 %	1940-70 %
Average growth rate of GDP (current prices)	10,0	6,9	8,6	8,5
Contributions of the various sectors of the GDP				
Primary sector	32,0	31,0	27,0	20,0
Secondary sector	17,0	21,0	24,0	31,0
Of which manufacturing	12,0	16,5	19,0	23,0
Other	52,0	48,0	49,0	50,0

Source: The Department of Statistics as cited in Reynders Commission (RSA,1972)

However, by the 1960s the most profitable import replacement opportunities were exhausted. "...the emphasis shifted toward intermediate goods industry (for example chemicals and textiles) and greater local content of big ticket items such as motor vehicles, white goods and audio visual equipment. Because of the relatively small size of the local market, South African manufacturing had to forgo the advantages of economies of scale. This together with

[7] Report of the Commission of Inquiry into the Protection of Industry. Report U.G.36/1958.

the social pressures to increase labour remuneration tended to build an inflationary bias into the production cost structure. South Africa's efforts to compete on the export markets with manufactured goods has only been marginally successful." (RSA, 1990). In 1968 the Board of Trade and Industry (RSA,1969) recommended that in certain cases, protection could still be given on an interim basis. This recommendation was accepted by Government. Formula duties were also introduced by the Board of Trade and Industry in 1968 to provide protection against disruptive competition.

International empirical estimates of the significance of import substitution in the growth process show large contributions up to the mid-1950s where imports were replaced firstly in the consumer and the intermediate goods sectors. Du Plessis (1973) shows that for the period 1956/57 to 1966/67 import substitution was the most important contributor to growth for intermediate as well as capital goods. In contrast, Scheepers (1969) showed that for the period 1956/57 to 1963/64 import substitution ended with little penetration into the capital goods sector. As a result of the policy of import substitution from 1924 to the 1970s, first by way of quotas and mild tariffs and later with high tariffs and complicated formula duties, imports declined from 31 per cent of total supply in 1926/27 to 19 per cent in 1963/64 (RSA, 1972:35) and South Africa industrialised. However behind the tariff curtain, manufacturers were uncompetitive and shielded from international competition. "South Africa's infant industries of 1920s are still infants and GEIS seeks to add additional infants to the impoverished family." (Davis, 1994:18) As in many other countries, that have pursued an import replacement industrialisation strategy, the protection has resulted in inward-looking industries only marginally interested in exports.

Because of the political isolation of South Africa during the late sixties and early seventies, a new emphasis was placed on self-sufficiency. There were huge investments made in "strategic industries" such as energy, chemicals, engineering, defence and transport equipment.

3.1 South African export policy and export promotion

Although, it was initially controlled by a multi-national trading corporation, South Africa never developed a sound export policy until 1972. From 1855 to 1925, there was still no export policy. The system was later extended so that South African goods enjoyed favourable entry into Britain. Exports still consisted of gold, wool, diamonds, and certain agrarian exports to the UK. South Africa still followed a policy of import substitution, and no effort was made to adopt an outward trade policy.

In 1961 South Africa become a Republic, and the UK, a major South African customer, became a member of the European Economic Community in 1970, as a result of which South Africa lost its preferential status. The South African Foreign Trade Organisation (SAFTO) was founded in 1961 with the assistance of government. In 1964, the first Economic Development Programme set export targets. The Reynders Commission (RSA, 1972) was commissioned in July 1971 to examine South Africa's export trade. From 1972 to 1983 export growth was slow; from 1983 to 1990, export growth was moderately high. Exports of agricultural products grew gradually while the exports of mining equipment grew rapidly. Most of South Africa's exports, despite the period of sanctions from 1985 – 1990, are sold to the EU, USA, and Japan. Since World War II, international trade has been turbulent and since South Africa has an open economy, it has had a direct impact on the South African economy. Voluntary Restraint Agreements (VRAs) were imposed on South African steel exporters in the mid-1980s.

With the loss of the UK and other Commonwealth country markets and the realisation that South Africa's economy became more reliant on exports for growth. The Government had to face the visible problem of the balance of payments. It became clear that a policy of export promotion was required. In 1971, The Board of Trade and Industry recommended that industries that could not compete without protection should not be established. This recommendation was accepted by government. However, government did not liberalise because of impending negotiations with GATT regarding various tariff bindings. Unfortunately gold and foreign reserves reached a low level toward the end of 1971 and the authorities again imposed a sharper degree of import control (RSA, 1972). Kleu (RSA, 1983) stated "that some monetary, semi-monetary and fiscal measures introduced with a view to short term considerations become protracted or permanent and often have unfavourable side effects on the development of industry in the long run."

Political troubles in South Africa, especially since the 1974 coup d'état in Portugal and the effects it had in Southern Africa and South Africa's own political problems, prevented Government from "adopting policies strongly in favour of market-oriented interest rates and measures" (RSA, 1983).[8]

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[8] Republic of South Africa, 1983: *The Report of the Commission of Inquiry into the Export Trade of the Republic of South Africa*, Government Printer, Pretoria.

3.1.1 Reynders Commission and export incentives

The Report of the Commission of Inquiry into the Export Trade of The Republic of South Africa (RSA, 1972), popularly known as the Reynders Commission, was published in 1972. It consists of two volumes, almost 700 pages, and covered the problems facing South African exporters in detail. It made many recommendations and with it came the birth of export promotion in this country. Unfortunately, the report found in favour of export promotion but left distortions "such as infant-industry tariff protection, import control, policy toward industrial locations, agricultural price supports, transport pricing, labour deployment, and the development of labour resources" unchanged. Reynders did not look at the effects of taxes on imports that reduced exports, nor the effect that subsidisation on exports has on the volume of imports. (Radcliff, 1975:76)

In 1977, following the Reynders Commission, a Study Group under the leadership of Mr J van Huyssteen was appointed to investigate the system of export incentives in South Africa. This eventually resulted in the establishment of Categories A, B, C, and D that were effective until 1990. Category A (input compensation) provided for exporters to claim 50 per cent of the value of the import duty applicable to inputs used in the production of export goods. There were other individual export promotion schemes in operation before 1980. The income tax allowances for export market development, which came into operation in 1976, were the most important. There were also transport concessions, financing incentives and iron and steel export concessions. Although low by international standards of the time, altogether these represented 3,5 per cent of eligible exports. (RSA, 1978). Exporters were also allowed to apply for a rebate on the duty under Section 470,03 or a drawback of the duty under Section 521 of the Customs and Excise Act. This was however only available where actual imported products were used.

Category A on the other hand made allowances for the price parity effect (which resulted from duties) for locally manufactured goods. Under Category A it was immaterial whether the inputs were actually imported or not. Assistance was therefore available to all producers of export goods providing their inputs were subject to duty. It was immaterial whether this was ad valorem, specific or formula duties. There was no provision made for compensation for the increased costs of raw materials or inputs cause by quotas.

Table 3-3 Total Category A export assistance (R millions)

Sector	1982	1983	1984	1985
Food	15,08	12,92	12,72	9,25
Beverages	0,06	0,10	0,03	0,01
Textiles	0,44	0,61	0,70	0,80
Clothing and footwear	1,31	1,32	2,90	3,02
Wood products	0,17	0,17	0,17	0,31
Furniture	0,19	0,19	0,21	0,17
Paper and paper products	1,74	2,11	2,30	2,00
Printing	0	0	0	0
Leather products	-	-	-	-
Rubber products	0,19	0,23	0,25	0,12
Chemicals	3,44	3,33	0,96	1,97
Other chemicals	0,05	0,06	0,07	0,59
Non-metal mineral products	1,32	1,58	1,21	1,11
Basic metals	10,15	1078	11,32	18,60
Metal products	0,86	0,96	1,03	1,23
Machinery (excl. electrical)	0,70	0,42	0,49	0,34
Electrical machinery	0,54	0,54	0,37	0,47
Transport equipment	6,47	7,65	6,75	4,90
Other	0,46	0,44	0,53	0,92
Agriculture	9,79	7,17	8,09	15,06
Total (excl agriculture)	43,17	43,41	42,01	45,81
Total (incl. agriculture)	52,96	50,58	50,09	61,41

Source: BTI: Committee of Enquiry into Export Incentives, 1987.

The Category B (value-added compensation) provided a subsidy of 10 per cent of the value-added component of tariff-protected manufactured goods. The rationale for this assistance was to compensate exporters for the cost-increasing effects of South Africa's policy of protecting industry. The value added was the difference between the export price and the cost of the inputs in producing the final product. The value-added included the overland transport cost to the port or border, administrative and marketing overheads, wages and salaries, depreciation, returns on land or intangible assets. It even included the compensation received under Category A. From Table 3-3 and Table 3-4 it can be seen that the value added compensation was approximately double the input compensation. The sectors to benefit the most were basic metals and food.

Table 3-4 Total Category B export assistance (R millions)

Sector	1982	1983	1984	1985
Food	14,21	11,45	16,11	21,67
Beverages	1,24	1,82	1,55	1,42
Textiles	1,27	1,77	2,31	2,87
Clothing and footwear	1,63	1,62	4,17	5,22
Wood products	0,58	0,79	0,74	0,73
Furniture	0,57	0,50	0,40	0,44
Paper and paper products	1,32	0,96	2,44	7,08
Printing	-	0	0	0
Leather products	-	-	-	-
Rubber products	0,48	0,49	0,47	0,16
Chemicals	15,23	10,74	9,72	15,22
Other chemicals	6,96	5,77	9,46	14,29
Non-metal mineral products	1,63	2,06	1,33	2,37
Basic metals	14,12	19,87	35,02	64,50
Metal products	3,13	2,7	2,85	3,57
Machinery (excl. electrical)	1,91	1,66	2,24	2,12
Electrical machinery	1,03	0,97	0,72	0,76
Transport equipment	1,54	1,09	1,03	1,40
Other	2,89	3,17	4,54	6,52
Agriculture	0,40	1,21	0,26	0,15
Total (excl agriculture)	69,74	67,43	95,09	150,34
Total (incl. agriculture)	70,12	68,64	95,35	150,49

Source: BTI: Committee of Enquiry into Export Incentives, 1987.

Under Category C discretionary incentives were provided to exporters mainly to assist with marketing costs. Much of this category (the main exception was the warehousing assistance) is now encompassed in EMA (see section 3.3.5 below).

Both Categories A and B were complicated and difficult to administer. Exporters had to complete numerous forms to prove their claims, adding to the cost of exporting.

3.1.2 Other subsidies

Although, due to the general nature of the Category A and B incentives, they received much attention. There were however many other forms of assistance available to the exporters which helped reduce costs and stimulate exports.

3.1.2.1 Infrastructural subsidies

The Railway Administration, under certain circumstances, were able to grant reduced rail rates on commodities destined for foreign countries. Representations regarding special tariffs could also be made to Escom as far as electricity intensive industries were concerned. The relevant shipping or airlines offered special export rates. Furthermore, the primary steel industry offered support in the form of special raw material import prices with regard to manufacture for export. (RSA, 1972).

3.1.2.2 Tax

Since the 1963/64 budget, provision was made under section 11bis and section 17 of the Income Tax Act. Exporters were entitled to claim either 175 per cent or 200 per cent of certain export marketing expenditure depending on whether there was an increase in export turnover. Normally only 100 per cent of a marketing expenditure could be deducted. Exporters were therefore not actually paying much for their export marketing. The definition of marketing expenditure was very wide and included premiums on export credit insurance, paying consultants to undertake market research, supplying free samples, bringing prospective customer to South Africa, preparing and submitting tenders, commissions, SABS certification fees, membership of export promotional organisation and warehousing. The scheme was open to abuse and just about the only criterion for qualification was registration as an exporter with the Department of Trade and Industry.

It was estimated that deductions in terms of Section 11bis cost R250 000 in 1963/64 (when it was introduced) and rose to R12 million in 1969/70. Although there was no mechanism in place to calculate the total cost, nor to identify who the main beneficiaries were, it was estimated that 80 to 90 per cent supported the manufacturing sector. (RSA, 1972). The Receiver of Revenue never calculated the cost of this deduction although it was estimated at R329 million in 1985, which is more than Categories A and B. Many of the costs allowed were not necessarily related to export marketing. It was only in 1990 when a maximum of 20 per cent of exporter turnover could be claimed that expenses were brought into line with actual export marketing activities. Most exporters interviewed were happy with this limitation of 20 per cent of exports introduced in 1989 and felt that this would minimise abuse of the system and contribute to South Africa's export drive. New exporters or exporters targeting new markets, it was felt, could use either Category C incentives before 1990 or the Export Marketing Assistance (EMA) after this date.

Table 3-5 Estimated total Category D export assistance (categories indicated by the claimants) R000

Sector	1982	1983	1984	1985
Food	24,4	26,6	16,0	23,7
Beverages	1,3	4,0	4,2	5,6
Textiles	3,2	4,3	6,7	8,6
Clothing and footwear	8,8	8,8	11,4	13,3
Wood products	1,3	2,2	1,9	2,3
Furniture	1,0	0,4	0,6	0,9
Paper and paper products	8,4	8,7	13,9	11,2
Printing	0,0	0,0	0,1	0,0
Leather products				
Rubber products	0,7	0,5	0,6	0,2
Chemicals	21,6	19,9	18,4	18,6
Other chemicals	2,1	4,9	22,8	42,3
Non-metal mineral products	6,7	8,0	8,0	10,5
Basic metals	34,1	30,3	47,0	65,9
Metal products	11,6	15,2	8,9	7,2
Machinery (excl. electrical)	4,1	5,7	7,1	8,8
Electrical machinery	2,6	1,8	5,2	4,7
Transport equipment	1,0	1,8	2,8	1,3
Other	3,1	4,7	6,5	6,3
Agriculture	59,3	49,8	72,1	97,6
Total (excl agriculture)	136,0	147,8	182,1	231,4
Total (incl. agriculture)	195,3	197,6	254,2	329,0

Source: BTI: Committee of Enquiry into Export Incentives, 1987.

In terms of section 17 of the Income Tax Act, expenditure incurred with the appointment of an agent outside the borders of the Republic could be deducted from taxable income. This expenditure could include expenditure of a capital nature.

From interviews with exporters, the withdrawal of the tax deductions under section 11bis of the Income Tax Act contributed considerably to reducing the cost of overseas marketing. Warehouses and selling organisations contributed to maintaining market-share in a competitive international environment.

3.2 Critique of the system of pre-1990 incentives

In 1978 the Technical Committee on the Practicability of the Van Huysteen Study Group Proposals (RSA, 1978), found that before the schemes were introduced, frequent changes in the incentive programme would reduce its effectiveness and any changes should be according to a "predetermined timetable". It indicated that Government should be fully committed to the export effort and be seen to support the export effort. Although the scheme ran for nearly 10 years there was constant criticism of the scheme and Government was not seen to be "fully committed." Kleu (RSA, 1985) acknowledged that these export incentives were "an important step in the right direction." He also highlighted the following shortcomings: There was no clear distinction drawn between what constituted a protective duty and what was merely a fiscal duty. Therefore, certain industries were receiving too much assistance that over-

compensated for protection, while other sectors still suffered from an anti-export bias. Because the removal of the fiscal duties would result in a lose of revenue, the Board of Trade and Industry were loath to grant rebates unless the pressure exerted by them was significant. In 1985 the Minister of Trade and Industry appointed the Board of Trade and Industry to "investigate a system of export assistance measures that could replace the current system, and to make recommendations in this regard" (RSA, 1988).

The following short-comings were recognised by the Board of Trade and Industry (RSA, 1988):

- The level of assistance was too low. The Board of Trade and Industry estimated that South African manufacturing suffered a 17 per cent competitive disadvantage, while the assistance provided to exporters was roughly calculated at 7 per cent for the period 1982 - 1987; and
- The payment method was inappropriate. Payments were made as a tax deduction that was not very helpful to exporters in an assessed tax loss position. This was later rectified and payment was by means of promissory notes. Further, claims could only be lodged once the export had taken place. The time delay meant that the incentive did not contribute to additional exports.

The Committee of Enquiry into Export Incentives (RSA, 1987) found the effective rate of assistance[9] was lower than many other countries. The effective rate of assistance expresses export aid in terms of the value added and therefore does not include all imported raw materials and components.

[9] The effective rate of assistance is the defined as Assistance/Value added. Value added was defined as the sum of the compensation paid or allocation to factors of production (inputs) involved in the operation or process concerned i.e. for labour, capital, entrepreneurs and government (taxes) (Board of Trade and Industry, 1987).

Table 3-6 Table of the effective rate of assistance

Sector	1982	1983	1984	1985
Food	33,7	37,8	36,6	35,7
Beverages	47,0	56,6	57,4	38,0
Textiles	6,2	8,1	7,4	7,2
Clothing and footwear	15,3	12,0	19,8	19,7
Wood products	39,3	44,4	42,4	48,6
Furniture	25,6	21,6	24,2	29,0
Paper and paper products	8,8	9,9	12,2	28,8
Printing	0	0	0	0
Leather products	-	-	-	-
Rubber products	23,7	20,5	28,7	25,0
Chemicals	21,6	17,1	17,5	17,4
Other chemicals	7,6	6,8	12,2	11,9
Non-metal mineral products	6,2	7,5	6,0	8,6
Basic metals	6,8	7,5	8,0	8,4
Metal products	32,0	33,5	20,8	20,7
Machinery (excl. electrical)	14,3	20,4	39,2	40,8
Electrical machinery	23,7	16,8	35,7	35,7
Transport equipment	74,8	82,1	91,5	74,2
Other	7,2	7,1	5,9	6,2
Agriculture	8,9	19,2	14,5	9,6
Total (excl agriculture)	15,2	14,7	16,3	15,2
Total (incl. agriculture)	13,2	15,3	16,0	13,6

Source: BTI: Committee of Enquiry into Export Incentives, 1987.

In 1985 the effective rate of assistance varied from a low of 6,2 per cent for other manufacturing to 74 per cent provided to transport equipment. Regrettably, the Board of Trade and Industry did not calculate the export assistance elasticities of exports. They concluded that the direct effect of the assistance "was at best very modest." However, they speculated that the indirect effects (generating income, employment, and productivity) could be substantial. It was even argued that net tax receipt, after paying for subsidises, could be positive.

The problem of whether to provide a uniform export or a differentiated incentive was raised. Uniform subsidies cause fewer additional distortions in the economy. Whereas it is argued that those sectors that are least likely to succeed internationally will receive the largest share of the pie and therefore encourage inefficiencies. Not all exporters face the same level of protection on their inputs and therefore some manufacturers are able to obtain their inputs at world prices. Factors other than protection also influence competitiveness such as transport costs and power tariffs. Kleu (RSA, 1985) argues that because of varying elasticities, even a uniform overvalued currency affected the different sectors differently.

The incentives rewarded actual exports. There were no incentives aimed at creating additional capacity to export. South African manufacturers tended, and still do, to manufacture for the local market. Manufacturing facilities were therefore never constructed with international

trade in mind. Part of the competitive advantage of the Eastern Tigers was that they achieved economies of scale that lowered the unit cost of the goods manufactured. South African exporters simply diverted production away from the local market to the international market or only exported when they had spare capacity. A subsidy to create production capacity would have resulted in long term international commitment from manufacturers giving South Africa a more balanced development profile.

There were no incentives provided for technological innovation directed specifically at exporters.

This together with the period of political uncertainty and the threat of, and eventual imposition of, sanctions on a number of industries did not provide ideal conditions for companies to invest increasing the manufacture of exportables. Manufacturers found it far easier to lobby for additional protection due to the "total onslaught".

3.3 The 1990 export support measures

From the 1970s, South Africa embarked on a more outward-oriented trade and industrial policy. Therefore, in order to counteract the anti-export bias and provide an incentive for manufacturers to export certain measures were introduced. In the mid-1980s, there was a re-evaluation of the incentives and policies. They were found ineffective and new incentives had to be provided. (Jones, 1994).

3.3.1 Background to the 1990 export support measures

In the 1960s and 1970s there was rapid growth in both production and exports compared to the period from the early 1980s. (See Table 3-7 below.) There were numerous factors that affected trade adversely including: decline in the growth of world demand for basic commodities; the international debt problem; capital shortages in major industrial countries; import substitution policies; volatile exchange rates; increasing protectionism; and an increase in the oil prices in the 1970s.

Table 3-7 Average annual percentage change in volume terms

	1960-69	1970-79	1980-83	1984	1985	1986
Production:						
All merchandise	6,0	4,0	0,0	5,5	3,0	3,0
Agriculture	2,5	2,5	2,0	5,0	2,0	1,0
Mining	5,0	3,5	-3,5	0,0	1,0	6,0
Manufacturing	7,5	4,5	1,0	7,0	3,5	3,5
Exports						
All merchandise	8,5	5,2	0,5	9,5	3,5	3,5
Agriculture	4,0	3,0	1,5	4,0	0,0	-1,0
Mining	6,5	7,5	2,0	12,0	-2,0	7,5
Manufacturing	10,5	7,0	4,5	4,7	5,0	3,0

Source: GATT: International Trade 1985/86 and Focus Newsletter October 1987 as published in BTI Report number 2614

The changing patterns of trade had a significant impact on South Africa's foreign trade in that markets for her traditional exports had not grown as fast as markets for manufactured goods especially certain new products. Neither did South Africa at the end of the 1980s show that it had adapted to the new changing patterns. Non-tariff protectionist policies have had an adverse effect on world trade. This was exacerbated in South Africa's case in that she still had to deal with sanctions. Although the motives for imposing the sanctions are not questioned, it would seem as though "sensitive" (agricultural products, steel, coal and textiles) industries were targeted.

3.3.2 Anti-export bias

Belli (1993) found that the average statutory tariff, weighted by the value of imports, did not make South Africa an over-protected economy. The average statutory duty in 1993 was 27,5 per cent that was just above the median for developing countries. It was however twice as high as New Zealand's average tariff.

In 1990, the IDC undertook a study into South Africa's effective protection. They assumed that firms set their prices up to the limit allowed by the tariff. On average, the effective protection was 13 per cent on inputs and 18 per cent on outputs and the effective rate of protection was about 30 per cent.

Table 3-8 Estimation of the effective protection

Sector	Protection on inputs	Protection on outputs	Effective protection
Food, beverages and tobacco	15,2	13,7	8,8
Textiles, apparel and leather	27,8	43,6	93,6
Wood and wood products	14,0	21,7	39,7
Paper and paper products	9,5	13,3	22,2
Chemicals	7,5	18,9	50,6
Non-metallic minerals	5,2	19,8	34,3
Basic metals	4,7	11,2	23,2
Metal products and equipment	17,1	18,2	20,3
Other manufacturing	2,8	10,9	62,8
Total manufacturing	12,6	17,8	30,2

Source: Ondersoek na die tariefbeskermingsbeleid, IDC June 1990

SACOB (1991) found that South African manufacturing costs were 15 per cent higher than OECD averages, partly because capital and productivity-adjusted labour costs are higher, and because input costs are higher. According to Belli (1993) the net effect of the effective protection and GEIS was that exporters were still operating in an anti-export biased environment.

3.3.3 GEIS

During the sanctions period, it was deemed necessary to promote exports more aggressively. To boost exports in general and manufactured goods in particular, it became essential for financial export incentives to be cost-effective. The Categories A and B schemes of the 1980s were not achieving the results necessary. Government consequently developed an incentive scheme that rewarded export performance while encouraging the beneficiation of local raw materials. The new General Export Incentive Scheme (GEIS) replaced the Categories A and B incentive schemes with effect from 1 April 1990.

3.3.3.1 The formula

In formulating the GEIS, the Government decided that certain basic requirements should be met. The most important of which were selectivity, simplicity, flexibility, and easy administration. The degree of assistance granted is determined according to a formula, which is based on the value of exports (U), the extent of processing of the export product (M), inflation and exchange rate fluctuations (E), as well as the local content of the export product (P).

The formula for the calculation of the GEIS benefit is:

$$Z = U \times (M \pm E) \times P$$

The individual components of the formula are discussed below.

Z-value

Z represented the tax-free incentive paid to exporters. Since the GEIS was an open-ended scheme and the claims on the exchequer theoretically had no limit, although there were budget constraints, the Department of Trade and Industry issued promissory notes for claims more than R25 000pa (or R12 500 each six month). The promissory notes were however interest bearing after April 1991. Before 1 April 1991, the interest earned on the promissory notes was taxable. The GEIS subsidy payment was tax-free since its inception until the Minister of Finance, Derek Keys announced the tax-exempt status would be withdrawn from March 1995. He stated that "the tax-exempt status of GEIS payments was unsound in principle and of small effect in increasing the incentive value of the payments" (SAPA, 22 June 1994). One of the reasons for the withdrawal of the A and B Schemes was that: " ...the method of payment was inappropriate. .... claims for assistance could only be lodged after export had taken place. Even now, with export assistance being provided by means of promissory notes, claims can only be lodged annually." As a result many exporters did not use A and B in their costing nor did it contribute to increased expenditure. Although GEIS claims are allowed every six months, payment still may take place by means of a promissory note and after the export has taken place. In the worst case scenario, an exporter can wait up to two years after the export has taken place to receive payment that may be cash or a promissory note.

U-value

The U-value represented the free on board (f.o.b.) value of the products qualifying for the subsidy. This included all transport and insurance costs incurred within South Africa getting the product to the harbour or border post. Commissions and other overheads cost which were incurred outside South Africa were not included in the f.o.b.-value. The date stamped on the customs documentation (DA550 and F178) was used to determine the exchange rate (spot-rate) which was to be used to convert foreign currency into South African Rand.

Using an f.o.b.-value as opposed to an ex-works value was that in reality, transport was also being subsidised. This subsidy would therefore tend to assist inland exporters (mainly in the PWV/Gauteng region) who have spare capacity. This was not conducive to new investments. If an export promotion strategy is to be followed, a firm would more likely set-up near a port as it would be closer to sources of imported raw material and export markets. GEIS therefore

hindered the development of industry in that potential investments would not be optimally located.

M-value

This factor was designed to promote the export of products with a high degree of value added.

Customs and Excise have categorised all products into codes based on the Harmonised Tariff System (HS). This system is used internationally by most of our trading partners and is harmonised to the six-digit level. The South African system consists of eight digits and is published in Schedule 1 to the Customs and Excise Act, 1964. Using this code, all export products are divided into four categories, namely:

Category 1: Primary Products that are products have not been beneficiated significantly and include basic raw materials and resources.

Category 2: Beneficiated Primary Products that are products that have undergone at least the first stage of beneficiation but the added value relative to raw material input is still low.

Category 3: Material Intensive Products are products have been beneficiated to such an extent that further addition of value can occur only if they are either incorporated in or transformed into category 4 products.

Category 4: Manufactured Products are products are considered those which have been fully manufactured and to which adding any further value is uneconomic or physically impossible to add before their use.

To illustrate the categories: raw cotton or wool would be considered a Category 1 product; yarn spun from wool or cotton would qualify as a Category 2 product; once the yarn has been woven into fabric it would be categorised as a Category 3 product; and finally when it was made into a garment it was rated as a Category 4 product. Although the scheme was designed to assist in the beneficiation of products, clearly more work goes into producing a worsted fabric or other specialist fabric such as that used for parachutes than for a simple T-shirt. Yet the highly beneficiated specialist fabric only attracted a Category 3 rating while the T-shirt, which is traded almost as a commodity item in world markets, was rated Category 4.

Table 3-9 Examples of the classifications of the industry types

Stage 1 Raw materials production industries	Stage 2 Materials beneficiation industries (first stage)	Stage 3 Material type products industries (second stage)	Stage 4 Manufactures type products industries
Iron ore	Steel	Steel sheet	Motor car
Copper ore	Copper	Copper wire	Electric motor
Chrome ore	Ferro-chrome	Stainless steel	Wine vat
Cotton	Yarn	Cotton fabric	Suit
Coal	Ethylene	Polystyrene	Toys
Wheat	Flour	Bread	Hamburger

Source: BTI (1988) Report number 2614

Since the level of the export incentive increases according to the category classification of the product it was hoped that the traditional imbalance between the export of primary products and final manufactured goods would be redressed.

Reclassification of products

The categories were defined using the HS[10]. It soon became obvious, that although the M-factor was designed to stimulate the export of goods with added value, there were anomalies. A box of matches, for example, was originally classified as a category 2 product, the wooden splints used in manufacturing matches qualified for category 3 assistance. Clearly, the degree of value added in a box of matches was greater than the degree of value added in the wood. The Department of Trade and Industry therefore set up a committee to evaluate all requests for reclassification. Numerous changes were made to the system. Special new tariff numbers were created by the Department of Trade and Industry to differentiate between products sold in bulk and those packaged for retail sale. The system that was meant to be simple when it was introduced therefore became more complicated. Companies had to ensure that their products were correctly categorised before quoting for export orders as the difference in the subsidy between a category 3 and a category 4 product was 12,5 per cent. Care also had to be taken when using the new HS numbers created by Department of Trade and Industry, since Customs and Excise only recognised their HS numbers, the DTI's (GEIS) HS code on the claim form could be different to the code on the Customs and Excise (DA550) form.

P-value

GEIS also made it more profitable to export products that were manufactured with South African content.

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[10]The system was developed for customs purposes and was introduced in 1988 in South Africa. Most of the trading nations of the world have now adopted this system. It does not conform to the needs of the manufacturing sector.

The P-value is calculated using the following formula:

$$P = \frac{U - I}{U}$$

Where **U** is the value of exports based on the f.o.b. price, and **I** is the invoice value of inputs known to be imported.

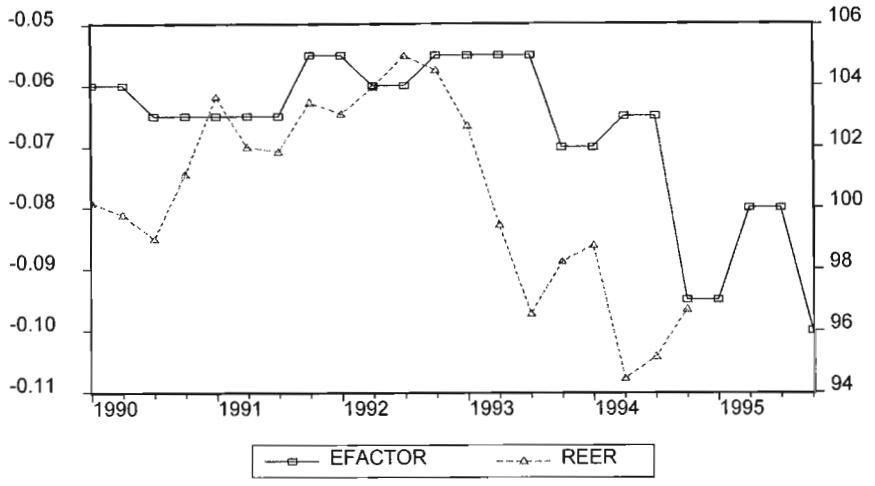
Products containing more than 75 per cent local content received 100 per cent of the GEIS, while if the local content was less than 35 per cent the export received no assistance. Within these parameters, the exporter would receive GEIS pro-rata to the actual percentage local content. In 1995, the local content threshold was reduced to 60 per cent to receive full incentive. This gave exporters more flexibility to use imported inputs that improved their competitiveness.

The P-factor encouraged exporters to buy South African inputs and discouraged making use of rebates and drawbacks for importing raw material (under either section 470,03 or section 520,00). GEIS therefore inherently maintained the anti-export bias and did not attempt to remove or reduce it. Only the symptom and not the cause of South Africa's low export propensity was addressed. As in the case of the U-value including transport costs, the P-value did not encourage the development of export industries at coastal areas where manufacturers would have been able to import at world prices and then again export without incurring the additional transport costs between the port and Gauteng.

E-value

To compensate for the exchange-rate fluctuations and inflation, another factor was built into the formula whereby a greater subsidy was given if the South African Rand strengthened against a basket of currencies of South Africa's major trading partners. Since the inception of GEIS however this factor has been negative, which indicates that the authorities felt that the Rand was undervalued. Figure 3-1 A graph showing the movement of the E-factor and the R shows the movement of the E-factor and the REER (Real Effective Exchange Rate).

Figure 3-1 A graph showing the movement of the E-factor and the REER



Source: South African Reserve Bank and Department of Trade and Industry

The E-factor lagged behind the REER by a few months. This is because the South African Reserve Bank calculated the E-factor for the Department of Trade and Industry, and based the calculations on the same basket of countries with similar weights as was used for the determination of the REER.

The E-factor, because it was based on a basket of currencies, could not compensate for fluctuations in individual currencies. Although the basket was weighted to represent South Africa's trading patterns, exporters, especially those exporting to only one or two markets, could be negatively effected.

Another complaint about the E-factor was that it was only announced six weeks before the start of the new period. This was to give the South African Reserve Bank and the Department of Trade and Industry time to establish a reliable future trend. However, many exporters had to prepare quotations for delivery in six months and therefore had to anticipate or guess the future E-factor before quoting or determining export price lists.

These complaints were summarised by SACOB (1991) as follows: "The export community is disappointed and confused by the announcement that the E-factor for the calculation of export assistance under the General Export Incentive Scheme (GEIS) has been fixed at minus 7,5 per cent for the period 1 April to 30 September this year. The factor is adjusted on the basis of a basket of currencies. This basket was composed on the actual exports in 1988 and has not revised since. The US$ has weakened quite significantly since 1988 and more specifically in recent months. Exporters selling in dollars now find themselves in a position where they lose Rand earnings on exports because of the weakened dollar."

Non-qualifying products

As motor vehicles and motor vehicle components benefited from Phase VI of the Local Content Programme, they were excluded from any GEIS benefits. Second-hand, refurbished and re-exported products did not contribute to the development of the manufacturing sector. These products too did not qualify for GEIS either.

Jewellery, it was argued, consumes gold and other precious metals that would have been exported in any event. The export incentive was therefore only calculated on the value added to the precious metal employed in the manufacturing process. GEIS payments on precious and semi-precious stones incorporated into jewellery or other articles were calculated separately on the export sales value of the stone according to its specific M-factor.

Category 1 products, those raw materials to which no value was added or insufficient beneficiation took place, had a M-factor of zero. Therefore, unless the REER of the rand increased significantly, no products in this category would receive any benefit from the scheme.

3.3.3.2 The claim procedure

An exporter could choose to submit a claim once every six months or once a year, coinciding with the company's financial year-end. Most exporters however choose a six monthly claim period because this improved their cash flow. Even exporters claiming every six months only received the incentive some time after the export had taken place. This, together with other uncertainties, never encouraged exporters to factor the subsidy into their pricing and therefore did not encourage the gaining of market-share.

Initially, the claims procedure was relatively simple and therefore open to abuse. After an investigation by the auditing firm Deloitte and Touche, certain new procedures were introduced which added to the cost of submitting claims. An auditor's certificate for example had to accompany each claim. Although Closed Corporations do not have to submit statements verified by a Chartered Accountant when submitting tax returns, they were required to obtain these for GEIS claims. Therefore, especially small exporters had to specially appoint a Chartered Accountant to verify the claim that added to the cost.

Late claims

Only claims received by the Department of Trade and Industry within three months after the relevant claim period had expired were considered by the Department. Although certain

concessions were made, such as claims sent by mail were accepted if the post mark or other proof indicated that they were dispatched on or before the expiry date, the procedure did require exporters to concentrate on claim procedures rather than on export marketing. For example, **The Citrus Board** missed the deadline for submitting a R36m GEIS claim to the Department of Trade & Industry for their 1994 export crop. About 1 200 farmers claimed that government had reneged on its obligation to pay GEIS allowances. "Morally and legally, that money is ours." (John Stanbury, CE of the board's marketing arm Outspan International.) He acknowledged that the initial claim was 26 days late but says there had never been a problem before because there was a long-standing agreement on late claims (Financial Mail, 08/07/94). There are numerous other examples where claims were submitted late, but due to the regulations controlling the payments of GEIS, the Department of Trade and Industry has no discretion and may not pay late claims..

3.3.4 Critique of GEIS

3.3.4.1 Regular changes to the system

The Government's intention to scrap Categories A and B and the deadline was announced before a replacement had been designed. There was not sufficient time to undertake careful analysis of the implications of GEIS. The system was designed on the run. "Incentives should be certain and not discretionary. When GEIS was mooted, officials could not tell manufacturers how it would be implemented as they wanted to see how it ran - and then make the rules. This is hardly a way to promote investment. Schemes should be simple, they should be bold and they should capture a businessman's imagination" (Hasson, Haywood and van Zyl, 1993).

In common with export incentives in Turkey and Costa Rica, the entire system of export incentives was too complicated and subject to frequent changes. Initially, the system of GEIS was designed to be easy to understand and easy for exporters to claim. It soon became clear to the Department of Trade and Industry that the system was open to abuse and it initiated an enquiry directed to the administrative procedures. Consequently the guidelines were amended from 1 October 1992.

Revision 2

The most important changes included:

- Certified copies of Bills of Entry (DA 550, DA25, DA 28) and the Exchange Control Declarations (F178)[11] now had to accompany claims were required;
- More accurate information regarding the imported inputs, used to calculate the P factor was needed;
- A declaration by the chief executive officer of the claimant certifying the accuracy and validity of the claim had to accompany the claim;
- A declaration by the consultant preparing the claim accepting co-responsibility for any fraud also had to be included;
- The cession procedure was amended; and
- The audit report of the independent auditor was extended to ensure that audit procedures led to a greater degree of compliance.

These amendments put greater burden on the exporters to ensure that they complied with the rules. Although it does seem to be reasonable, bearing in mind that public funds were being used, it did add to the cost of submitting claims. The CEO of the exporting firm now not only had to ensure that products were sold and marketed efficiently in foreign markets, but that the GEIS claims submitted were correct.

The Department of Trade and Industry did give its assurance that the scheme would continue until 31 March 1995. This was met with scepticism. Coopers and Lybrand (1993) wrote: "However, uncertainty exists as to the position after that date. Notwithstanding the assurance that the scheme will apply until 1995, it may happen that the financial burden of the scheme may become too onerous for the state. The Department of Trade and Industry may, accordingly, extend the list of non-qualifying products to such a degree that the total value of the subsidies is effectively limited in the process. In addition, claimants must take cognisance of the fact that the current favourable dispensation, namely that the subsidy as well as the interest on the promissory note is currently income tax free, may not necessarily continue for the full remaining period of the scheme." This view was the common perception. Manufacturers were therefore hesitant at making the necessary investment into export

[11] The "DA" forms are the forms Customs and Excise requires exporters complete when goods are exported, while the F178 is required by the South African Reserve Bank to ensure that the foreign exchange is received for goods exported.

marketing and even more reluctant to expand facilities to create capacity for exports as is required for a successful export promotion strategy.

Revision 3

This revision further clarified definitions and concepts to avoid misunderstandings.

Revision 4

The Department adjusted the GEIS benefit levels downward on 1 April 1995 and, according to its commitments under the WTO, announced that the GEIS would be scaled down until the scheme terminated on 31 December 1997. The reason given was that the expenditure on the GEIS, represented one of the largest single items on the central budget, and payments on GEIS competed with other important development projects on the budget. The Department had to prove, on a continuous basis, to the Department of State Expenditure and to taxpayers that the GEIS was justifiable and in the interest of industrial development. The Auditor-General conducted a performance audit on the GEIS and questioned the control over GEIS payments.

In terms of GEIS Guidelines it was recommended to make it compulsory for claimants to submit a report on developments that had taken place in the particular firm regarding R&D, work organisation, human resource development, and in fact on any other positive developments. To enforce this ruling on GEIS beneficiaries, the Department of Trade and Industry planned to withhold a small portion of GEIS payments until these requirements were met. The Department of Trade and Industry never did implement these changes, although similar requirements were introduced for the Clothing and Textile industries Duty Credit Scheme. This was yet another change to the scheme that introduced confusion and created the impression in the minds of the exporters that goal posts, once set, would be moved again.

Not only were the regular changes to the system a problem to the exporters, but also the constant consideration by the Department of Trade and Industry and later by bodies such as Nedlac about future changes to the system or even a complete abandonment of the system raised concern among exporters. As a result there was continuous speculation by exporters as to which way government was planning on going. This environment was not conducive to additional investment.

3.3.4.2 GEIS failed to neutralise the anti-export bias

Holden (1992) determined that there was an implicit tax of 71 per cent (including gold - this figure is only 34 per cent if gold is excluded) which was shifted to exportables. An increase of 10 per cent in the duty structure resulted in an increase in the average export tax of 3,4 - 7,1 per cent. With GEIS benefits of less than 20 per cent for category 4 products, and considerably lower for other categories, clearly the anti-export bias is still present in the South African economy. The de facto policy of Government could therefore be considered import substitution.

This view was confirmed by Belli *et al* (1993). (See Table 3-8.) Belli found that effective protection ranged from -26,1 per cent to 239,3 per cent while the GEIS payments ranged from 1,19 per cent to 19,1 per cent in 1993. It was found that GEIS was neither related to the protection on inputs nor the degree of effective protection in the domestic market. Of the nine sectors, two were pro-export, five exhibited an anti-export bias and two an extreme anti-export bias. Chapter 5 analysis the impact of import substitution on each of the 26 manufacturing sectors, and the impact of export incentives.

In addition, GEIS was structured in such a manner to maintain the anti-export bias. The U-value (see section 3.4.3.1) subsidised transport costs and therefore encouraged exporters to remain inland and away from the ports. The P-value (see section 3.4.3.1) discouraged exporters buying foreign inputs and therefore provided no incentive to reduce the anti-export bias even marginally.

3.3.4.3 GEIS failed to recognise competitive or comparative advantages of various industries

No prior analysis was done to determine which industries had either comparative or competitive advantages. (See footnote 19 on page 130 and footnote 19 on page130 for a definition of comparative and competitive advantage.) The various categories were determined simply on the degree of raw materials beneficiation. Further, no analysis was done to determine price elasticity of supply in South Africa or the price elasticity of demand in foreign markets to give a subsidy to those industries that would have contributed the most to the growth of the South African economy. The subsidy was too general, no potential winners were identified. It was expected that equal results would be achieved by all sectors.

3.3.4.4 Impact on imports

One of the reasons GEIS was introduced was to generate foreign exchange to meet commitments under the Debt Standstill Agreements. It is true that the "P-factor" discouraged the use of imported raw materials. There was, however, no corresponding analysis of such as machinery requirements, which would be required for increased exports.

3.3.4.5 Small and medium exporters

Figures released by the Department of Trade and Industry show overwhelmingly that GEIS benefited the larger exporters in absolute terms. However, the administrative rules such as the requirement that claims be accompanied by an auditor's certificate (prepared by a registered CA) also harmed small exporters. Even the Receiver of Revenue does not require an auditor's certificate. The cost of preparing a claim and the auditor's certificate often represented such a great percentage of the claim that exporters would not bother to submit such claims.

Further, it was difficult for small exporters to import raw materials directly. They were therefore not able to negotiate with large suppliers to obtain the raw materials at international prices. Large exporters could import the raw materials and use the rebate and drawback facilities. They used this lever to obtain better raw material prices from domestic supplies for products exported. However, a few producers of raw materials such as Iscor (Committee for the export of secondary products), the South African Sugar Association (see 3.8.3) and Alusaf (see 3.8.2) do provide rebates to manufacturers who export. Again, the procedures are complex and detrimental to small and medium sized exporters.

3.3.4.6 Budget

From a budgetary point of view, the scheme is open-ended. It could have cost far more than was budgeted for. However, the scheme could be manipulated, as many exporters have indicated, by setting an E-value that is far lower. The Department of Trade and Industry also issued promissory notes that could be paid from future budgets.

3.3.4.7 Corruption

As with most such financial schemes, it was rife with corruption. Obviously Customs is more interested in ensuring that their revenue from import duties and excise tax is properly collected. They therefore seldom checked export consignments. All their resources are dedicated to checking imports. There was little co-ordination between the Department of Trade and Industry and the Commissioner for Customs and Excise to ensure that the proper controls were set in place. The DA 550 was the most important document that the Department

of Trade and Industry used in assessing a GEIS claim. It was possible for an exporter to load a container with rocks and complete documentation for clothing and export them without Customs ever being aware. However, had adequate controls been put in place, it would have been counter-productive. Customs could and would have had to stop and check many containers. These goods would have been unduly delayed. This would have caused delays that are unacceptable to foreign importers. Costly and uneconomical controls and verifications had to be set in place. Uncertainty was created among exporters who, rightly or wrongly were under investigation. This certainly impacted negatively on the export drive.

As the scheme progressed it became obvious that abuses were taking place and the Department of Trade and Industry placed more administrative requirements in place. Declarations are required from a Chartered Accountant and the Freight Forwarder. In many cases, exporters have obtained the services of "consultants" who complete and submit the claims. The scheme, which was originally meant to be simple and easy to administer has become clumsier and uses considerable resources that could be put to more effective use in the South African economy.

3.3.5 EMA

Partly as a result of the withdrawal of Category C & D (section 11bis), EMA was introduced. However, EMA comprises mainly old Category C incentives. The following schemes are available under EMA: primary export market research; outward selling trade missions; inward buying trade missions; and participation in foreign exhibitions. These schemes are especially geared towards assisting small- to medium-sized concerns (SME) in their efforts to find suitable markets abroad.

3.3.5.1 Primary export market research

This scheme partially provides compensation to exporters for costs incurred in developing new export markets through personal contact with potential clients in international markets. The assistance covers the following: the cost of an economy class return air ticket; the cost of transporting the samples up to a maximum of R600; and a subsistence allowance of R400 per day for a maximum of fifteen days per applicant.

3.3.5.2 Assistance for outward-selling and inward-buying trade missions

The Outward-Selling Trade Mission Scheme provides financial assistance to trade missions to make contact with foreign buyers with a view to concluding export orders. The primary

objective of such missions is to facilitate personal contact in trade and government circles, to obtain information regarding the trading conditions in the markets being explored and to exploit new opportunities. The ultimate aim should be to conclude new export contracts. Only a recognised employers' organisation or a trade association qualifies for this scheme.

The Inward-Buying Trade Mission Scheme provides financial assistance to inward buying trade missions so that prospective buyers can make contact with South African exporters to conclude export orders. The primary objective is the same as the outward selling trade missions. The only difference is that potential importers are assisted in coming to South Africa and establishing links with South African exporters.

Outward missions are regularly arranged by SAFTO, Chambers of Commerce, and other business organisations. Despite the subsidisation of these missions by the Department of Trade and Industry, the organisers often find it difficult to recruit participants. Different exporters have different needs, which cannot be accommodated by trade missions. Trade Missions tend to be more public relations exercises than trade promotion efforts.

Inward buying missions are usually initiated by firms, who approach organised business to make applications on their behalf. For this reason, inward missions have tended to be more successful. It is mainly large exporters who benefit.

3.3.5.3 Participation in foreign exhibitions

Exhibitions are considered the most cost-effective means for an exporter to introduce and promote his product to a number of potential clients. The Department administers two promotional schemes to encourage and assist exporters to introduce their products into foreign markets by participating in exhibitions.

Official group participation by way of national pavilions

These projects are undertaken for both commercial and political "waving the flag" purposes. The Department of Trade and Industry officially participates in exhibitions around the world. This participation takes the form of national pavilions in which South African exporters may exhibit their products to identify foreign outlets. Participation in international exhibitions using national pavilions offers firms an ideal opportunity, particularly new exporters, to experience international foreign marketing conditions while their direct expenses are relatively small and all the administrative arrangements are taken care of.

Financial assistance for individual participation.

Besides the assistance granted in respect of participation in national pavilions, exporters participating in any other specialised exhibition qualify for financial assistance. The cash reimbursement will only be made after termination of the exhibition. The amount paid by the Government will be limited to 80 per cent of the acceptable items, up to a maximum of R15 000 on the basis of actual expenditure, as substantiated by invoices, receipts and proof of payment of the foreign exchange involved.

3.3.5.4 The impact of EMA

The aim of assistance is to partially compensate exporters for costs incurred in developing new export markets, establishing personal contacts, introducing their products into foreign markets, and more importantly, to conclude new export contracts. Most governments assist exporters with exhibitions. Many governments also assist with trade missions. The Primary market research scheme is not as common. The South African Government stated at the Review of it's Policies in June 1993 that it did not consider that the EMA schemes were contrary to GATT and that the intention was to keep them.

3.3.6 Sectoral support schemes

During the late-1980's the Board of Trade and Industry, under Dr L. McCrystal, investigated the replacement of the Categories A and B incentives with industry specific incentives. The underlying rationale for these programmes was the weak performance of the manufacturing sector, its inability to adapt to changing market conditions and its uncompetitiveness in the international markets. These were known as Structural Adjustment Programmes (SAP). However, after the investigations the Director-General of Trade and Industry, Dr S. Naude, complained that the proposed SAPs were too complicated to administer and that a simpler system would be needed. As a result GEIS was introduced. However the SAPs for two industries, the clothing and the automotive industries, remained. The SAPs made it attractive to export by reducing import duties on certain products based on export performance. Both these industries enjoyed a high protection rate making them ideal candidates for this type of incentive. However, it is not in the scope of this dissertation to analysis the success of the SAPs.

3.3.6.1 Motor vehicle manufacturing

With this programme, the local content, on a value basis, of South African produced motor vehicles, was required to increase from an industry average of 55 per cent at the inception of the programme with the aim to raise this to 75 per cent by 1997. Essentially, the Phase VI Local Content Programme tried to reduce the foreign exchange used by South African vehicle manufacturing and associated industries by about 50 per cent over eight years. To this end, the provisions of the programme contained a 50 per cent penalty on foreign exchange usage by the industry or a 50 per cent avoidance incentive.

Vehicle manufacturers, in terms of Phase VI of the programme, achieved the prescribed local content targets in essentially two ways. One is by reducing foreign exchange usage or imports, or by increasing the local content in locally assembled vehicles (i.e. import substitution). The second method of increasing Phase VI local content was by foreign exchange earnings, through incremental export business. To encourage exports further, component manufacturers who exported their products could cede such export credits to the motor vehicle manufacturers to raise the local content level of the motor vehicle manufacturers.

The criticism of the programme was summed up by the Minister of Trade and Industry, Derek Keys during the 1993 budget debate on the Department of Trade and Industry. He stated: "it is abundantly clear that whereas (Phase VI of the local content programme for the motor vehicle industry) has achieved one of its objectives in making the industry export conscious, it has certain flaws which have the overall effect of reducing local jobs and increasing motor vehicle prices. In addition, very material frauds have been perpetrated." This critique can probably be said about any export enhancement programme in the world. This industry is discussed in more detail in section 6.3.30.

The Motor Industry Development Programme

Registered motor vehicle manufacturers that export motor vehicles and automotive components and tooling manufacturers or exporters may qualify for importer rebate credits under the Motor Industry Development Programme. Import rebate credits can be earned through the export of eligible products. The value of import rebate credits that can be earned will be the difference between the foreign currency earnings and the foreign currency usage. Royalties received been in respect of exports will only form part of export sales value if included in the export sales value of eligible exports. Commissions, salaries, etc paid in South Africa and transferred abroad later will not form part of the export sales value. The local

content value of the products exported may be used to rebate the import duty payable on completely built-up light and heavy motor vehicles and auto automotive components. Each one ran value of local content of exported lighters motor vehicles qualifiers for use to rebate the duty payable on one rand of the value of imported lighters motor vehicles. Each one rand value of local content of export light and heavy motor vehicles, approved automotive components and tooling qualifiers for use to rebate the duty payable on one rand of the value of imported automotive components and heavy motor vehicles. The local content value exporters of heavy motor vehicles, auto automotive components and tooling is reduced by 25% if assembled light motor vehicles are imported against such credits. From table below it can be seen that the benefits growing to the manufacturers and exporters under his scheme decrease as the rest of duty imposed on the imports of these products decrease. However, a period of seven years has been given to the industry to adjust to the international market. (DTI, 1996)

Table 10 Phasing down of the rates of duties

	Duty: Light motor vehicles per cent	Duty: Original equipment components per cent
1 January 1996	61,0	46,0
1 January 1997	57,5	43,0
1 January 1998	54,0	40,0
1 January 1999	50,5	37,5
1 January 2000	47,0	35,0
1 January 2001	43,5	32,5
1 January 2002	40,0	30,0

Source: DTI (1996:4)

3.3.6.2 Textiles and clothing

The textiles and clothing industries programme allows clothing and textile fabric manufacturers who export at least 2,5 per cent of their turnover the duty-free importation of: products (yarns, fabric or clothing), based on exports of products (fabric and/or clothing) manufactured from locally produced raw materials, or from imported raw materials on which full duty was paid; and fabrics based on local purchases of raw materials (yarns or fabrics).

As with the motor vehicle industry, the programme is under review. A new export support programme came into effect on 1 April 1993. This incentive is in the form of duty credit certificates where the value of such certificates is calculated as a percentage of the f.o.b.-value of clothing (30 per cent), fabric (15 per cent) and yarn (10 per cent) exports. The duty credit certificates may then be applied against import duty liabilities for imports.

3.3.7 Drawbacks and refunds of custom duties

3.3.7.1 Approved list of products

Provision is made for the drawback of customs duties previously paid on products listed under specific industries that are for use in the manufacture, processing, finishing, equipping or packing of goods for export. The products appearing in this part have been approved by the Director-General as a permanent form of drawback assistance used in finished goods that are exported regularly and where local raw materials suitable for the specific use are not locally available.

3.3.7.2 Temporary drawback

Provision is also made for a drawback of customs duties already paid on goods used in the manufacture, processing, finishing, equipping or packing of any goods exported in the initial stages in the development of a new industry when the exporter is testing the export market or is involved in a once-only transaction and requires relief as a temporary measure.

3.3.7.3 Refunds of duties on goods exported in the same condition

Refunds of custom duties are provided for in respect of goods which are not legally saleable in South Africa or which, at the time of importation, were not in accordance with the terms of the contract or which have been landed damaged and are either returned to the supplier or abandoned unconditionally to the Commissioner.

A refund of customs duties on goods (not having been returned to the supplier) which are exported for trade purposes in the same condition as imported or in a condition in which the essential character of the imported goods has been retained, is also available.

3.3.8 Rebates and refunds of excise duties

3.3.8.1 Approved list of products qualifying for specific excise duty rebates

A full specific duty rebate is given on excisable goods imported (including the supply as stores for foreign-going ships or aircraft) to the manufacturer of such goods. The list of goods

includes mineral water, beer, wine, spirits, tobacco, petroleum oils, certain chemicals and new motor vehicles.

3.3.8.2 Other products qualifying for specific excise duty rebates

A drawback of a specific excise duty may be claimed by manufacturers on excisable goods used in the manufacture of other goods than those listed, on export of such manufactured goods. The drawback however, is confined to beverages and related products.

3.3.8.3 Ad valorem excise duty rebates

Manufacturers may claim a full ad valorem excise duty rebate on excisable goods exported ex a customs and excise warehouse (including the supply as stores to foreign-going ships or aircraft).

A refund of ad valorem excise duty could also be claimed by an exporter, registered with the Director-General as an approved exporter, who is not the manufacturer of the goods and who paid the duty.

3.4 IDC finance schemes

The IDC has a number of finance schemes that are used to develop industry. Schemes have been developed for exporting manufacturers to further stimulate exports and manufacturing in general.

3.4.1 Low interest rate scheme for the promotion of exports

R100 million per year is made available by the IDC to promote new investment directed at exports. Finance is available at nine per cent per annum for the first three years for the acquisition of fixed assets (machinery and equipment). Thereafter, the normal IDC rates for the remaining term of the loan will apply. To qualify for the IDC export promotion scheme at least 30 per cent of the additional capacity generated by the investment should be directed towards exports.

3.4.2 Finance for the export of capital goods

Credit facilities are provided by the IDC and commercial banks for capital goods and services exported from South Africa. These are provided at attractive interest rates, subject to an acceptable local content. The scheme comprises the following:

- Post-shipment finance, which commences when the contract has been completed and the goods have been accepted by the buyer, or upon progress payments falling due.
- Medium to long-term finance to foreign customers, where the repayment periods are two years or more, up to a maximum of 10 years.

3.5 Export credit re-insurance

The Export Credit and Foreign Investment Re-Insurance Act was introduced in 1957 and is considered the first direct involvement of Government in the promotion of exports. Its aim was to limit the exposure of an exporter to credit risk when pursuing export opportunities. Export credit re-insurance is regulated by the Export Credit and Foreign Investment Re-Insurance Act, 1957 (Act 78 of 1957) as amended. Exporters who ship goods to buyers outside South Africa on credit terms are subject to certain risks before they receive a return on their outlay. The possibility of non-payment, owing to political or commercial circumstances beyond their control, constitutes a major part of the risk factor in the export business. Political risks include laws, wars, strikes, and political upheavals that obstruct the importation of goods in the buyer's country, or prevent transfer of payment from such a country to South Africa. Boycotts and sanctions that have the same effects also fall into the risk category.

Commercial risks consist of three main types, namely:

- The insolvency of the buyer;
- protracted default (failure to pay within six months of due date); and
- repudiation (unwarranted failure or refusal of the buyer to take delivery of goods).

The Export Credit Reinsurance Scheme, which is administered by the Credit Guarantee Insurance Corporation of Africa Ltd (CGIC) in conjunction with the Government, provides insurance cover against political and transfer risks, as well as commercial and insolvency risks. Reinsurance of the political/transfer risks is undertaken by the State through the Department of Trade and Industry, while the commercial/insolvency risks are underwritten by the CGIC. Commercial/insolvency risks are underwritten by the Department of Trade and Industry, when the capacity of CGIC is over extended.

It appears as though the scheme has been managed on a commercial basis with very little state involvement. Even the Political and Transfer risks are covered by the Credit Reinsurance Fund that is generally made up of premiums. Under Section 11bis of the Income Tax Act,

exporters could deduct an additional 75 per cent of the premium off their taxable income. This however seems to be the extent of the State's involvement. Most other developed countries have such schemes that are heavily subsidised.

Policies covering exports where credit is extended typically from periods up to 180 days cover five basic risk groups. Pre-shipment cover protects exporters who would not be able to resell goods if the contract is frustrated between the date of the contract and shipment. Goods manufactured to certain exact specifications should be covered. Post-shipment cover provides exporters with protection from the moment the goods are shipped until payment is received. An exporter will still take out marine insurance to cover loss or damage of goods while in transit. Exporters who are required to ship consignment stocks, such as South African fruit exporters, can be covered against confiscation or loss. To promote exports by enabling approved exporters to require additional finance to secure and execute certain export orders, and who would not normally be able to obtain finance under normal banking practices, guarantees are given to commercial banks who provide such finance. (For a further discussion on the potential use of credit insurance see section 5.5.)

3.6 Tax

Before 1992, section 11bis was the most important incentive available to exporters under the Income Tax Act. It was withdrawn because of cost and abuse. Nevertheless, a few other tax benefits remain which exporters can use.

3.6.1 Value-added process allowances 37E of the Income Tax Act

Section 37E of the Income Tax Act provides for an accelerated write-off of existing allowances for the cost price of machinery, plant and buildings used in a value-added process of local and imported raw materials and intermediate goods, and for an accelerated deduction of pre-production interest or finance charges.

Section 37 E of the Income Tax Act was introduced in September 1991 and expanded in March 1992. It provided for tax allowances in the form of accelerated write-offs for capital goods and property used in the beneficiation of raw materials and intermediate products. The main aim of this allowance was however geared to promoting investment in value-added projects aimed toward export.

The applications for qualifying under this scheme expired on 11 September 1993. A new company tax structure was introduced whereby the company tax rate was reduced from 48 per cent to 40 per cent. However, a fifteen per cent tax on distributed profits was introduced with the aim to encourage firms to retain profits and reinvest them in new projects.

The accelerated write-off was mainly aimed at allowing projects such as Columbus Steel and the Alusaf extensions to be internationally competitive.

3.6.2 Appointments of export agents

The Income Tax Act allows the deduction of the costs incurred in appointing agents: in countries outside South Africa for the sale of goods to persons outside South Africa. The deduction is claimable by taxpayers who carry on a trade, other than mining or farming, e.g. by a manufacturer or any authorised agent in South Africa; and in any export country (as defined in section 11bis) for obtaining orders for the supply of goods or services to persons in export countries.

3.6.3 Doubtful debt allowance

The uninsured portion of foreign debt arising from exports of capital goods may be treated as doubtful debts for purposes of a deduction in terms of section 11 (j) of the Income Tax Act.

3.6.4 Exemptions

The Income Tax Act provides for the exemption from income tax of any amount paid on or after 1 April 1990 by the State under any scheme for the promotion or financing of exports. Interest calculated in respect of a period after 1 April 1991 in terms of the GEIS is also tax-free. This interest free allowance was revoked in the budget speech on 22 June 1994.

3.6.5 Value added tax

Value Added Tax was introduced in September 1991. In common with most, if not all countries that use VAT as a form of revenue, the Act provides for the zero rating of exports of either goods or services. An exporter would therefore be entitled to obtain credit or refunds of the value added tax (input tax) paid by him on taxable supplies used to manufacture the exports.

Importantly, the Act provides for the zero-rating of services comprising the filling, granting or maintaining of intellectual property rights such as patents, designs trade marks or copyrights, insofar as they are to be used in the export country.

Exporters have not complained that the claims procedure is too complicated. There is however, a delay from the time the inputs are purchased until the time the VAT is reclaimed. This has caused certain cash flow problems initially. Exporters have however adapted to this and it seems as though procedures at the Receiver's Office are running smoothly.

3.6.6 Indirect tax incentives and concessions

A manufacturer who exports at least 15 per cent of the total value of all goods manufactured by him, calculated according to the ex-factory price, may qualify for a relief from surcharge on capital goods imported for use by him.

3.7 Concessions

There were many concessions in the 1970s and 1980s available to exporters. Reduced railway rates were introduced because the then South African Railways realised that the manufacturing was in the PWV area and that where exporters could prove that the cost of railage "is the most important reason why the product cannot be marketed at a competitive price abroad, the South African Railways will consider the introduction of reduced or 'export' rates in an endeavour to offset this disadvantage." (Department of Trade and Industry, 1973:13) This benefit is no longer available although the cost of shipping from Durban to Singapore or Rotterdam is cheaper than from Johannesburg to Durban.

Shipping lines are often willing to negotiate reduced rates with exporters. These negotiations are offered as good business practices rather than providing further incentives to exporters. There is more southbound cargo to South Africa and therefore rather than sending empty ships north, it is better to offer concessionairy rates. The Conference Lines offer a 'COP-rate' of up to $150 off each container depending on the volumes and frequency. Non Conference lines are always willing to negotiate lower freight rates, again depending on volumes, frequency of shipping, and the balance of north and southbound trade. The rates normally differ considerably, from a low of $550 for a 20 foot container shipped to Singapore to $2 400 for a container to Chile. Distance is not the deciding factor. A Container to Mombassa costs $1500. (Turners Shipping, 1996).

3.7.1 Electricity

In many industries, the cost of power is an important element of the total cost of processing. Escom is the major generator of power in South Africa. In some cases it supplies directly to the consumer, in other instances power is purchased by municipalities and other suppliers. However, Escom has made arrangements with Alusaf to supply electricity at a reduced rate and the price is determined by a formula linked to the Aluminium price at the London Metal Exchange. Since South Africa has a spare capacity of electricity that is among the cheapest in the world, this symbiotic relationship should benefit both industries and a precedent has now been established and will probably extended to other manufacturers.

3.8 Private sector subsidies

The Reynders Commission recommended that: "private firms which supply raw materials for incorporation in export products, give special attention to the possibilities of reducing their prices on those quantities used in the manufacture of goods, especially in view of benefits which could accrue from high production volumes and marginal costing; and agricultural marketing boards of whatever type consider, in consultation with the Department of Commerce, further possibilities for more favourable prices concerning the quantities of primary raw materials incorporated in export products." (RSA, 1972)

There have been many complaints that manufacturers use import parity pricing policies. They maintain separate prices for the local market and the export market, the later being lower. Many primary producers do in fact provide rebates for manufacturers who use their raw materials as inputs for the manufacture of export products. Regrettably, prices are simply brought into line with those available internationally. There is no evidence that manufacturing exporters are given the benefit which "accrue from high production volumes and marginal costing". As with all bounties, because of the potential for fraud, claims procedures are complex and add to the cost.

3.8.1 Iron and Steel

The Committee for Secondary Manufacture allows exporters who use South African steel in their exports to claim a rebate. The South African Iron and Steel Institute claimed that in the five-year period to March 1995, through this export assistance scheme of price incentives and rebated prices, the steel industry paid out R1298-million. Although it received over R800million in GEIS. (SAPA, 10 April 1996)

Although the primary producers passed on more than received from GEIS and assisted downstream manufacturers to remain internationally competitive, effective protection remained a problem for these manufacturers.

Claims submitted are only paid if there are funds available. Exporters are therefore not sure how long they will have to wait to receive these rebates. This hampers exporters' cash flow and makes it difficult to determine export costs. The claim procedure, although similar to GEIS's claim procedure, is more complicated in that exporters have to determine the value and quantity of steel exported. This also contributes to increased costs that hamper exporter competitiveness.

3.8.2 Aluminium

Huletts Aluminium and Alusaf provide an export rebate based upon the actual mass of the aluminium exported. The amount of the rebate is negotiated with the exporter before the actual export-taking place. It can therefore vary and it depends on the negotiating skills of the exporter. Huletts Aluminium were not prepared to disclose even the average rebates paid to exporter. It would seem therefore that small exporters and exporters entering the export market for the first time are at a disadvantage and therefore still experience an anti-export bias.

Claims can be submitted monthly. Exporters can therefore calculate this benefit into their export costing. However, the claims procedure and the negotiations that have to take place before exporting, simply add to the cost of exporting. Although a good second-best option, it would be preferable to reduce the protection, which would give exporters access to inputs at world prices. Claims need to be supported by audited proof certifying the aluminium mass of the product actually exported together with official export documents (DA550 or F178) to prove exports actually took place.

3.8.3 Sugar

The South African Sugar Association provides rebates to exporters of food products who use sugar as input. The rebate is calculated to give the exporter the price of sugar at world prices. The exporter therefore, could benefit by buying sugar normally at the South African price, when the South African price is lower than the world price.

The exporters have to complete certain documentation that contributes to increased costs. These have however been kept to a minimum. Regrettably, the South African Sugar Association has found fraudulent claims that may result in additional controls.

3.9 Conclusion

Although there are many schemes and export enhancement measures, clearly South African exporters face an anti-export bias along with numerous other factors that hamper their export efforts. Since 1972, the South African Government and various private sector organisations have endeavoured to compensate for the barriers. The effectiveness of GEIS in neutralising the anti-export bias and creating an export culture will be discussed in detail in chapter 5.

Table 3-11 Examples of the classification of industry types

Stage 1 Raw materials production industries	Stage 2 Materials beneficiation industries (first stage)	Stage 3 Material type products industries (second stage)	Stage 4 Manufactures type products industries
Farming	Meat	Processed foods	
	hides	Textiles	clothing
	skins		footwear
	wool yarn		
Fishing	Fish at point of sale		Printing and publishing
		Beverages	
Agriculture	Flour	Spirits	Agricultural Machinery
Sugar	Tobacco	Wood products	Industrial Machinery
Forestry	Cotton yarn	Paper and board	Mining Equipment
Mining	Vegetable oils	Metal	Electrical Machinery
	Sawn timber	sheets	Electronic equipment
	Wood pulp	plates	Motor Vehicles
	Metals-	tubes	Transport Equipment
	ingots	sections	Metal products
	anodes	wire	
	cathodes	castings	
	billets	Chemical Products	
	concentrates	Resins	
	alloys	Plastics	
	Chemicals-	Rubber	
	inorganic	Glass	
	organic	Non-metallic mineral products	

Source: BTI Report number 2614 page 22

Table 3-12 Export incentives per annum

	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Administration	0	0	0	0	0	15674284	16614311	20736291	23837401	28772629	42311487	62820		
Advertising	447929	549057	493965	701419	901787	1248979	1413372	1472216	1761710	1753476	1514493			
Fairs	575872	721525	830060	1357231	1710681	1805491	2189132	2616386	2129910	2535140	1004524			
Exhibitors	58222	164793	175409	215921	0	1364589	2859571	2568401	2063771	1879738				
SP's Export Award	0	0	0	0	415248	30440	23290	32561	31444	44625	0			
Trade Missions	70136	147705	183620	295389	444607	1246303	1303349	1365189	1277030	630695				
Sitprosa	0	0	0	0	0	196000	259000	356000	409000	450000	0	240000		
SAFTO	0	0	0	0	0	4099998	4200000	4900000	5390000	5603000	0	5250000		
Interest financing CGIC	4573213	13137545	18588425	2070041	30349809	16895195	24537350	42833702	79304645	33469683				
Interest financing foreign stock	150	1562721	2581866	2858819	3379134	6480734	4336595	3256340	658166	184106	0	0		
Warehousing	7016	118013	17877	74186	33025	761267	1043905	1177139	1251455	542880				
Primary Market research	10588	15657	21780	66104	969473	2744130	2082622	1880569	1680768	1979675	175304			
Beneficitation of minerals	42006005	56989238	68672662	78487853	83801346	105000000	131765620	157608917	159702081	46000000	134280105	134280000		
A AND B	0	0	0	0	8132896	6076046	440203910	451635450	650084686	563822277	210961089	872514000		
GEIS	0	0	0	0	0	0	0	0	0	1031854993	1156450000	1567500000		
Air subsidy on perishable	868189	2009426	1375070	2010618	5569476	5344406	2714170	2947439	3396502	1359009	0	0		
Counter Trade Ass	0	0	0	0	0	111707	381684	388934	90000	213440	0	90000		
Assistance to Auto Industry	0	0	0	0	0	4125320	0	39348589	170305765	162173724	12173472	217522000		
Joint market research	0	0	2800	2245	0	3500000	3786666	3500000	6219	0	0	67000		
Perishable products	1347132	1297829	3302637	0	4497795	4124959	3823092	3706077	4267307	1241276	0	0		
Contributions to C.of Commerce	0	0	0	0	0	251094	16657	0	805885	1315386	0	0		
SAR&H	0	0	0	0	0	0	0		62000000			0		
Wool & Mohair	0	0	0	0	0	0	0	0	0	0	0	11550000		
CGIC fund	0	0	0	0	0	0	0	0	0	0	0	1000		

Source: Department of Trade and Industry Annual Reports

4. Subsidies

The problem of export subsidies is no longer a privy issue intermittently deliberated by international trade negotiators. Subsidies have in fact moved to the centre stage of international trade fora and were prominent during the Uruguay Round of GATT. Most governments provide subsidies that benefit their exporters in one form or another. The South African Government has paid over R6 000 000 000,00 since April 1990 in GEIS payments in an effort to achieve greater growth in exports and thereby stimulating the South African economy.

Table 4-1 Amount spent on GEIS in an attempt to promote South African exports

Year	Amount spent on GEIS
1990/91	1 000 000 000,00
1991/92	1 300 000 000,00
1992/93	1 600 000 000,00
1993/94	1 300 000 000,00
1994/95	1 500 000 000,00

Source: Clothfed (1996) and DTI Annual Reports.

Assuming that an export promotion policy is suitable for South Africa and will contribute to welfare improvement, the next question is whether the government's 1990 package to stimulate exports was indeed the correct policy option. This chapter will examine the rationale behind government's use of subsidies to attain economic goals and particularly to promote exports. A definition of an export subsidy, the effect of both domestic and export subsidies, the reasons why governments use subsidises, and the rules of the World Trade Organisation (WTO) governing the use of subsidies will also be examined.

4.1 Introduction

Sovereign governments, as can be expected, use "macroeconomic, industrial or social policies" to achieve various economic or even non-economic objectives to improve the national prosperity. Subsidies are one of these measures (Hufbauer and Erb, 1994:5). Standard welfare analysis implies that subsidies reduce overall economic welfare by driving a wedge between what consumers pay and what the producers receive for a product. The optimal therefore is no subsidy. However, because markets are imperfect, this analysis has to be revised and subsidies can be shown to improve welfare if subsidies are limited. (Ford and Suyker, 1992). In the case of export

subsidies it is foreign consumers who may pay less for the goods as a result of the subsidy. Therefore, unless there are other factors such as externalities, increasing returns to scale or information asymmetries, export subsidies will not improve welfare. (These factors will be discussed in more detail in section 5.)

It is a well-established proposition that subsidies are better than other forms of government intervention. (Bhagwati and Ramaswami, 1963) and (Corden 1974) Therefore if it is deemed necessary to produce a particular product or promote a particular industry, then government should either subsidise production or the export of that product rather than imposing barriers to imports. Subsidies encourage production rather than discourage consumption.

Governments use many techniques to boost or protect their manufacturers. Tariffs are probably the oldest and most widely used methods. However there are many other non-tariff barriers that are designed to achieve the same end albeit by indirect means. The most common form of non-tariff barriers used by Governments are: quotas which include a wide range of instruments ranging from import control to voluntary restraint agreements (VRAs), local content requirements, subsidies, anti-dumping regulations, and various technical requirements such as labelling requirements or certain quality standards. New forms of protection are introduced regularly. It can even be argued that the sanctions imposed on South Africa in the mid-1980's were a form of protectionism in that the products targeted were so called sensitive products - agricultural and iron products and textiles and clothing. All the above restrictions obviously have an impact on trade.

Arguably, the easiest policy options available to government to stimulate domestic production are tariffs and non-tariff barriers. Since the end of World War II, tariffs have generally been reduced. There has been a general trend toward freer trade. However, non-tariff barriers have begun to play a more prominent role in international trade. This substitution of explicit tariffs for non-tariff trade barriers is sometimes called new mercantilism or new protectionism. (Carbaugh, 1985) The international negotiating community has limited itself mainly to those actions that assist firms directly to compete internationally. Less visible non-tariff barriers that also have the effect of limiting trade, are replacing tariffs. Subsidies are granted to help domestic

firms compete against foreign firms (in either the domestic or international market) and can also be considered an indirect form of protection. The effect of the subsidies is to allow less efficient domestic producers to compete against efficient foreign firms in the domestic market and thereby keeping the foreign competitors out. Subsidies allow firms to sell products at prices lower than actual costs or profit considerations would normally allow.

In reality, as with all government favours, subsidies are granted for a multitude of reasons. Herderschee (1995) identifies three economic reasons why export incentives are necessary in countries with high levels of protection.

- Firstly, subsidies offset protection for intermediate inputs used in the production of exports. Import substitution policies cause price increases in intermediate inputs used in manufacturing for export. Balassa (1982) has indicated the effect of the import substitution policy by calculating the effective rates of protection. The high input prices result from tariffs, quantitative restrictions or discriminatory regulations.

- The second reason for incentives is to offset factor-market distortions. As a result of protection, import-substitution firms draw scarce resources to their activities and away from exporting industries. This effect is also felt by non-traded goods and services, and their costs rise as a result of protection. As import substitution policies begin to influence the economy, skilled labour (which is scarce in developing counties) and other scarce resources are diverted to those industries. Theoretically, subsidies can be given to offset these factor-market distortions. It is usually beyond the fiscal and administrative capacity of most developing countries to implement such schemes. Liberalisation, however, remains the first best alternative.

- The third category of incentive, intra-industry subsidies, which governments can use to increase the volume of exports, is to encourage (or force) firms to use the profits generated in the home market to become competitive in the international markets. Many of the reasons given for subsidies are of a political rather than economic nature.

Subsidies can take many forms. Subsidies can vary in form from direct grants dependant upon exports, such as GEIS, to indirect assistance such as subsidised insurance cover. The instruments which governments use include grants, tax concessions, loans (below market rates), and equity participation that will be discussed in greater detail below.

There is an unrelenting debate between politicians, producers, organised labour, and taxpayers regarding the merits of supporting one sector or industry over another. Any subsidy granted to one sector would have an impact on other sectors directly or indirectly. The effect can be positive or negative.

Many justifications have been put forward for the introduction of various subsidies. These include: the infant industry (or sunset industry) argument, national security, others do it and the playing fields must be levelled, industries must achieve economies of scale, to offset the anti-export bias, exporting is more risky and more difficult than domestic marketing and therefore needs assistance, and to earn foreign currencies because of foreign debt or other financial crises to achieve social goals such as regional development. These will be discussed later in section 5.

4.2 Definition of an export subsidy

4.2.1 Domestic subsidies

It is important to distinguish between those subsidies that benefit exports directly and those which do so only incidentally. A domestic subsidy relates to all production in a particular sector regardless of its destination. All government actions are meant to benefit someone and can be regarded as a subsidy. Many of these subsidies will benefit exports albeit indirectly. Snape (1988) quotes the example of requiring flags flown on government building to be locally manufactured. This action will secure a home market and may promote economies of scale allowing the firms to export. It therefore becomes very difficult to know where to draw the line. Defence is a recognised government function. By assisting defence contractors to cover the cost of weapons, commercial applications such as computers, the Global Position Systems (GPS - to assist location plotting) and many other commercially marketable applications have been developed.

The US government is by far the world's largest consumer of military hardware. US manufacturers dominate the production of military goods involving large economies of scale. US government purchases of defence equipment often help US corporations gain economies of scale that help them in both the US and international civilian markets. Adams and Stoffaës (1994) cite the example of Boeing: The B-52 bomber resulted in the development of the Boeing 707. Now even though the Boeing 707 has reached the end of its civilian life it continues to be manufactured as the AWACS reconnaissance plane. Military R&D sometimes give US companies knowledge that they can apply elsewhere.

Although education is certainly a function of government, educating and training citizens in a particular industry will surely give that industry an advantage they can use to export. Ismail (1995) maintains that South Africa's low levels of education have been crucial to the failure of the manufacturing export sector to expand.

In the South African context, the Electronics Support Programme is a good example of a local subsidy that benefits both local sales and export sales. Manufacturers are assisted to develop new electronic applications. Although many of the items developed are exported, the aim of the programme is to develop the electronics industry.

Nam (1987) found that domestic subsidies, as opposed to export subsidies, provided by the Korea and Mexico authorities, provoked countervailing duties in the US. These countervailing duties exceeded the amounts of subsidies given to Korean or Mexican exporters. Because domestic subsidies can also be provided by many more diverse channels, than export subsidies, they are more difficult to detect. They obviously can also assist exporting and therefore the US government's countervailing duties.

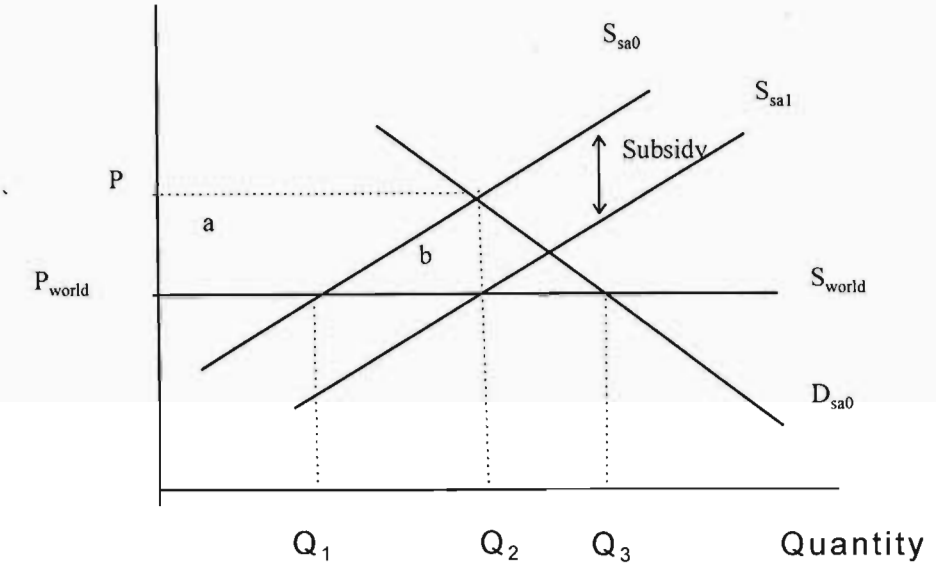
4.2.1.1 The effects of domestic subsidies

Governments give subsidies to agents in the market to influence the market to achieve certain given political, social or economic goals. The subsidies are usually designed to either lower the price or increase the supply of the good being subsidised. Subsidies will invariably have side effects that will influence other sectors of the economy. In some cases, the subsidies can affect the economy considerably in other cases less so.

However, in the majority of cases, subsidies make use of government funds which are raised by taxes. Thus the total welfare of a country can be affected negatively by the impact of the additional taxation or positively by the beneficial impact of the redistribution or other effect of the subsidy.

The trade and welfare effects of a subsidy are shown above. The initial supply for South African widgets is shown at S_{sa1} and the demand at D_{sa0}. Since South Africa is a

Figure 4-1 The economic effects of a domestic subsidy



small purchaser of widgets, increases or decreases in amounts purchased do not affect the world price. Given a world price of $P_{world,}$ South Africans would buy Q_3 and manufacture Q_1. South Africa would therefore import Q_3 - Q_1 widgets. Assuming the government then offers to subsidise the manufacture of widgets for some economic, political or strategic reason; the supply curve would shift from S_{sa0} to S_{sa1}. Domestic production would expand from Q_1 to Q_2 and the amount imported would reduce accordingly. The subsidy revenue will partly be redistributed to efficient widget producers as a producer surplus denoted by area **a.** There is also a protective effect that allows more costly less efficient production to take place. This is shown by area **b** and is a dead-weight loss to the South African economy. The Government could achieve a similar effect by using tariffs or quotas. This would generally involve a larger sacrifice in national welfare. Unlike subsidies, tariffs and quotas distort the choices for domestic consumers. Subsidies on the other hand have to be paid for directly by tax revenues, which may not be popular with taxpayers.

4.2.1.2 Effects of an export subsidy

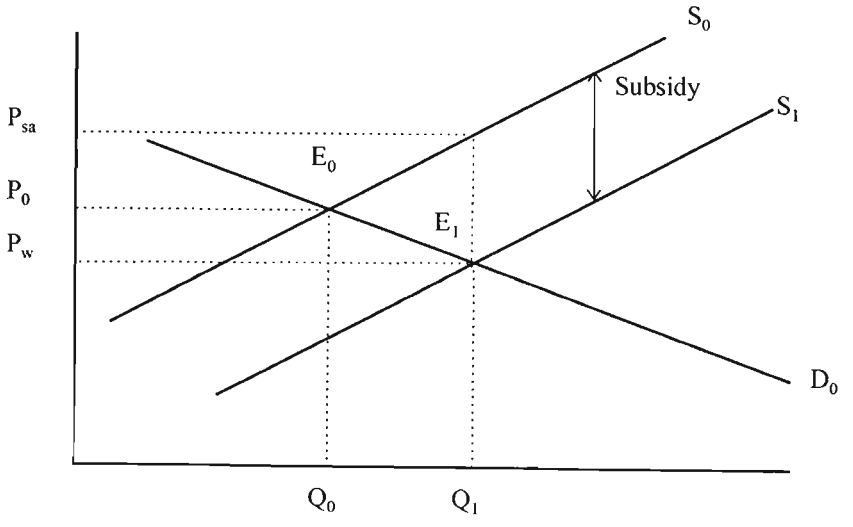
In essence export subsidies are measures provided by government that allow an enterprise to sell in an export market at a price below the total net private costs of production for that market; or allow customers in an export market to buy at a price below the costs of supplying that market. This assistance is provided to exporters in three ways: Directly, by subsidising the cost of an industry or activity by providing concessionary taxes, exemption from government charges, reimbursement of charges at more than 100 percent, government equity participation or free provision of market information; indirectly, by subsidising the costs of inputs to an upstream industry - for example, by subsidising domestic industries which provide material inputs to an export, or by subsidising the infrastructure used by industry (for example by under-recovering the cost of port services); or by subsidising consumption - such as by providing export credit at less than commercial rates or underwriting risk so that more favourable rates can be obtained than would otherwise be the case.

The beneficiaries of the subsidies include the owners and employees of the industry producing the subsidised output and consumers of the subsidised product.

In the case where a government has given an export subsidy, producers are encouraged to export by providing an incentive either to reduce the price paid by foreigners to South African firms or to increase the margin. Foreign consumers are favoured over domestic consumers to the extent that the foreign price of the subsidised product can be less than the products domestic price.

It is assumed that the exporting country (South Africa) is not a price taker, but rather

Figure 4-2 The effects of an export subsidy



selling into niche markets. At the equilibrium point E_0, the exporter will sell Q_0 at price P_0. When government introduces a subsidy, the equilibrium point moves from E_0 to E_1. The demand curve D_0 represents the foreign importer's demand curve and remains unaffected by the subsidy given to the exporters. Therefore, the price paid by the importer drops to P_w while the price received by the exporter increases to P_{sa}. From the above analysis, clearly two effects take place when an export subsidy is given to an industry. Firstly, the subsidy will have an impact on the terms-of-trade. The equilibrium point shown by E_0 will move to E_1. The export price will fall. This will result in a decline in the country's terms-of-trade. Secondly, there will be a revenue effect. The drop in the price paid by foreigners will result in an increase in the quantity bought from Q_0 to Q_1. If the percentage of goods sold increases more than the percentage drop in the price of the goods, the country will benefit.

After GEIS was introduced the timber furniture manufacturers complained that foreign importers were negotiating with different manufacturers in South Africa with the effect that after the introduction of GEIS, export prices fell by almost 19 per cent, which represented the value of the subsidy to the manufacturer. Although production did expand, and exports of pine furniture increased, this did take time and therefore the net welfare effect of the subsidy was negative.

4.2.2 WTO definition

The WTO was founded to promote fair trade among nations. It has drafted regulations to discourage or prevent the use of subsidies that distort competition and adversely affect other countries. The WTO does not wish to restrain the right of governments to provide subsidies unduly. Three categories of subsidies have been identified: prohibited, permissible and actionable subsidies.

The Marrakech Agreement defines a subsidy as existing if the government makes a financial contribution either directly or through an agent to a firm or industry, or provides income or price supports. One of the following must occur: direct transfer from the government's funds or the government guarantees of payment of loans; the government foregoing the revenue that should otherwise have been collected; or the government providing goods or services, or purchasing goods benefiting the industry.

4.2.3 Definition

Before any meaningful discussion can take place, the term "subsidy" must be defined. There are many proposals for the definition of the term "subsidy". Subsidies can take the form of cash grants, tax exemptions, preferential exchange rates, government contracts with special privileges, inputs (including electricity) at reduced prices or prices below the cost of producing that input; or any other favourable treatment given to firms. In fact, since export subsidies have been outlawed by GATT, they are mutating and adopting forms more difficult to detect.

The provision of subsidies has resulted in the over-production of certain commodities and the demise of certain industries in particular countries. Subsidies are a sensitive matter and are regularly discussed in international trade fora. Subsidies were one of the most heavily discussed issues during the Uruguay Round of GATT. As there are legal and diplomatic implications it is important, subsidies are defined. Hufbauer and Erb (1984) hold that "virtually all definitions failed to meet the practical needs of the policymakers". Broadly, these "policymakers" are international fora where governments meet to discuss the ramifications of each of their policies on their countries and to negotiate changes. The United Nations (1982) use the following definition of subsidies for national accounting purposes:

> *Subsidies include all grants on current account which private industries receive from government. These transfers which, in view of the basis on which they are made, represent additions to the income of the producers from current production. The grants may, for example, be based on the amount or value of the commodities produced, exported or consumed, the labour or land employed in production, or the manner in which production is organized and carried on. Transfers by public authorities to private industries for investment purposes or to cover destruction, damage and other losses in capital and working assets are classed as capital transfers rather than as subsidies.....Subsidies also include all grants on current account which government make to public corporations, for example, in compensation for operating losses (negative operating surplus). In the case of government enterprises, transfers on current account should be treated as subsidies when it is clear that the transfers are the consequences of the policy of the government to maintain prices at a level at which the proceeds of the enterprise will not cover the cost of production.*

For a number of years, the question of what a subsidy is, has been the focus of economists, politicians, and lawyers. In 1979, the Tokyo Round of the GATT

negotiations was concluded. A "Code" was negotiated which interpreted and extended GATT provisions relating to subsidies and countervailing duties.

It is thus difficult to find a workable definition of a subsidy. Policymakers have therefore turned to the degree to which governments provide subsidies. Hufbauer and Erb identify four broad concepts that provide the framework of the pre-Marrakech international rules governing subsidies and countervailing measures: firstly, all producers must have access to inputs at "world" prices and should be able to sell their output on world markets at world prices; secondly, governments should not subsidise exports - selling goods internationally cheaper than in the home market; thirdly, incentives to industries or agriculture should not be sector specific; and fourthly, any nation should be entitled to the offsetting remedial action where the second and third principles and the resulting trade harm the nation's economic interests.

Subsidies given by the government of the exporter may harm either the domestic industry of the importing county and other exporters.

4.2.4 The General Agreement on Tariff and Trade (GATT)

Although there were attempts in the 1920s to return to the gold standard and to organise trade on a more liberal basis (du Plessis, 1994), the period between the two world wars was characterised by bilateralism in trade relations and a disintegration of free trade. Many countries reverted to protection and autarky after the Great Depression. Towards the end of World War II, the Allied Powers planned to form three organisations to prevent the international economic problems that preceded the war. These were:

- The IMF to take care of short-term problems of international liquidity;
- The International Trade Organisation (ITO) to take care of the real side of internal trading and create liberal system of regulations governing international trading conditions; and
- The International Bank for Reconstruction and Development (IBRD)/World Bank to help channel international investment along desired lines.

Unfortunately, the ITO, the instrument that was to carry the world into a system of free trade, was the least successful. In fact, the organisation was never ratified by many governments. A less ambitious organisation, GATT, came in its place. It served as a "clearing house" for trade negotiations between countries. The GATT was originally signed by 23 countries including South Africa but now represents more than 100 countries and about 24 other nations on a provisional basis.

Seven "rounds", apart from the founding conference, of tariff-bargaining negotiations have taken place. These were in 1949 (Annecy, France), 1951 (Torquay, UK), 1956 (Geneva), 1960-61 (The Dillon Round), 1964-67 (The Kennedy Round), and 1973-79 (The Tokyo Round). The latest, the Uruguay Round, was initiated in Punta del Este, Uruguay in September 1986 and was concluded with the acceptance of the Final Act in December 1993 and signed in Marrakech early in 1994.

GATT has successfully seen the steady reduction of tariffs and a dramatic increase in world trade. However many tariff barriers have been replaced with non-tariff barriers and subsidies that distort free trade. Trade among participants has seen a seven-fold increase since 1950. GATT's success in reducing tariffs saw an increase in the use of non-tariff barriers. GATT lamentably only regulated trade in manufactured goods. The Uruguay Round established rules for reducing non-tariff barriers, brought services, agriculture, and foreign investment into the negotiations, and protected intellectual property rights.

4.2.4.1 The Uruguay Round

On 15 April 1994 South Africa became a signatory to the Uruguay Round of the Multilateral Trade Negotiations, the Marrakech Agreement after the Final Act was signed. The key elements of the Agreement, a 400 - plus page legal document, can be summarised under three headings:

- Liberalisation of international trade by way of a lowering of import tariffs and the elimination of non-tariff measures;
- Strengthening of international trade rules e.g. new agreements on subsidies and anti-dumping and safeguard measures; and

- New agreements on subjects not previously covered by the GATT, namely Trade in Services, Trade-related Aspects of Intellectual Property Rights (TRIPs), and Trade-related Investment Measures (TRIMs).

These agreements have and will continue to affect virtually all aspects of South Africa's foreign trade and they will have a direct bearing on the competitiveness of industries. As a result of the agreement, South Africa has now been fully integrated into the international trading community and will in future have to adhere to all the rules and regulations in this regard. South Africa's offer to the aforementioned Uruguay Round was negotiated and debated within the National Economic Forum - labour, business, and government are therefore equally bound by this agreement. It can be added that South Africa also consulted the other Southern Africa Customs Union members[12], albeit at a late stage, on the offer to GATT.

GATT has been responsible for much of the liberalisation of international trade since the end of World War II. The Uruguay Round too, contributed to the improvements made in multilateral rules pertaining to international trade in goods. Problems relating to the trade of services and the protection of intellectual property were also addressed. The Uruguay Round also saw the creation of the WTO of which GATT is now only one part.

Agreement On Subsidies And Countervailing Measures (SCM)

Before the Uruguay Round, countries had the option of signing various codes. Before the Final Act, countries could sign a separate Subsidies Code. Regardless of whether a country signed the code, providing they were signatories to the GATT, they enjoyed most favoured nation status. South Africa chose not to sign the Subsidies Code. (Du Plessis, 1994). This alternative was not offered in the Final Act and countries either had to sign the entire agreement or not be part of the multilateral negotiating system, which would have had serious implications regarding trade and the most favoured nation status members enjoy with each other.

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[12] The so-called BLSN-countries viz. Botswana, Lesotho, Swaziland and Namibia.

The GATT rules do however recognise that governments grant subsidies for various measures such as encouraging the development of new industry. The GATT rules governing the use of subsidies are complex and differ for industrial and agricultural products. The main GATT provisions are elaborated in the SCM (for industrial products) and in the Agreement On Agriculture (for agricultural products). The SCM defines a subsidy and introduces the idea of a "specific subsidy". For the most part, the SCM set out to control subsidies available only to an enterprise, industry, or group of enterprises or industries within the jurisdiction of the authority granting the subsidy.

Only specific subsidies would be subject to the disciplines set out in the Agreement where:

> There has been a financial contribution by a government (or any public body) where: the government practice involves a direct transfer of funds (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees); government revenue that is otherwise due is foregone or not collected (e.g. fiscal incentives such as tax credits)[13]; a government provides goods or services other than general infrastructure, or purchases goods; or a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments.

Except as provided in the Agreement on Agriculture, the following subsidies, are prohibited: subsidies contingent, in law or in fact[14], whether solely or as one of several

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[13]In accordance with the provisions of Article XVI of GATT 1994 (Note to Article XVI) and the provisions of Annexes I through III of this Agreement, the exemption of an exported product from duties or taxes borne by the like product when destined for domestic consumption, or the remission of such duties or taxes in amounts not in excess of those which have accrued, shall not be deemed to be a subsidy.

[14]This standard is met when the facts demonstrate that the granting of a subsidy, without having been made legally contingent upon export performance, is in fact tied to actual or anticipated exportation or export earnings. The mere

other conditions, upon **export performance**; subsidies' contingent, whether solely or as one of several other conditions, upon the **use of domestic over imported goods.**

The aim of the Agreement is to prohibit or discourage governments from using those subsidies that distort conditions of competition and cause adverse effects on the trade of other economies and not to prevent governments from their right to grant subsidies. (ITC, 1995)

Prohibited, actionable and non actionable subsidies

The Agreement establishes three classes of subsidies; prohibited (red), actionable (amber) and non-actionable (green). (The traffic lights are used as an analogy; red - must stop; amber - proceed with caution; and green - may proceed.) First, it deems the following subsidies to be "prohibited": those contingent in some way upon export performance; and those contingent upon the use of domestic over imported goods. The agreements illustrative list includes:

- subsidies based on export performance (such as GEIS);
- currency retention schemes involving a bonus on exports;
- provisions of subsidised domestic inputs;
- exemptions from direct taxes (e.g. tax on profits related to exports);
- exemption from indirect taxes (such as VAT) on exported products in excess of those borne by the product (South Africa's system in this regard therefore falls within the prescriptions);
- remission or drawback of import charges in excess of those levied on inputs consumed in the production of exported goods (again South Africa's drawback and rebate schemes - sec 470,03 and 521 - do not make provision for payments in excess of those levied and are therefore "GATT-friendly");

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fact that a subsidy is granted to enterprises which export shall not for that reason alone be considered to be an export subsidy within the meaning of this provision.

- export guarantee programmes offering levels of coverage in excess of the long-term costs of the programme (South Africa's credit reinsurance schemes has run at a profit and therefore does not offer excessive levels of coverage); and
- overtly preferential export credit programmes, where they are used to secure a material advantage in export credit.

In addition, subsidies that are contingent on the use of domestic over imported goods are also prohibited.

Under the previous GATT rules, the codes pertaining to the use of export subsidies did not apply to developing countries. The new rules have now been extended to include developing countries except for the least developed countries and countries with GDPs less than $1000 per capita. The rules however do allow a more generous period in which to phase out the subsidies in the case of developing countries.

The second category is "actionable" subsidies. The agreement stipulates that no member should, using subsidies, adversely effect the interests of other WTO members. The subsidies should not cause injury to the domestic industry of another signatory, nullify or impair the benefits accruing directly or indirectly to other members under the General Agreement (in particular the benefits of bound tariff concessions), or serious prejudice to the interests of another member. "Serious prejudice" is presumed to exist for certain subsidies, including when the total ad valorem subsidisation of a product exceeds 5 per cent. In such a situation, the burden of proof is on the subsidising member to show that the subsidies in question have not caused serious prejudice to the injured member.

The third category involves "non-actionable" subsidies, which are either non-specific subsidies, or specific subsidies involving assistance to industrial research and pre-competitive development activity, assistance to disadvantaged regions, or certain types of assistance for adapting existing facilities to new environmental requirements imposed by law and/or regulations. Where another member believes that an otherwise non-actionable subsidy is resulting in serious adverse effects to a domestic industry, it may seek a determination and recommendation on the matter. These would include

subsidies for research activities, subsidies to adapt existing facilities to new environmental requirements and to assist the development of industries in disadvantaged regions.

Even the developing countries have to cease export subsidies on products that are "export competitive", having at least 3,25 per cent share of the world market of any section in the Harmonised System Nomenclature (HS) for a period of two years. Further any subsidies given to encourage privatisation will be treated as a non-actionable subsidy.

Remedial actions and countervailing measures

Where countries feel that they have been adversely affected by a permissible subsidy, the agreement allows for the matter to be raised in the WTO Dispute Settlement Body. Another part of the agreement concerns the use of countervailing measures on subsidised imported goods. It sets out disciplines on the initiation of countervailing cases, investigations by national authorities and rules of evidence to ensure that all interested parties can present information and argument. An application for an investigation shall include sufficient evidence of the existence of a subsidy, *material injury* to the domestic industry; and a causal link between the subsidised imports and the alleged injury. A countervailing duty can only be imposed after an investigation by the *injured country.* However, rules and procedures are set out. The rule does not per se regard that the exporter may sell his product at a lower price in the foreign market than in the home market as censurable. It is realised that the importing country's industries and consumers may benefit from the lower prices. The domestic industry must therefore complain about suffering from *material injury* because of the subsidy. This will be determined by factors such as a decline in output, sales, market share, profits, productivity, return on investment, and the utilisation of capacity. Potential decline as well as actual decline suffered is taken into consideration. Also included are the effects on domestic prices, actual or potential effects on cash flow, inventories, employment, wages, and growth. The producers who petition the investigation must represent at least 50 per cent of production of the producers who expressed either an opinion for or against the application and must also represent at least 25 per cent of the industry's total production. Once a decision to undertake an

investigation is initiated, the investigating authorities have an obligation to notify the government of the exporting country.

Calculation of the amount of a subsidy

Certain disciplines on the calculation of the amount of a subsidy are outlined, as is the basis for the determination of injury to the domestic industry. Any method used by the investigating authority to calculate the benefit to the recipient conferred, shall be consistent with specific guidelines. The Agreement would require that all relevant economic factors be taken into account in assessing the state of the industry and that a causal link be established between the subsidised imports and the alleged injury. A determination of injury shall involve an objective examination of both the volume of the subsidised imports and the consequent impact of these imports on the domestic producers of such products.

Investigations

Countervailing investigations shall be concluded immediately in cases where the amount of a subsidy is *de minimis* (the subsidy is less than one per cent *ad valorem*) or where the volume of subsidised imports, actual or potential, or the injury is negligible. Except under exceptional circumstances, investigations shall be concluded within one year after their initiation and in no case more than 18 months. All countervailing duties have to be concluded within five years of their imposition unless the authorities determine the expiry of the duty would be likely to lead to continuation or recurrence of subsidisation and injury. Public notice of products that are subject to such investigations shall be given, and other interested parties notified. Under this agreement a Committee on Subsidies and Countervailing Measures has been established. There is also an obligation to enter into negotiations with the government of the exporting country before the investigation is undertaken. Exporters can avoid countervailing duties imposed on their products by undertaking to increase their export prices.

There is an obligation that there is constant review of the countervailing duties. A sunset clause is also included under which countervailing measures automatically expire five years after their imposition.

4.2.4.2 GEIS and the SCM

Clearly GEIS qualifies as a "prohibited" subsidy and could possibly in some cases be viewed as an "actionable" subsidy in terms of the SCM. In terms of Article 28.1 (ii) of the SCM, GEIS, which is generally recognised as being susceptible to the definition of a prohibited subsidy, will have to be brought into conformity with the provisions of that Agreement within three years of the date of entry into force of the WTO for South Africa, 1 January 1995.

Of special importance is Article 28.2 of the Agreement which is interpreted to mean that after the entry into force of the WTO, a notified prohibited subsidy scheme may not be renewed in the event of it expiring before the end of the three-year period as provided for in Article 28.1 (ii). Article 29 of the Agreement refers to "members in the process of transformation from centrally planned into market, free enterprise economy ..." Such members are allowed a period of grace of seven years to bring their subsidy programmes into conformity with the Agreement and, furthermore, the Counsel has the discretion of inter alia extending the time-frame. The provisions applicable to developing countries are complex, but Article 27.2 (b) allows for eight years for the phasing out of their prohibited subsidies (GATT, 1995). The Agreement recognises that subsidies may play an important role in economic development programmes of developing countries. Therefore, provision has been made for exemptions from the disciplines of the Agreement in respect of least-developed countries. There is no provision in the Agreement in terms of which South Africa could apply for derogation from the three-year period of grace for GEIS.

The GEIS Guidelines were changed on 1 April 1995 with the aim of eventually reducing benefits and phasing out the scheme by the end of 1997. The following changes were introduced:

- GEIS became taxable;
- The E-factor remained, but no benefits are paid if the net M+E drops below 2 percent;
- The minimum category 2 level of 2,5 percent was abolished;

- The cut-off point for full incentives was reduced from 75 percent to 60 percent local content to increase competitiveness;
- Certain category 3 products were reclassified as category 2;
- There were maximum benefits associated with each product that will be reduced as shown in Table 4-2 below:[15]

Table 4-2 ***Revised net pay out levels***

Period	Category 3	Category 4
1/4/95 - 31/3/96	3%	14%
1/4/96 - 31/3/97	2%	12%
1/4/97 - 31/12/97 (9 months)	0%	10%

Source: DTI

While the SCM allows for the phasing out of GEIS as shown above during the transitional period, the threat remains that South African exports receiving GEIS can be countervailed if the importing countries domestic industries are injured.

4.2.4.3 Agreement on Agriculture

Over the years, GATT was able to develop rules for subsidies on industrial products. Unfortunately, it has not been able to bring about the same discipline to subsidies granted by governments to the agricultural sector. The Agreement on Agriculture is the first systematic effort to lay down rules for subsidies on agricultural products. This agreement nearly caused the whole Marrakech Agreement to falter. The rules however do differ from the SCM. There are no prohibited subsidies. Governments are required to reduce subsidies. The agreement does however establish a ceiling on the value and volume of subsidised exports of agricultural products. Developed countries are required to reduce their export subsidy expenditure by 36 per cent over six years while the volume of subsidised exports must be cut by 21 per cent. GATT estimates that international export subsidies on agricultural products will be reduced from $22 500 000 million to $14 500 000 million. The EU pays half of these subsidies.

15 These benefits have subsequently been revised. A full discussion concerning the history of GEIS and the changes made are discussed in Chapter 5.

The WTO secretariat estimates that annual gains in world income will range from $100 000 million to $315 000 million, using various static models and between $185 000 million and $510 000 million using various dynamic models.

4.3 The role of subsidies in South Africa's industrial policy

South Africa has followed a typical pattern of development. A self-sufficient agricultural-based economy developed, with the help of gold and diamond mining, into a manufacturing based economy. The aim of industrial policy is to change the structure of the economy moving away from an agricultural or mining-based economy to an economy based on manufacture. Unfortunately, agricultural-based economies are almost universally perceived as being less desirable than manufacturing based economies. This perception is exacerbated by the fact that generally industrialised countries have a greater per capita income than undeveloped countries. (Davis, 1990). It is this rationale which governments use to promote industrialisation. Regrettably governments, especially democratic governments, look to the short term and ignore the medium and longer-term implications. Although even Keynes was also suspicious of the long term and declared: "In the long term we will all be dead", policies do have implications over time. Therefore, governments eventually have to face the long term realities of their policies. It is for this reason, that looking at the implications of subsidies both in the long and short term is necessary.

Various reasons for government interference in the South African economy using subsidies have been mooted. Economic reasons such as the infant industry argument were augmented with political objectives such as national security or decentralisation. Real or perceived threats caused government to stress self-sufficiency and allowed enterprises to operate behind a wall of protection and subsidies. Partly due to apartheid logic it was felt that urbanisation was bad. To encourage citizens to stay in the rural areas, a decentralisation policy was introduced giving subsidies to companies willing to invest in those areas. In addition, in common with most other governments, there was a need to assist local industry. These affect on other industries that lobby their governments for incentive to counter-act the incentives or in fact to give their industry an advantage.

In 1958 the Viljoen Commission (RSA, 1958)[16] recommended that the balance of payments be kept in equilibrium and endorsed the encouragement of exports on an economic basis. The Commission came to the conclusion that: "Even though subsidies, may, in certain cases, be shown to be preferable to tariffs as a means of protection, their application is beset by many practical difficulties that their scope must always be strictly limited." (RSA, 1958). Until approximately 1970, successive South African governments relied on import substitution policies. As a result of various rounds of GATT negotiations, import control was replaced by tariff protection. The Report of the Technical Committee on the Practicability of the Van Huyssteen Study Group Proposals (RSA, 1978) found that "import substitution, export promotion and expanding the size of the domestic markets are not, however, alternatives but are more often than not in practice complementary."

Kleu (RSA, 1983)also set out "three sets of policy measures which deserve consideration: a reduction of the existing level of protection; a system of domestic taxes and subsidies coupled with exchange rate adjustments; and a system of taxes and subsidies on external trade with or without exchange rate adjustments." Kleu further recommended that the 1980 system of export incentives be continued, but that certain shortcomings must be eliminated. In 1988 the Board of Trade and Industry (RSA, 1988) found that the 1980 system of export incentives was ineffective and failed to achieve the objective of increased and diversified exports. The reasons given were that the level of the incentives was too low and the method of payment was inappropriate. The Board recommended the following in order to increase and diversify exports: that the A, B, C and D export incentives be phased out, that the system of rebates be improved, that a system of "input cost assistance" for particular industries be introduced, that export market development and export marketing project assistance be given, that productivity improvement schemes be introduced; and that comprehensive structural adjustment programmes be devised for selected industries. The Department of Trade and Industry dismissed these recommendations as being administratively too difficult. Nevertheless Categories A, B and C were abolished and

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[16] The Commission of Inquiry into the Protection of Industry

were replaced by GEIS, EMA, Phase VI and the Duty Credit Scheme, all of which have been found wanting and have been restructured or are in the process of been abolished or restructured.

Belli *et al.*(1993) confirmed that South Africa suffered from an anti-export bias as a result of the protection policy. The system made domestic sales in South Africa more lucrative than sales into foreign markets. This was achieved by allowing firms to raise prices in the domestic market more than would have been the case without protection. Secondly, the costs of inputs increased and therefore made South African firms less competitive internationally. In other countries, the anti-export bias is counteracted with effective duty drawback schemes, export-processing zones, and subsidies. Although South Africa has some of these schemes in place, Belli concluded that "they are not commonly used and their effectiveness is doubtful".

4.4 The international use of export subsidies

Politicians, trade negotiators, business executives and trade unionists call for the proverbial "level playing field", while manufacturers call for increased protection of their industries and subsidies and governments around negotiating tables are calling for subsidies to be reduced. Although GATT has played a major role in the liberalisation of trade and has had a code regulating subsidies, governments continue to give subsidies to their exporters. These vary in form and extent.

Although the US condemns the practise of export subsidies, US exporters also receive subsidies. Roberts and Whish-Wilson (1993) have shown that the expansion of the US Export Enhancement Programme (EEP) damaged the Australian wheat industry, (although Australia has certain export-support measures that it pays to its exporters.) The EEP is an export subsidy scheme applied selectively to US exports to certain markets that account for most US wheat exports. It was found that these subsidies increase average prices to US producers that led to increases in US production and exports. Higher US exports depress world prices thereby adversely affecting returns for Australian wheat. These subsidies also result in lower prices on targeted EEP markets than elsewhere (Roberts and Whish-Wilson, 1993).

The whole of the Uruguay Round of GATT negotiations was nearly derailed because of export subsidies given to farmers in the European Community. The EU grants export subsidies on a wide range of agricultural products including wheat, wheat flour, beef, dairy products, poultry, and certain fruits, as well as some manufactured products such as pasta. The Uruguay Round agreement requires that the EU reduce export subsidies over six years by 21 per cent in volume and 36 per cent in value from a 1986-90 base period. On the other hand, Nothdurft (1992:80) found that: "The Europeans have concluded that direct business subsidies simply do not work. Subsidies do not improve competitiveness because they do not change capabilities. They do not engender commitment to a course of action because recipients have made no meaningful investment and stand to lose little. And they do not provide public programme managers with useful information on the needs of clients, because there is no market feedback, no market test for the Assistance." The Marrakech Agreement distinguished between agricultural and other subsidies. Two agreements were concluded; one for agricultural and another general agreement for all other products.

The use of subsidies and other forms of incentives world-wide is considerable. Many subsidies are difficult to detect because they are in contravention of WTO rules. Although the extent to which individual South African exporters have benefited from the Categories A and B and GEIS has not been made public (except for very general details of the largest GEIS claimants), the schemes were very transparent.

4.4.1 Research on the impact of export subsidies

Various studies have been undertaken internationally to determine the impact of export subsidies on the domestic economy of the country offering the subsidy. It is not clear whether subsidies in fact do give an exporting country an advantage.

4.4.1.1 Latin America

According to Nogués (1989), after the experiences of the depression of the 1930s and particularly after World War II, most of the Latin American countries embarked on import substitution strategies to promote industrialisation. These policies contributed to balance of payment problems which in turn delayed development. Export subsidies were introduced to reduce the anti-export bias. Nogués found that export subsidies

appear to have improved exports in Brazil (although the econometric evidence is weak). He ascribes this success to the fact that Brazil liberalised import control and stabilised the real exchange rate at the same time that subsidies and other policies conducive to growth were introduced. In other Latin American countries, particularly Argentina, export subsidies failed to have any significant impact. In Argentina, export subsidies contributed negatively to the economic development. This, Nogués argues, was because the export subsidies contributed negatively to the fiscal effects, there was exchange rate misalignment, the subsidies had an anti-employment bias and an anti-efficient export bias.

Nogués stresses that governments should distinguish what is possible from what is likely. The likelihood of an export subsidy contributing positively to exports is low when they are applied in an environment of high import protection and unstable real exchange rates.

Export subsidies compete with other government programmes, and if they are unsuccessful, government funds would be better spent on infrastructure, health and education.

4.4.1.2 Costa Rica

Hoffmaister (1992) developed a model to estimate the effects of export subsidies on the supply of exports in Costa Rica. Although the export subsidy scheme led to an increase in exports, the direct fiscal costs were substantial. The subsidy scheme also led to a significant increase in imports. Hoffmaister contends that the elimination of export subsidies would not have a particularly harmful effect on the trade balance and would improve the fiscal position and thereby generate economic efficiency.

In its review of Costa Rica's Policies the GATT (1996) found: "The most distinctive feature of Costa Rica's economic policy from 1990-1995 has been the liberalisation of trade and the deregulation of the economy. These objectives have been achieved through the adoption of a number of measures under four different approaches: unilateral opening, participation in the Central American integration system, negotiation of a Free Trade Agreement with Mexico and, of course, the adoption of the commitments negotiated within the framework of the Uruguay Round.

"The policies and measures taken in these areas have yielded very positive results for the strengthening of Costa Rica's export capacity and its greater integration in the global economy. Since 1990, exports have increased at an annual average rate of 14 per cent, rising to a figure of 29 per cent for the first three months of 1995. The composition of exports has changed, with a noticeable decrease in the dependence on traditional crops and an increase in non-traditional exports, which now amount to more than 50 per cent of total exports. In addition, the markets for Costa Rica's exports have diversified, moving away from the focus on the Central American market during the 1970s, which then received around 70 per cent of exports, towards other markets, mainly around 45 per cent to the United States and 30 per cent to European countries. Imports have also increased over the past four years at an annual average of 13 per cent.

"The increase in exports, as well as their importance as the driving force for growth in the Costa Rican economy, means that Costa Rica has had to play an increasingly active and aggressive role in defending its trade interests, above all endeavouring to maintain and increase access to the markets of other trade partners and to defend its exports against the protectionism prevalent in other markets. To do so, Costa Rica has sought to avail itself of the instruments offered by the multilateral system." (WTO, 1995)

4.4.1.3 Turkey

Turkey has had similar developmental experiences as Latin America and South Africa. After World War II, Turkey embarked on a policy of import substitution. This contributed to pressure on the balance of payments (Krueger, 1985). The failure of the import substitution growth strategy led to the adoption of an outward-oriented export promotion strategy introduced in 1980. The two significant export promotional instruments used were: firstly, the adoption of the Japanese sogo shosha export trading companies. They received certain rebates, tax incentives, and subsidies. Although the aim was to establish trading houses that could assist small manufacturers export their products, in reality most of the trading houses was part of large industrial groups and exported the parent's products. Secondly, attractive incentives were used as instrument. These took the form of tax rebates, rebates from the Support and Price

Stabilisation Fund, export credits, foreign exchange allocation, retained foreign exchange earnings, duty free imports, tax exemptions, and technical and administrative support. Changes to the system were frequent. Because the systems were complicated, exporters and manufacturers were never quite sure where they stood. (Dicle and Dicle, 1992)

Dicle and Dicle (1992:74) conclude that it was not clear that an export promotion strategy based on direct monetary incentives can ensure enduring success. Further, "the ephemeral success resulting from subsidised competition can be deceptive." A sound export promotion strategy requires a well-developed infrastructure, qualified work force, domestic investment for export production (an export culture) and appropriate technology. They do concede that temporary measures may be required initially.

4.4.1.4 Taiwan

Herderschee (1995) found that in 1969 the majority of exporting sectors in Taiwan had a large domestic sales base which was limited in growth potential because of the size of the market and market barriers. Taiwan used various export incentives including drawbacks of import duties, pre-export finance, provided export information, and subsidised export credit and insurance. The tax and export credit subsidies only amounted to 3,8 per cent and therefore protection offsets were the single most important export incentive. Because of these export incentives, Herderschee found that export production allowed firms, of all sizes, to achieve economies of scale and firms shifted from production for the Taiwanese market to production for the export markets.

4.4.2 Conclusion

Although export subsidies may have led to increased exports, the desired macro-economic effects were not always achieved. The subsidies had a direct negative impact on the fiscus. The increased exports often led to an increase in imports with no net foreign exchange savings. Therefore, even though exports can be shown to improve growth, the instruments used to promote exports may neutralise these effects.

4.5 Evaluation of the benefits of subsidies and other export promotional activities

The International Trade Centre (ITC, 1987) recommend that governments undertake evaluations of their export promotion programmes in order to ascertain the magnitude of the results and the effectiveness of the programme, to uncover problems and solutions, identify any improvements and help define activities which will contribute to the effectiveness of any new programme. Countries use different methods to evaluate their respective programmes: Canada uses a cost-benefit analysis as well as making an assessment of what exports would have achieved without the programme, France uses experienced specialists to evaluate each programme and to make recommendations regarding future programmes, Ireland uses both internal and external evaluators, Japan do not have any systematic review mechanism but do undertake evaluations on an ad hoc basis, while the UK setup certain returns that it hope to achieve for each project and then measure the result against this norm. The ratio of total export promotion costs to the total value of additional exports generated is in the order of 1:50, while individual programmes vary from 1:3 and 1:146.

Various statistical techniques can be devised for each programme to ensure that the evaluation is scientific. Targets set beforehand ensure that all parties are aware of what is required and they will be aware that should the goals not be reached the programme will be terminated. No goals or targets were set when GEIS was implemented. The system was open-ended and aimed simply to export as much as possible. Exporters were promised that GEIS would last at least five years. It could therefore be justifiably said that: If you do not know where you are going any road will take you there!

4.6 Conclusion

The strategic trade policy argument holds little relevance to the South African manufacturing sector, since most markets in which they operate are not oligopolies. Most South African exporters are price-takers. If the rationale of the strategic trade policies in fact do take hold and if governments believe that they will increase the welfare of their countries, and subsidies are also extensively used, South Africa's

trade will be detrimentally affected as a small country, because she will not be able to match the resources used in providing subsidies.

Valid reasons have been given for each of the tariffs and subsidies imposed on the economy. However, the stage has long been reached that the subsidies and other forms of protection are given because of the distortions created by past policies. Although GEIS can therefore be accepted as a policy implemented to reduce the anti-export bias, steps should have been taken to reduce the cause (the anti-export bias) and not the symptom. Exporters who are competitive internationally would continue to export and would in all likelihood increase exports and fully exploit their comparative advantage in an increasingly liberal global economy. "Government does not have the power to encourage one branch of production except by curtailing other branches. It withdraws the factors of production from those branches in which the unhampered market would employ them and directs them to other branches... It may subsidise openly or disguise the subsidy in enacting tariffs and thus forcing its subjects to defray the costs..."(von Mises, 1949:737).

The Australian Tariff Committee was of the opinion that subsidies were inferior "Since bounties require payments, while duties create receipts, the interests of the treasury are all against bounties. Bounties are less popular with protected interests, partly because their costs are more obvious, but also because they are less secure. And the more effective the protection becomes, and the larger the volume of production, the larger is the amount required for the bounties. It may be equally so with duties, but the larger amount is not realised." (Union of South Africa, 1958).

Firstly, from a growth point of view, export promotion is a more promising strategy than import replacement, since the costs of export promotion are borne by the fiscus and are therefore less likely to become as excessive as import replacement where costs are hidden. Secondly, exporters compete with strong international industries and tend to be more efficient by nature than import replacing enterprises who operate behind barriers of protection. Thirdly, exporting firms are more likely to achieve economies of scale since they are not limited to the size of a market, as are import replacement industries. (Holden and Holden, 1981).

Unsuitable macroeconomic and monetary policies can swamp the effects of export incentives. A stable REER is important to both the exporter and the importer who need to calculate their margins before making any long term commitments or investments. High tax rates or interest rates discourage further investment and exporters and cannot compete in a world with rapidly changing technology.

"Subsidies are rarely associated with true competitive advantage. On going subsidies dull incentives and create an attitude of dependence. Government support makes it difficult to get industry to invest and take risk without it. Businesses focus on renewing subsidies rather looking at means of creating a 'true competitive advantage'. Subsidies in one ailing industry encourage others to seek them." (Porter, 1990:639)

Arguments in favour of providing subsidies to infant industries for national security or for the reasons given by the strategic trade economists will sound justifiable to most voters. Government will be faced with lobbyists trying to extract a "free lunch". Before any plans are devised, governments should set predetermined goals by which the cost and the benefit of the subsidy, including externalities and economies of scale that have been generated can be accurately measured. Subsidies are bound to attract countervailing duties.

Subsidies do change the countries' terms of trade. The subsidies cause a country to export products at a lower price. If imports coming into the country also receive subsidies, then the terms of trade may remain steady. However, if there are no subsidies on the goods being imported the terms of trade will deteriorate.

If export subsidies given to select industries are successful, they will export more than they otherwise would have. This would, *ceteris paribus*, help to maintain a stronger local currency. With a stronger local currency, receipts are lower if the price in the foreign currency remains constant. There will be a tendency on the part of exporter to push up the price in the foreign market that may effect turnover and market share. It will therefore hamper the efforts of exporters of products that may enjoy a comparative advantage but not enjoying the same level of subsidy support.

Subsidies also have to be financed from the treasury. To finance the subsidies the tax rate has to be higher than it would have been without the subsidies.

Under the new international trade rules negotiated during the Uruguay Round, transparent subsidies are an endangered species. However, as lobbying groups' pressure government for protection or assistance to give it a "competitive edge", subsidies will be more difficult to detect but will remain. In addition, Governments will make more use of anti-dumping rules to protect their industries.

Economists and policy makers should ask themselves the questions Nogués (1989) poses: What is the possible outcome of the granting export subsidies and what is the likely outcome? Are the conditions conducive to exports in general and if not how will subsidies contribute to improving this? If the export subsidy is recognised as a failure, it should be dismantled.

It is not clear whether subsidies have a net positive welfare effect on the economy as they may interfere with the comparative advantages of a country. The theory of comparative advantage states that if one country is more efficient in the production of a good, all countries will benefit if they produce the products that they manufacture relatively efficiently and trade those products for products that they are relatively inefficient at producing. Therefore a country may not trade in the goods it is most efficient in producing nor will it import the goods in which it is least efficient in producing if subsidies are given.

Herderschee (1995) identifies three preconditions before a country can increase exports rapidly. Firstly, the country must have a literate work force. It makes sense that if a work force is not aware of the requirements that exports have to attain, it is unlikely that the products will attain the necessary standard. This is especially true in more manufactured products. Secondly, successful exporting requires developed commercial skills. Exporting takes place across internationally boundaries. Exporters therefore have to negotiate with people of different cultures and values. If the exporters' skills have not been developed to relatively sophisticated levels in the home market, it is unlikely that they will be successful in the international market. Finally, a well-developed infrastructure helps reduce the cost of manufacturing and doing business in addition it contributes to lower transaction costs.

Governments should look at areas such as education, research universities and providing advanced infrastructure as a means of developing new technologies and methods of production that will foster the development of internationally competitive industries. The first best solution to an anti-export bias is to remove the factors causing the bias. Increasing liberalisation and exposing the industries to world competition will increase efficiency and productivity. Lower input prices will also contribute to international competitiveness.

5. Reasons for and consequences of export subsidies

Many reasons are given for introducing various export subsidy schemes. The arguments presented are similar to those used by the mercantilists two centuries ago. Strengths of countries are often judged on the relative strength of their currency and what their foreign exchange and gold holdings are and how many months' imports can be paid with this. Governments are therefore not only lobbied by industrialists, who stand to benefit from the incentive, but also by labour organisations and others who may not benefit directly. Exporting has become to be considered patriotic by many average citizens and therefore export subsidies generally meet with little resistance from taxpayers. Adam Smith wrote in his Wealth of Nations: "Consumption is the sole end and purpose of all production; and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer. The maxim is so perfectly self-evident, that it would be absurd to attempt to prove it. But in the mercantile system, the interest of the consumer is almost constantly sacrificed to that of the producer; and it seems to consider production, and not consumption, as the ultimate end and objective of all industry and commerce."

Reynders (RSA, 1972:95) gives the following view: "It (the export objective of a society) is associated with the aim of maximising the economic well-being of all the peoples of South Africa with due regard to the costs involved and due cognisance of the social and political goals. *It does not imply exports at all costs* but rather the utilisation and allocation of physical resources and labour complement of a country in the most advantageous combination as between production for the local and the foreign markets."

Governments may accept that export subsidies are a second best solution but nevertheless justify their actions with the following arguments:

5.1 Anti-export bias

Countries, such as South Africa, that use import substitution policies and therefore have high levels of effective protection, have an anti-export bias. These policies make it more attractive to produce for the domestic market rather than the export market.

This is because of over-valued currencies and the cost of inputs that tend to be higher without foreign competition.

Protection impedes exports and creates an anti-export bias in two different ways. Firstly, domestic sales are more lucrative than export sales as protection allows firms to sell their products at higher prices than would prevail in a free trade regime. Without protection the competition from foreign producers would keep prices lower. Therefore input costs are higher than the world market prices. Secondly, factor market prices increase in a protected economy. Import substitution industries draw skilled labour and other resources away from other industries by paying more by drawing on rents accruing because of protection. Drawbacks, rebates and export processing zones are typically used to counter the effects of protection. In South Africa there are no export processing zones. The effectiveness of the drawback and rebates (Schedule 470,03 and 521 of the Customs and Excise Act) is also doubtful in general although some exporters do use these facilities. Protection has had differing effects on each of the various sectors in South Africa. The IDC (1990 and 1992) has calculated the nominal and effective rates of protection and Belli (1993) has calculated an anti-export bias for each of the manufacturing sectors. The cause and impact of the protection policies and resulting anti-export bias are discussed for each sector in Chapter 5.

Doubtless the first-best alternative would be to remove the barriers to imports and reduce the anti-export bias. Nevertheless, subsidies can be effective while reducing the anti-export bias. In an effort to create a neutral trade regime, subsidies are given to offset part or even the whole of the anti-export bias. The incentives in effect in South Africa before 1990, know as Categories A and B, made specific allowances for exporters to claim back part of the duty and so offset at least part of the anti-export bias that was created.

5.2 Infant industry

Justification for export subsidies often draws on similar infant industry arguments for the imposition of various protection measures including tariffs. It has been popular with developing countries since Alexander Hamilton used it in his *Report on*

Manufactures in 1791. The rationale behind the argument is that a new national industry has to be protected from foreign competition during its "infant" stage. In the long run, it is maintained that the industry will become competitive, be able to stand on its own and make a positive contribution to the national economy. Protagonists maintain that a country which in fact has a comparative advantage in a certain good may not be able to exploit this advantage in the short term because another country has established a lead and has an early advantage in the production of that product. It is therefore argued that in the long run the protection or subsidy given to the industry will result in the exploitation of the comparative advantage that would be in everyone's favour. In the short term a new industry may suffer losses as a result of not achieving the necessary "economies of scale" or not having had enough time to "learn by doing". In such cases, if government believes its information to be better than that of the private sector, it should provide a subsidy. Capital markets may not be willing to lend "infant" industries capital because of perceptions that the industries will not be able to repay.

Unfortunately, many infants remain infants and never develop the wherewithal to compete. Regrettably, in each industry marginal firms are barely able to stay in business and rely on protection for their survival. These marginal firms are presented as the norm and what will describe the social consequences of the firm ceasing production. Average and competitive firms obviously benefit from the additional and unnecessary protection given to the entire industry. The main policy used in South Africa to stimulate the infant industry was tariff protection. However, past governments have used other methods such as establishing State Enterprises such as Iscor, which received both subsidies and protection.

It is difficult to conceive that an industry, which is going to enter world markets, can ever be considered an infant. Indeed, exporting in particular and international trading in general require a high degree of maturity. Governments providing protection either in the form of tariff barriers or subsidies create a culture of dependence from which it is difficult for corporations to escape. It is clear from interviews with exporters that even though it is accepted that GEIS is not a permanent institution, they maintain that government should provide some other form of support measures. Many of the

exporters even maintained that the GEIS should be retained while the "new" measures are introduced and phased in. In a survey by Deloitte and Touche in 1992, exporters indicated that they would prefer improved incentives above lower tax rates, lower import tariffs, other investment assistance, devaluation of the rand and lower interest rates. However, exporters also indicated that they would prefer a lower inflation rate rather than improved export incentives.

5.3 National security

It is argued that due to national security measures, certain domestic industries must be able to survive foreign competition and continue to operate within the domestic market. Many nations subsidise their agricultural sectors, because, it is argued, in the case of war they need to be self-sufficient. Consumers end up paying more for food since foreign producers, who enjoy a comparative advantage, are unable to sell their goods in the subsidised market. Often national pride, rather than true national security concerns, determines which industries are protected. Using this contention, most products could be included. South Africa developed a petro-chemical industry, an arms industry, as well as capacity in the engineering and transport sectors as a result of the "total onslaught". These investments took place with direct and indirect subsidies, outright transfers and a significant level of tariff and non-tariff barriers. In most cases these enterprises will never be able to compete freely internationally and will require some form of on going assistance if they are going to survive.

5.4 Exporting is more risky than domestic marketing

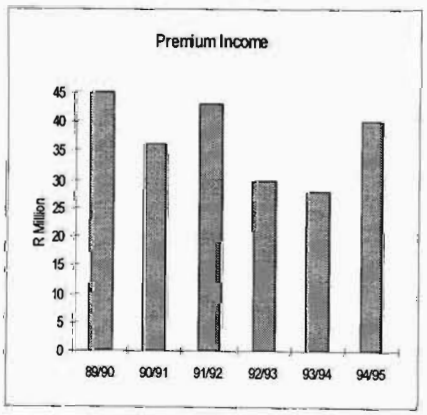
With local markets having received protection and industries being established in relatively uncompetitive markets, exporters face many uncertainties and new challenges. Exporting also involves many new complexities and risks not present in the local market. Credit risks are greater and complicated by various complex legal structures. Many countries, including many of our natural trading partners in Southern and Eastern Africa, do not have sufficient foreign exchange to pay for their imports.

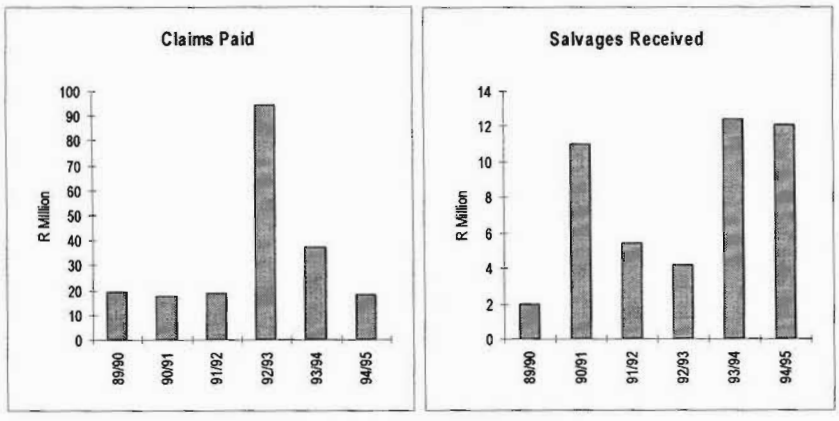
Viviers *et al* (1996) found that non-exporters perceived exporting to be more risky than actual exporters. This perception certainly contributes to a lack of an export culture in South Africa and therefore hinders the development of an export sector.

There is perhaps a case that inexperienced exporters be given certain assistance to help overcome this perception. Such an argument sounds suspiciously similar to the infant industry argument and begs the question: "When will an infant exporter be mature enough to survive in the international market place without these benefits?" Secondly, the experienced exporters would consider it discriminatory and would object especially if the infant exporter competed with them in their established foreign market.

Most governments have some form of credit protection or insurance plan. Many of these are government owned, operated and therefore subsidised. The South African Government helped establish the Credit Guarantee Insurance Corporation of South Africa (CGIC). CGIC issue all the credit insurance policies and then re-insure only the "political" and "transfer" risks with the Government. A separate fund has been set up into which all premiums are paid and into which all claims are paid. Since its inception the fund has operated at a profit, indicating that the premiums are too high or that the government is risk averse - which does not help to overcome the perception or problem exporters have that exporting is more risky than local sales. From Figure 5-3 below it is clear that there is premium income exceeds claims paid. In addition the a large percentage of the claims paid are eventually salvaged.

Figure 5-3 Department of Trade and Industry's income and costs from credit reinsurance cover





Source: Department of Trade and Industry Annual Reports

Using strategic trade policy logic, the South African Government should provide very cheap credit insurance into Africa, the logical market for South African manufacturers. Viviers *et al.* (1996) also showed that in most other parts of the world exporters would first start selling into their neighbouring countries. African markets do indeed suffer from a shortage of "hard" currency. The exporter will therefore eventually be paid, as can be seen from the "claims salvaged" above, but especially for a small exporter, that this may be too long. With government providing cheap subsidised credit insurance, exporters will be able to recapture these markets, which were served by mainly European exporters before 1990.

Credit insurance is one area which government should consider expanding. Since most claims are eventually paid by the foreign importer, a small subsidy from government can neutralise a major stumbling block and the risk of international trading can be minimised. Further, it probably will not attract retaliation since most of the OECD countries have some form of subsidised credit insurance.

5.5 Exporting is more difficult than domestic marketing

Exporting is complicated by the distance from most of our foreign markets, cost of transport, cost of raw materials (due to tariffs on imported components), tariff and non-tariff barriers, different marketing channels, different pricing structures and new involved distribution channels. In addition, products often have to be adapted to meet legislative and marketing requirements of the importer. It is often argued that to "level the playing field" and assist exporters overcome these obstacles, government must provide assistance.

Most countries provide some form of extension service to their exporters. The South African Government maintains offices in approximately 50 countries that provide exporters with market intelligence at no cost. Although many governments do charge a fee for this service, it seldom represents the true cost of obtaining information.

This service should be expanded and enhanced since most other countries provide it and therefore would not attract retaliation. Secondly, the cost of obtaining information through trade representatives is considerably less than exporters trying to obtain the information themselves.

5.6 Foreign debt or other financial crisis

The Mercantilist view is that exports are good and imports are bad and that a country should generate a positive or "favourable" trade balance. If we are to buy, we must sell and similarly, if a country is going to import, it must export. There are few if any completely self-sufficient countries. South Africa is no exception, and needs to import a variety of products such as machinery and raw materials, especially with a policy of import substitution. After the financial crisis of the mid-1980s where Chase Manhattan Bank and other foreign banks refused to renew credit facilities, South Africa was almost forced to pay "cash" for all its imports. In order to maintain exports at a sufficiently high level and maintain the currency at a relatively stable rate, it was necessary to promote exports that would generate foreign exchange to pay for imports and a surplus to repay the debt as was negotiated at the various "Debt Standstill Agreements".

5.7 Copycat syndrome

Governments are often lobbied by industrialists to grant similar, if not better, subsidies than competing nations. The argument is offered that unless their industries are treated the same, they will lose business and eventually the industry will disappear. The targeted industries benefit and may even increase their international market share. This is at the taxpayer's expense. The benefits need to be analysed and weighed against the costs. The problem is that eventually governments compete against each other rather than industrialists using comparative and competitive advantages to gain market share.

5.8 Strategic trade policy

In recent years, much has been written about **strategic trade policy.** The argument has been developed to justify intervention in free trade. Brander and Spencer (1983) who developed the theory of strategic trade policy contend that optimum scale of production in oligopolistic industries can be achieved if government assistance as subsidies are given. This Government assistance enables a firm to achieve a national objective in international trade it would not have achieved without assistance. Implicitly, the rest of the economy benefits from spill-over effects that will exceed the cost of the assistance to government.

The theory of strategic trade suggests that if the government commits itself to subsidising its companies, foreign competitors will be forced out of the international market. This theory is based on the assumption that other governments do not retaliate, and that the rents can be shifted. With economies of scale, incremental costs fall as producers move down their learning curve. Therefore the long run viability of the companies will be ensured by subsidising the sunk costs of setting up large operations with spare capacity. Should the foreigners contest the market, firms could simply undercut their prices by cranking up volume and achieving lower unit costs. Strategic trade policy would enable firms to capture rents in imperfectly competitive markets at the expense of their rivals

The policy is essentially a "beggar-thy-neighbour" policy. Where room for only one industry to operate profitably, a subsidy provided by the government to the domestic industry will give that firm a strategic advantage and the opportunity to become the sole producer at the cost of the foreign firm that will be loss making.

Strategic trade policy is a sophisticated mercantilist argument for protection. In theory, the government is led to subsidise large domestic corporations in pursuit of taking rents from trading partners. It promotes the subsidy game. The countries that have the most resources will subsidise their large corporations so long as smaller countries do not stop subsidising their companies and abandon the market. One consequence of this subsidy war is that the targeted markets are more likely to be closed to small and medium size economies such as South Africa.

5.8.1 An assessment of strategic trade policy for South Africa

"...It is important for those who live in the smaller open economies to appreciate fully the 'strategic trade policy' argument, both at the logical and empirical level, as it is being used in the large industrial countries. As these arguments are important inputs into the formation of trade policy within the United States, the European Common Market, and Japan, it is certain that those policies will affect our own country, and in ways that we may not fully understand." (Harris, 1989:753).

The rent that a country will enjoy is the most important aspect of the strategic trade policy debate. In South Africa's case, what monopoly rent is the policy aiming to shift? It is important to know whether the future world markets in new products would have monopoly rents. These would be the profits, according to strategic trade policy, that each national government would find in its interest to capture. Even with a subsidy from the South African government, it not clear how long South African companies would remain successful in deterring foreign competition. In profitable markets, there is always a probability of new entries. Subsidies create dependency that will be funded from the fiscus. Policy prescriptions should be limited to situations where firms are unable to capture these rents on their own. Strategic trade policy proponents argue that the government is able to make irreversible commitments that give domestic firms a strategic advantage against foreign firms and that the domestic firms would be unable to replicate such strategic moves by themselves.

If a government announces a policy for export promotion in an emerging industry, the policy will be anticipated and firms will enter. Although there will be successful domestic firms, there will also be losers.

The adoption of strategic trade policy enables the targeted industry to expand by drawing resources from other industries in the economy. Resources and workers employed by these (high technology) industries are generally in short supply, which is especially true in South Africa's case. Other industries, although they may have excellent export prospects, must therefore contract, at least over the short term. In an economy-wide sense, targeting specific industries can indirectly hurt other exports through the misallocation of resources. Some of these industries might also be oligopolistic and their strategic position will be worsened. Economy-wide

considerations radically increase the difficulty of formulating interventionist trade policies and make it even more unlikely that these policies will do more harm than good.

The political economy of strategic trade policy show that concentrated special interest groups in established industries benefit while ignoring the dispersed groups of consumers and newly emerging industries. Established industries may point to one niche or the other of their business as the "emerging" industry and lobby for protectionist or retaliatory trade policy measures. There is the danger that trade policy may be used by entrenched interests rather than promoting "winners".

Strategic trade policies are beggar-thy-neighbour policies. If South Africa attempts to use such policies it will probably provoke retaliation. It will certainly lose any benefits it receives from the GSP offered by many of the OECD countries. Further, a trade war will leave warring countries worse off than if a hands-off approach was adopted.

Brander (1995) accepts that slight differences in the model can lead to "strikingly different" trade policy implications. It can be expected that as strategic trade policy becomes more popular and gains respectability as increasingly academic papers and journal articles emerge, these arguments will be used to pressure the WTO to "accept" export subsidies under certain circumstances. Lobbying groups will in turn, coerce governments to introduce subsidies for export. "After several years of theoretical and empirical investigation, ...it has become clear that the strategic trade argument, while ingenious, is probably of minor real importance." Krugman (1993).

5.9 The political economy aspects of subsidies

5.9.1 Bureaucratic costs

When the GEIS was introduced in April 1990, the aim was to have a system that was simple and easy to administer. In fact, the Board of Trade and Industries recommendations regarding the implementation of Structural Adjustment Programmes were rejected by the Department of Trade and Industry because they would be too difficult to administer. Initially the GEIS system was relatively simple. A claim form was to be submitted together with a few supporting documents.

However, as the Department of Trade and Industry became aware of certain shortcomings and fraud (see 5.9.3) more and more requirements were made on the exporters to prove that their claims were legitimate. Small and medium exporters were especially detrimentally effected. All exporters are required to submit an auditor's certificate. The cost of obtaining such a certificate could exceed a quarter of the amount claimed. Together with the costs of putting the claim together (often consultants had to be used) the effort and the cost of submitting claims was raised.

The Department of Trade and Industry has a staff of approximately 30 officials who undertake verifications of GEIS claims. In 1995 an amount of R63 million was recovered and R95,9 million and R104,8 million for 1993 and 1994 respectively. The reduced recoveries can be ascribed to the fact that, although there were more investigations undertaken, the improved control systems, seminars and assistance to exporters and accountants improved the quality of the claims submitted. The cost of undertaking these verifications in 1995 was R2,7 million. Although it reduces abuse and fraud, it is an additional dead-weight cost to both the Government and the exporter, and does not contribute to increased productivity.

5.9.2 Rent seeking and lobbying activities

As with all subsidies, there are two groups, those who receive the benefit and those who give the benefit. Both these groups expend a considerable amount of effort in justifying the continuation, extension, or introduction of new schemes. The Private Sector Export Advisory Committee (PSEAC) was set up to advise government on the implementation of the schemes. In effect, the PSEAC became a lobbying body to maintain whatever benefits were given and to motivate for additional benefits. The Director-General of the Department of Trade and Industry has suggested that if firms spent only half the resources and time they were giving to lobbying for protective tariffs and retention of GEIS benefits, and channelled the rest into a critical examination and international bench-marking of their production, South Africa could reach a growth rate of five per cent before 1999 (Sapa, 17May 1995).

5.9.3 Bribery and corruption

Any bounty is bound to attract attention and there will always be those who will try to benefit without complying with all the requirements. The various subsidies granted were bound to be the subject of fraud. Customs had experienced problems in the past with administering rebates given under section 470,03. Traditionally Customs do not examine exported consignments. Revenues were on the import side and therefore all the resources of Customs and Excise were used to verify that the customs duties were collected. In addition, Customs were short staffed and did not even have enough personnel to check imports thoroughly. A confidential report by the international accounting firm, Deloitte and Touche, which has not yet been released, highlighted these facts and uncovered irregularities such as exporting an empty box. (Engineering News, 11 August 1995)

5.9.4 Countervailing duties

Countervailing duties are a constant threat, especially if the subsidy is successful and generates volumes of exports that threaten the local industry in the foreign market. This was highlighted in May 1996, when the US Commerce Department determined that circular welded non-alloy steel was sold at a lower price in the US than in South Africa. South Africa was "fortunate" in that between 1986 and 1991 there were no countervailing duties imposed - because steel and other products were subject to sanctions. The Robor case highlights the fact that South African products are subject to countervailing actions and that foreign interest will not hesitate to use this form of protection should they feel their interests are harmed (Barber, 1996).

6. The South African trade model

"There are few econometric studies of the effect of export incentives on export performance. This fact reflects the difficulties of establishing a statistical relationship between the two variables. In a time series framework, the shortness of the time series, the lack of observation on changes in incentives to import substitution that provides an alternative to exports, and the difficulties involved in quantifying the effects of other influences on exports make estimation difficult. In turn, in a cross-section framework, the lack of stability of the incentive system and lags in adjustment to incentives create problems in statistical estimation. Nevertheless, studies available for several of the countries under consideration show the existence of a positive relationship between export incentives and export growth." (Balassa, 1978).

As has been previously discussed, it will be assumed that any measure designed to stimulate exports can only be judged worthwhile if it leads to an increase in national prosperity. This is defined as a sustained increased in the Gross National Product. Therefore the export support measures should indeed do more than simply increase exports. The net effect on the entire economy is important. Thus the cost to the fiscus should be taken into consideration as well as any other direct benefits. (IC, 1992). However, such a model is beyond the scope of this study. The purpose of this model is to determine the effects of GEIS in increasing the volume of exports. The model will look at the factors that determine trade and then estimate what effect GEIS had on exports. The period used will be from 1988 to 1994 using quarterly data. [17]

6.1 Factors determining trade

There are many factors which effect trade. These include non economic factors such as political, geographic, social, and historic and more importantly the economic reasons. Political factors such as the imposition of sanctions and various other boycott actions, both imposed on South Africa by law and individuals, have had a definite

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[17] In 1988, the new Harmonised System replaced the old CCCN classifications and data is more readily available from this date. The South African Standard Industrial Classifications (SIC) have been used to determine the sectors to be studied. Trade data and the GEIS data, which is published using the Harmonised System (HS), have been converted to SIC using the Central Statistic Services (CSS) concordance (conversion) tables.

impact on both exports and imports. Sanctions affected both the price (as exports were often subject to discounts) and quantity.

The propensity of a country to export can be effected by many factors: the size of the economy, location in relation to that of its natural trading partners and its main competition, natural resource endowment and the diversity of its industry. Government policy will naturally also affect manufacturers' decisions. A free-market determined exchange rate will not influence exports in the long term. However, many countries, including South Africa, have maintained a strong exchange rate. This has no doubt caused exports to be too expensive and resulted in fewer sales. In the case of South Africa, exporters were not able to compete on a normal business basis. Often goods had to be sold at a discount even when there were no official sanctions limiting trade.

6.1.1 Non-economic factors

Historical factors such as South Africa's past links with Britain explain why trade with her remains so strong. South Africa's distance from the major industrial countries has also negatively affected South Africa's trade. Also included under **geographical** factors is that a large percentage of the industrial output is in Gauteng. There is thus an extra cost involved in exporting products from this region that obviously has had a negative impact on trade. The **social** factors in South Africa have also had their influences. Productivity is lower because of the distance labour has to travel from their home to work. The education system resulted in a level of technology which, in some cases, can be exported. However much of the technology used has been bought abroad. There are often restrictions limiting the licence holder from exporting. Other **political** factors that have economic consequences are tariff and non-tariff trade barriers. The fact that Britain joined the EU resulted in a decline in trade. Other trade blocs will no doubt also affect South African exports. However, trade with neighbouring countries will increase as a result of the various agreements in Southern Africa. Many of South Africa's major trading partners have extended General System of Preferences (GSP). These will positively influence trade. Most of the above factors cannot be quantified or are very difficult to quantify or there are no reliable data available and therefore cannot be included in the model. As has been discussed above,

institutional factors such as the formation of trade blocs will have an impact on trade. It is difficult to measure the impact with aggregated trade figures. To keep the model simple it has therefore been decided to ignore these factors.

6.1.2 Economic factors

Balassa *et al* (1986) argued that export supply exhibits a significant response to a change in relative prices. Sachs (1989), on the other hand concludes that strong export growth occurs mainly in the presence of large unemployment of domestic resources. The macro-environment in which firms operate will influence their export performance. These conditions will affect exporters differently although the direction of effect of the changing parameter can be determined a priori. Even factors such as education will affect the type of exports. "Increasing the education of the population will be crucial for expanding higher-value-added manufactured exports, increasing per capita incomes and reducing earnings inequality in South Africa" (Ismail, 1995).

The issues surrounding the behaviour of exporters are difficult to understand. In the South African environment it are not only the normal complexities of determining what the capacity is, how the prices are moving etc., but economists have to take additional factors such as sanctions, over-invoicing export sales to claim additional export incentives and under-invoicing export sales and over invoicing of imports to avoid the stringent currency controls regulations.

Porter (1990), identifies four factors, the determinants of national advantage, which will affect the volume of exports in the medium to long term. These factors are:

- **Factor conditions**, which include the factors of production, i.e. the nation's natural endowment - human resources, physical resources, knowledge resources, capital, and infrastructure.
- **Home demand conditions**, which include both the quality and the quantity of goods demanded - firms can achieve economies of scale if the quantities are sufficient and also sell into niche markets (monopolistic competition) if the quantity is sufficient to spur the development of new products or features. Quality products can also be sold at a premium.

- **Related and supporting industries** provide assistance to the final exporter to produce a product that can in fact compete on the international market.
- **The firm strategy, structure and rivalry** plays a profound role in the process of innovation.

Buiter (1986) identified some of the issues involved in the design of stabilisation policy in developing countries when faced with an external shock. The six most important external economic parameters of developing countries are: the terms of trade; the growth of world markets; the cost and availability of private external finance; the cost and availability of official and other concessionary finance, including aid; the world rate of inflation; and the exchange rates between the currencies of the major industrial countries.

The demand and supply are affected by the various policy instruments (monetary and credit policy, the entire array of fiscal instruments, exchange rate policy, the use of exchange and capital controls and incomes policy).

The stabilisation responses to external shocks such as a deterioration in the terms of trade, a slow-down in the rate of growth of export demand, an increase in the interest rate at which developing countries borrow abroad, and an increase in the external rate of inflation all affect the level of exports. The prevalence of repressed financial markets and credit rationing makes effective demand and effective supply responses to monetary, fiscal and exchange rate policy quite different from what they are in most of the industrial world.

6.1.3 Demand side of the export function

Probably the most important factor on the demand-side, is the level of economic activity in the international markets. In the short-run, as foreign income increases so should the demand for South Africa's products. This is especially true if industrial output increases because most of South African exports are raw materials used as inputs in industry. In the long-run it is not clear what the impact on South African level of exports will be. However, as substitutes are found for the raw materials used and as other international companies respond to the increased international demand,

the demand for South African exports will decline. This will however be difficult to verify because of the lack of reliable trade figures and it will not be possible to determine the exact impact trade sanctions had.

South Africa's trading partners' capacity to import is important. Factors such as availability of foreign exchange will influence the capacity to imports. The fact that her neighbours' capacity to import is low has definitely had a negative impact on South Africa's level exports and influenced the pattern of trade. With markets to the north demanding products and where South Africa generally has a competitive advantage, the lack of foreign exchange has hampered the export drive. South African exporters have investigated various options for bridging this problem. Nevertheless, trade to this region should grow. It will, however, remain low as long as there is a shortage of hard currency. However, most of major South Africa's trading partner's currencies are considered hard. Most of our trading partners have also removed exchange control and importers are free to buy foreign currency and remit it to foreign suppliers without too many problems. The capacity to import has therefore not been a problem for most of South Africa's exporters.

How do South African exporters set prices? - If they use a cost-plus approach, the impact which South African exporter would have on the world markets is negligible and nor will there be an effect on the South African market. Whether South African exporters sell in oligopoly markets or not is also debatable. Many small and medium-sized exporters sell into niche markets where there is minimum competition. Although most of South African exporters may trade in oligopolistic markets with differentiated goods, it is assumed the exporter will sell on a cost-plus basis and will not try to maximise profits any further. However, the price the exporter asks (without incentives) will not necessarily be the same as the price in South Africa.

Relative prices have affected South African exporters. The inflation rate in South Africa has been higher than that of trading partners. This fact has not always been revealed in the exchange rate. For this reason, the REER is used in the model. The changes in the relative prices nevertheless affect demand through the effects on the real income. There is also a substitution effect.

6.1.4 Supply side of the export function

The two most important factors determining the behaviour of the exporter are the profitability of exports and the pressure of demand. The effect of the subsidies was to increase the profitability of exports and thereby increase the volume of exports and hopefully increase the production capacity to meet the new found markets.

From a country's perspective, factors that will affect export supply in the short term are: Price of its products that are partially affected by the level of inflation and the exchange rate; the level of subsidies given; manufacturing capacity; and under utilised capacity due to lack of demand.

6.1.4.1 Pressure of demand

When South African exporters or manufacturers face an increased demand in South Africa, the trend has been for them to forsake the foreign markets in favour of the home market. The foreign market either is perceived as not as profitable as the local market or is less desirable for effort and risk. It is not sure exporters calculate the cost of losing a foreign customer in that when the market in South Africa contracts, extra efforts will have to made to find new markets or in trying to recapture old markets. The latter is often more difficult to do because the exporter is perceived as being unreliable in that he is only willing to supply when South Africa is in a recession or contractual phase of the economic cycle. Although many exporters act in this manner, and this behaviour would obviously affect the markets supplied by the South African exporters, it will be too difficult to obtain all the information especially for disaggregated information. It is assumed, to keep the model simple, that the marginal capacity utilisation is constant. In other words, a one per cent increase of spare capacity at 98 per cent utilisation will have the same impact as a one per cent increase of capacity at 80 or 70 per cent capacity utilisation.

Supply can be positively stimulated by pressure of international demand. For example with the increased requirements for catalytic converters, South African manufacturers responded by creating the capacity to meet the demand. As manufacturers get more exposure to the foreign market, so they will identify trends and determine needs that

they can fill. The pressure of international demand in a post-apartheid South Africa should therefore be positive.

6.1.4.2 Profitability

For the South African manufacturer, the relative profitability of selling in the foreign market or the South African market is the important factor. Exporting is perceived to be more risky and less profitable and therefore not as desirable as selling in the home market. In the short run, a firm will switch capacity from the South African market to the foreign market if the foreign market becomes more profitable. In the long run however, the capacity should increase in response to foreign markets becoming more profitable.

Many firms are aware of the non-budget sheet items that add to their competitiveness by exporting. These factors include new product development, improved marketing techniques and increased home sales because of the "if foreigners are willing to buy it - it cannot be bad" syndrome.

The rationale and impact of domestic and export subsidies were discussed in Chapter 3, and the arguments will not be repeated. Suffice to say the profitability is enhanced if firms use the export incentives and supply should therefore be effected by level of the incentive, to whom it is given as well as how the incentive is structured.

Firstly, it is generally more profitable in South Africa to produce for the domestic market than for exports. South Africa has a complicated trade regime. Protection has been granted to domestic manufacturers almost as they have demanded it. "Although the Government, through a series of commissions, has emphasized the need to use trade policy to move toward a more export-oriented and open structure, the need to protect existing industries and utilize domestic resources as inputs has interfered with these objectives" Fallon *et al* (1994) Secondly, protection has made exporting firms less competitive internationally by raising the price of input costs.

Chowdhury (1993) found that the effect of exchange rate volatility on the trade flows of the G-7 nations did not display any sign of parameter instability. Data covered the period 1973-90, beginning with the abandonment of the fixed exchange rate regime. He demonstrated that exchange rate volatility had a significant negative effect on

export volume. Assuming that market participants are risk averse implied that exchange rate uncertainty causes them to curtail activities, change prices, or shift sources of demand and supply to minimise exposure to the effects of exchange rate volatility. This can change the distribution of output across many sectors in the market participants. The surprisingly weak link between trade flows and exchange rate volatility reported in several earlier studies may have been due to insufficient attention to stochastic properties of the relevant time series.

6.1.4.3 Raw material and input costs

The availability and cost of raw material also influence the supply of exports. As discussed in section 5.1, the anti-export bias was a result of an increased price of inputs that made exporting difficult. The Timber Product Exporters Association (TPEA) have complained that the export of timber by the South African Lumber Millers Association (SALMA) has created a shortage of timber and consequently pushed the prices up, making the export of timber furniture uncompetitive. This situation is aggravated by the high level of protection afforded to manufacturers and producers in South Africa. Nevertheless, to maintain simplicity these factors will be excluded.

6.1.5 Firm-level factors

It is however firms which export. Although the macro-environment has definite influence on exporters, it is at the micro-level where the decisions are made. Policy makers should be aware what the motivating factors are, before drafting trade-policy. Cavusgil and Zou (1994) developed an operational model to examine the marketing strategy-performance relationship for export ventures. Each venture was assigned a four-factor composite performance measurement, and potential explanatory variables for an export venture's success were categorised into five groups: export marketing strategy, firm characteristics, product characteristics, industry characteristics, and export market characteristics. It was found that performance in export marketing is enhanced when management has international competence, is committed to the export venture, adapts the product to meet export customer requirements, and provides strong support to its foreign distributor or subsidiary. Calof (1994) attempted to determine the direct and indirect effects of firm size on export behaviour by examining the

propensity to export, and countries to which they export. The relationship between a firm's size (considered both in terms of sales and number of employees) and its propensity to export was tested using discriminate and ANOVA analysis, with differences between size and classes tested using Duncan's range test. The results indicated that the size of the firm had a very limited association with a firm's propensity to export, number of countries served, and export intensity. Yang and Alden (1992) developed a probabilistic model to identify currently non-exporting manufacturers with a relatively high potential for future exports. The model included a time dimension of firm behaviour and attitudinal constructs such as perceived barriers to exporting. Lim, Sharkey and Kim (1991) verified that the export process proceeds in four steps, moving from awareness through interest and intention to adoption. According to the framework of the model, if a company's management is unaware of the benefits of exporting the provision of information may develop an interest. Once management is interested in exporting, intention might be developed by linking the firm's management with the management of similar companies that export. Once management adopts the intention of exporting, creating opportunities and providing the necessary guidance to succeed may move the firm to actually export. This study will not attempt to determine the influence that firm behaviour has on exports.

Types of exporters

There are various "types" of exporters each of which has different needs. Exporters achieve economies of scale and have to export because the local South African market can never hope to take up all their production. Others, such as gold producers, rely on natural resources and international demand. On the other end of the scale are small manufacturers who export occasionally. Export houses, such as the soga shosa in Japan, have played an important role in development of exports. They provide services to manufacturers ranging from simply consolidating consignments and shipping them through to the development of products that can be sold on the international markets. The number of small or medium exporters in South Africa is small compared to international standards. Calof and Viviers (1995) estimated that less than 3 per cent of SMEs are exporters and account for less than 1 per cent of exports, while in the figures are: Italy - 80 per cent, USA - 37 per cent, Canada 14 per

cent, and the UK 20 per cent. SMEs also represent significant export turnover (Korea - 40 per cent, Taiwan 56 per cent, and Italy 53 per cent).

Lack of export culture

As manufacturers export more the costs associated with marketing, product development and negotiation costs reduce. This "learning by doing" is important. For a number of years, South African exporters have either had to face sanctions or the threats of sanctions. The costs involved in developing new markets weighed against the potential benefits were too high. This combined with the traditional reasons why manufacturers do not export under a protected trade regime hindered the development of an export culture. Manufacturers remained inward looking, rather serving the local South African market than the international market.

"According to the stages model of internationalization, a firms first export market will be the one which is culturally and psychologically closest to the home market." Calof and Viviers (1995) In South Africa's case, except for its direct neighbours, very little in the way of exports was permitted. South African manufacturers tended to target the triad markets of North America, Europe, and Japan. This was because of trade restrictions and lack of buying power in Africa.

Businesses therefore never developed an export culture. Exporting is undertaken only when the conditions in the local market are down and there is spare capacity.

6.2 Review of economic models

There are a large number of models internationally. In the US the better known models are: the Tinbergen Model developed in 1939 and the first to model business cycles in a quantitative manner; the Klein Models developed by Prof. Lawrence Klein; the Wharton Model which was a descendant of Klein's models; the Brooking's Model; the Chase Econometric Model; and the St. Louis Model. Most other countries also have models. Project Link is an ambitious attempt to model the international economy. (Kohler, 1991)

There are a number of economic models in South Africa. These include: the University of Stellenbosch's Bureau for Economic Research's model that is

essentially a demand oriented model; the Standard Bank Model that emphasises monetary and interest variables; the Keynesian-based Econometrix Model; the Rand Afrikaans University's Model; and the South African Reserve Bank Model.

This research will use applied econometric techniques to develop and evaluate an export model of the South African economy. It will look at economic aggregates to determine the appropriateness of the model and determine the impact of the export support measures introduced by government.

6.3 Export model for the South African economy

The purpose of the export model is simply to ascertain the effects of GEIS. This was achieved by developing a model and estimating the factors influencing exports, including GEIS.

Determining an accurate export model for the South Africa economy is very difficult because of the lack of reliable economic data. The most important of which is the lack of trade figures, which during 1986 - 1992 were never published comprehensively because of sanctions and the threat of sanctions. At the best of times, trade data was unreliable. Customs officials, who collect the data, rely on the exporter completing the forms. The forms are often incorrectly completed, sometimes to categorise the product in a more advantageous position (i.e. to gain more GEIS or to pay lower duties) or simply because the systems of categorisation are complex and open to different interpretations.

There are also numerous variables that cannot be quantified but which have an important impact on exports. These would include factors such as an export culture and the level and type of education. Winters (1981:29) ascribe the lack of success to: "lack of sales effort, which includes deficient advertising, small sales staff, poor market-research and packaging, and poor after sales services." He also cites poor technical specification (NEDO, 1977), limited credit and finance (Parkinson, 1966), the role of foreign investment (Krause, 1968) and foreign aid (Broadbent, 1970).

This research will use applied econometric techniques to develop and evaluate an export model of the South African economy. It will look at economic aggregates to

determine the appropriateness of the model and determine the impact of the export support measures introduced by government.

6.3.1 Assumptions

In developing an Export Model we have to make certain assumptions: Firstly, the world markets, except in a few commodities, are not affected by South African exports; Secondly, most of South Africa's manufacturers find themselves in an oligopolistic market selling differentiated products.

As with any economic model, not all the variables can be included or measured. Other variables, because of the cost of obtaining the data are not included, but proxies are used in the estimation. These assumptions are discussed below:

6.3.1.1 Negligibility assumptions

These are assumptions that have such a small impact on the model and the cost of collecting the data is so large that they are ignored. There are also numerous variables that cannot be quantified but which have an important impact on exports. These are discussed above in 6.3 above. (Winters, 1981: 29)

6.3.1.2 Domain assumptions

These state that the model will remain accurate providing these assumptions remain true. It will be assumed that both the South African and World economies are unaffected by the level of South African exports. South Africa is a small exporter by international standards and there are no manufacturing sectors in which South Africa supplies more than 2 per cent (Monitor, 1995). This is confirmed by Appendix A showing South Africa's market-share per sector of the major trading countries in the world. Clearly, the increased volume of South African exports should not have an effect on the international trading position although it could in individual countries where South Africa does have a more significant market share. However, there could be shortages of raw materials or products in South Africa due to increased exports.

6.3.1.3 Heuristic assumption

This type of assumption models something as definitely different from the way it is in the real world, but under the supposition that the unrealism of the assumption will not effect the result.

South African exporters operate in many different markets, each of which has a number of factors that would influence imports into that market. It is difficult even to group the countries together effectively. Factors that would influence export sales to the OECD countries, such as the level of economic activity or level of manufacturing would not be as important in African countries where the propensity to import would be determined more by the availability of foreign exchange than the level of economic activity. The type of products exported also varies. African countries would import more basic consumer goods that are relatively price inelastic. These would include medical products and foodstuffs. On the other hand exports to OECD countries would include more luxury goods and raw materials for their manufacturing processes. It will be assumed that the level of economic activity in OECD is one factor determining the quantify of exports to keep the model simple.

Factors such as South Africa's corporate tax policies and long run economies of scale or learning by doing are assumed to remain steady over the period and are not included. The tax rate was reduced, but at the same time GEIS was made taxable. The net effect for a South African manufacturing exporter would be minimal as the percentage of their turnover exported is not that large.

6.3.2 Variables identified and data used

An econometric model requires time series data of the various economic variables deemed to influence the behaviour to estimate the parameters. In this study, quarterly data is used to estimate the model. The lack of reliable economic data made the determination of a model difficult. As has been discussed above, there are also numerous variables that cannot be quantified but which have an important impact on exports. The model was deliberately kept as simple as possible, however retaining the main features to test the hypothesis that GEIS has had minimal impact on the level of

South African exports. This research used applied econometric techniques to develop and evaluate an export model of the South African economy.

6.3.2.1 Exports

South Africa's export statistics are collected by the Commissioner for Customs and Excise (C&E). The period used will be from 1988 to 1994 using quarterly data. In 1988, HS replaced the old CCCN classifications Data was more readily available from this date. The South African Standard Industrial Classifications (SIC) has been used to determine the sectors to be studied. Customs and Excise were unable to provide the data electronically, nor did they have their original computer tapes. The Central Statistic Services (CSS) maintained sectoral data that were aggregated at a two digit SIC level and therefore not suitable. The data eventually used, were purchased from the IDC who also aggregated the data at a three digit SIC level suitable for the trade model, making it possible to analyse 26 manufacturing sectors.

6.3.2.2 GEIS data

This was obtained from the Department of Trade and Industries database. It was downloaded on a disaggregated basis, using the original HS classifications. These data were converted to SIC using the CSS concordance (conversion) tables. Although it would have been interesting to analyse the growth in category 4 exports, it was not possible to obtain the export data (dependent variable) from the IDC in a disaggregated basis. Sectors were therefore analyse in aggregate and not according to GEIS category. Since GEIS claims take some time to be submitted by the exporter and then to be verified by the Department of Trade and Industry, only data from the inception of the scheme until 1994 were used as this ensured that all claims were covered.

6.3.2.3 Prices and the exchange rate

Although export prices are determined per sector, these were only available on an annual basis and therefore unsuitable for constructing this model. Exporters sell to many countries, with contracts denominated in various currencies. It was therefore decided to use a REER, which took care of the variation in the fluctuation in the various currencies as well as the different inflation rates. This was therefore used as a proxy for price.

Two sets of Real Effective Exchanges Rates were available. The South African Reserve Bank has calculated this and publishes the series quarterly. The IDC has calculated the REER per sector for use in their General Equilibrium Model, the IDCGEM. Both series were used and selection depended on which gave the better statistical fit.

6.3.2.4 Capacity utilisation

The South African economy developed by means of a policy of import substitution. This made it more profitable to sell locally than to export. Clearly, manufacturers will only export if the South African market is not taking up all their production. To test the "vent for surplus", spare capacity is used. The capacity utilisation index is compiled quarterly at a three digit SIC level by CSS. There are a number of components to this series. Firstly, the industries capacity utilisation. The reasons for the spare capacity are then given. Certain bottlenecks are identified. However, unutilised capacity due to lack of demand is the factor that would drive exports.

6.3.2.5 International factors

Many factors influence a country's propensity to import. These would include factors such as taste, availability of the product, disposable income, exchange rate, perceptions about the future. As these would have to be weighted per sector and country to make a sound estimate, it would add greatly to the complexity and cost of the model. It was therefore decided to use the OECD's GDP as a proxy for these factors. In most sectors' exports, the OECD corresponded closely to South Africa's trading partner profile. This profile is however changing for certain sectors.

These series used compiled by the OECD and is published in nominal dollars and real 1990 dollars.

6.3.2.6 Seasonal and dummy variables

Certain products are exported seasonally and seasonal dummy variables were used. Sanctions were imposed on certain products that were lifted. A dummy variable is therefore included in selected sectors.

The textile industry also benefited from the SAPs. Although no values were put to these, clearly changes in the SAP/duty credit system had an impact on exports. A dummy was therefore used to measure the impact of the "announcement effect".

6.3.3 Verification of data

No attempt was made to verify the data provided by the CSS, although there are known flaws. Export data provided by the IDC could not be verified since the concordances used in aggregating the HS trade data into SIC data is complex. Where necessary, the data were smoothed using exponential smoothing techniques. The Department of Trade and Industry's database was used to download the GEIS data. It was therefore felt that the data were accurate, at least for exports that took place before December 1994. Claims for exports taking place would not necessarily have been submitted or processed by the Department of Trade and Industry.

6.3.4 The export equation: a quantitative approach

It is hypothesised that the level of exports is dependent on the price received for the exports (the REER is used as a proxy); the spare capacity available (both capacity utilisation and spare capacity due to lack of demand were tested); the demand for South African exports (the OECD's GDP was used as a proxy); and the export incentive measure (GEIS).

$$X_t=\beta_0+\beta_1X_{(t-1)}+\beta_2GEIS_t+\beta_3REER_t+\beta_4CAPUT_t\,(\text{or}\,UUDEM_t)+\beta_5OECDGDP_t+\varepsilon_t$$

where

X_t is the level of exports;

$GEIS_t$ is the value of export assistance given under the General Export Incentive Scheme;

$REER_t$ is the real effective exchange rate;

$CAPUT_t$ is the capacity utilisation;

$UUDEM_t$ is the spare capacity due to lack of demand; and

$OECDGDP_t$ is the OECD's GDP

And it is expected that:

$$\beta_2 = \frac{\partial X}{\partial GEIS} > 0, \beta_3 = \frac{\partial X}{\partial REER} < 0, \beta_4 = \frac{\partial X}{\partial CAPUT} \gtrless 0, \beta_5 = \frac{\partial X}{\partial OECDGDP} > 0$$

GEIS

Obviously, as GEIS is an export subsidy, one would expect that GEIS would contribute to greater exports. This is especially true, as GEIS is a performance-based export incentive and exporters are paid on actual exports.

REER

As the REER determine the relative price of the export product, the larger the REER, the greater the detrimental impact on exports will be.

CAPUT

Since most South African firms manufacture for the local market and export their surplus capacity, it would be expected that industries with a greater spare capacity would export more. If however, the industry exports a substantial portion of total production, it can be expected that a drop in international demand would lead to an increase in surplus capacity.

OECDGDP

As South Africa's major trading partners (The OECD countries) incomes grow, they would be expected to consume more. This additional consumption will be imported and it can be assumed that South Africa would supply a part of this.

6.3.5 Determinants: a qualitative approach

Interviews were conducted with a number of exporters, in order to determine their perceptions of export determinants. As was expected, all the exporters answered that without GEIS they either would not have exported or would have exported considerably less and that without GEIS they would export less or not at all. These

views were almost universal. Without direct access to the firms' financial statements and costing sheets, the views expressed were not considered scientific and therefore not included in this study.

A large European motor car manufacturer however indicated that although they welcomed benefits such as GEIS and Phase VI, their international experience had indicated that such schemes had a short lifetime. They therefore undertook all feasibility studies and investments without calculating such benefits.

6.3.6 Software

The Eviews software package, the Window's version of Micro-TSP, was used to estimate the parameters. This package consists of a number of procedures that allow manipulation of the data and statistical methods to estimate the model parameters.

6.3.7 Estimation techniques

The parameters were estimated using Ordinary Least Squares. Similar results were achieved using the Two-Stage Method and the Seemingly Unrelated Regression Method.

The Durbin-Watson test was used to test first order auto-correlation. With low Durbin-Watson values, the Breusch-Godfrey Serial Correlation LM Test was used to check for serial correlation and was corrected using autoregression techniques (AR).

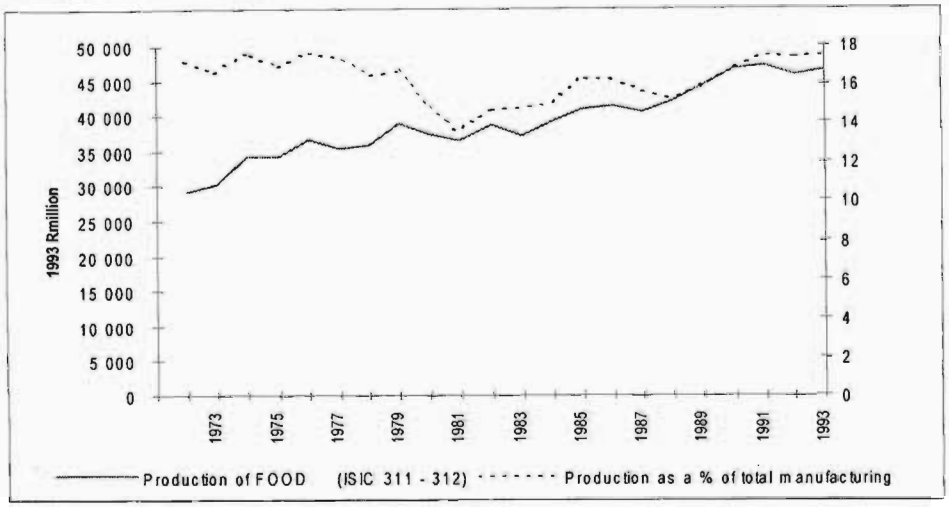
6.3.8 Food (SIC 311-312)

This sector consists of meat processing, dairy products, canning and preserving of fruit and vegetables, canning and preserving of fish, animal and vegetable fats and oils, grain mill products, bakery products, sugar, chocolates and sugar confectionery, prepared animal feeds and other food products. South Africa enjoys the advantage being in the Southern Hemisphere and therefore being able to supply products to the Northern Hemisphere, out of season.

6.3.8.1 Structure of the food manufacturing sector

Although this sector includes many small producers, the industry is dominated by large groups. These groups are responsible for much the exports. Although small producers have very successfully entered foreign markets, the branded goods have been the most successful.

Figure 6-1 Production of food



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The production of food has increased constantly in real terms. It is a significant industry, responsible for approximately 17,5 per cent of South Africa's total manufacturing, having risen from 14 per cent in 1980.

6.3.8.2 International comparison

Appendix A shows the international demand for South African products and indicates how South African exporters performed internationally, using revealed comparative advantage analysis and calculating a competitive indicator. It also shows South Africa's share of the world market. A competitive indicator (CI) value of 0 above shows that a sector's competitiveness in terms of growth of exports, has achieved average growth relative to other exporters. If it is positive there has been an above average growth.[18] South Africa has therefore improved its position in live animals, dairy products, and fish. Sugar and animal feed have lost ground.

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[18] The Competitiveness Indicator has been calculated as follows: for product i., SACUj and partner country k, $C_{ij}=[(1+\text{import trend}_{ij})(1+\text{import trend}_{iworld})-1] * 100$, with the import trend being the least-square trend of growth of imports of all reporting countries from 1990 to 1994.

The revealed comparative advantage (RCA)[19] compares the Southern African Customs Union (SACU) to other upper-middle countries. If the RCA>1 the subsector has a revealed comparative advantage. The only subsector that displays both a positive RCA and CI is Fish.

South Africa's food and agricultural sectors are very dependent on climatic conditions. This would explain why sugar, which has a revealed comparative advantage, has lost market-share.

Table 6-1 Protection and anti-export bias[20]

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Food	1,05	1,47	0,90	1,00	0,43	0,71	1,61	0,71	2,44

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. Ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: Belli et al. 1993 and IDC, 1990.

From the above it can be deduced that exporters who can purchase their inputs at world prices, are competitive internationally. However, with or without GEIS, and not having access to inputs at world prices, this sector is at a disadvantage. Large manufacturers who have the necessary bargaining power do negotiate with suppliers of inputs are competitive. Amongst others, the South African Sugar Association provides rebates on their sugar to manufacturers who export in order to bring the sugar price in line with international prices. Small exporters should play a valuable role in this sector suffer from not knowing about such rebates or not having the negotiating strength to reduce their input prices. It is therefore important to reduce the anti-export bias to promote exports.

Table 6-2 and Table 6-3 show the extent of government assistance to the export sector in the past.

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[19] SACU's RCA_{ijk} for product i, SACU j , all other middle income countries k and imports of the partner country M is $RCA_{ijk} = (M_{ij}/M_j)/(M_{ik}/M_k)$

[20] If policies raise value for domestic production more than for export, the anti-export bias coefficient is greater than one. If policies are neutral the coefficient is one.

Table 6-2 Total Categories A and By A and B assistance: 1982 to 1985 (R millions)

Sector	Category A			
	1982	1983	1984	1985
Food	15,08	12,92	12,72	9,25
	Category B			
	1982	1983	1984	1985
Food	14,21	11,45	16,11	21,67

Source: Board of Trade and Industry, 1987.

Table 6-3 Categories of GEIS incentives paid per subsector, headings per tariff

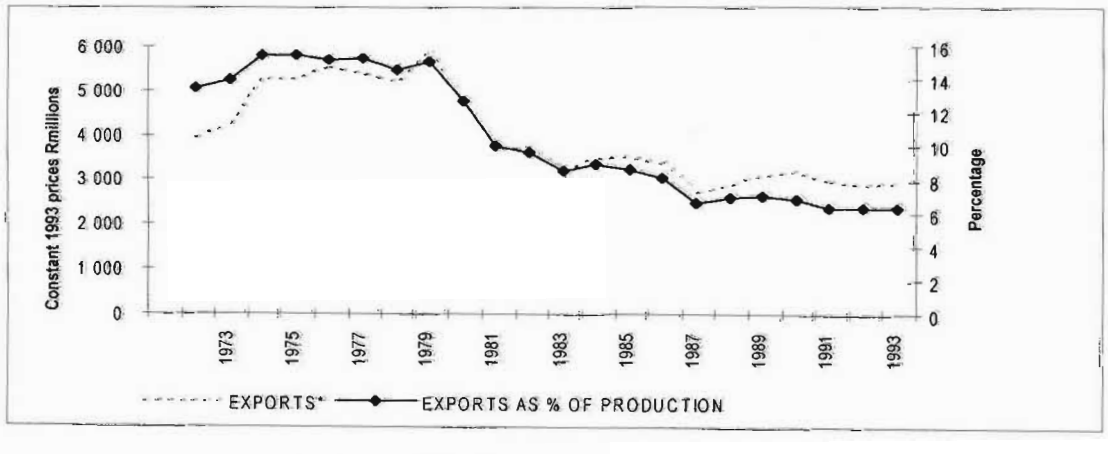
	Sector	GEIS exclusions	Primary products	Beneficiated primary	Material intensive	Manufactured
Meat processing	3111	44	0	48	8	0
Dairy product	3112	0	0	57	41	2
Canning of fruit and vegetables	3113	6	0	12	76	6
Canning and preserving of fish	3114	0	0	37	63	0
Animal and vegetable oil	3115	0	0	89	11	0
Grain mill products	3116	0	0	99	1	0
Bakery products	3117	0	0	0	26	74
Sugar factories and refineries	3118	0	0	99	1	0
Cocoa chocolate and confectionery	3119	0	0	30	25	45
Other food products	3121	0	0	49	51	0
Prepared animal feeds	3122	0	0	56	44	0

Source: IDC, 1993.

Bakery products and chocolates received category 4 of export incentive. Most of the other subsectors however received only category 2 or 3 assistance. From section 6.3.8.4 below it can be seen that exports from these subsectors have been rising over the past few years.

6.3.8.3 Exports of processed food products

Table 6-4 Exports of processed foods



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Clearly, the long-term trend for food exports is down. Certain subsectors have performed well during the past few years.

6.3.8.4 Food subsectors

Table 6-5 Nominal levels of protection

Sector			Percentage of tariff headings			
		Average nominal protection	Ad valorem	Formula	Import control	Import surcharge
Meat processing	3111	5	47	43	93	27

Source: IDC, 1992.

Unfortunately, meat from South Africa is not permitted in many European or North American markets. Safety and health concerns are cited as reasons for the prohibition. The sector is however very protected. This would explain the long-term downward trend where less than five per cent of South Africa's production is exported.

Figure 6-2 Exports of meat

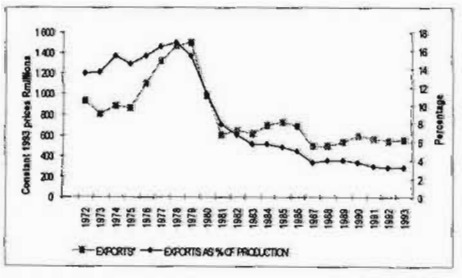
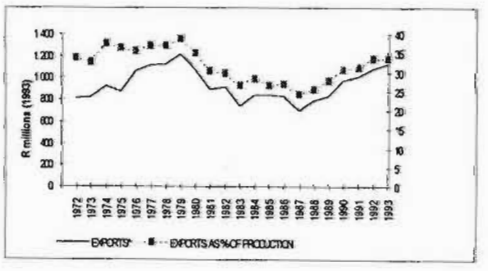
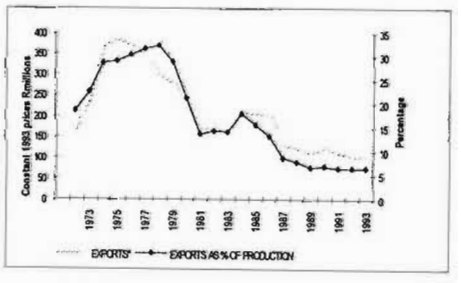


Figure 6-3 Canning and preserving of fruit and vegetables



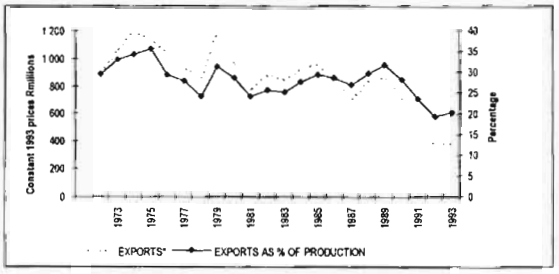
Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-4 Canning and preserving of fish



The canned food industry was hampered by official sanctions from 1985 until 1990. The marketing of South African consumer products, which could easily be identified as being of South African origin, suffered since the late-1970s because of consumer boycotts. This sector as with most of the food sector is dependent upon the weather. Exports as a percentage of production fluctuated with the level of production.

Figure 6-5 Exports of sugar



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Sugar does not suffer from lack of demand. The South African Sugar Association that markets most of South Africa's sugar internationally has signed long-term agreements. Prices are usually fixed internationally. South Africa has had a quota into the USA since 1991 that gave better prices. Therefore even during the periods of drought South Africa exported sugar to the USA.

Figure 6-6 Export of cocoa, chocolate, and sugar confectionery

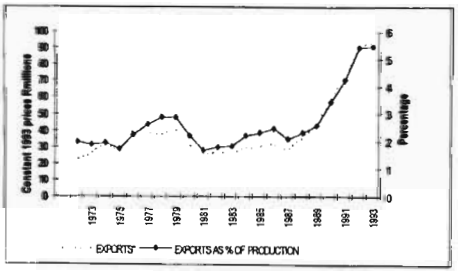
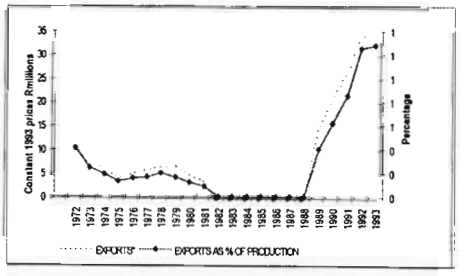


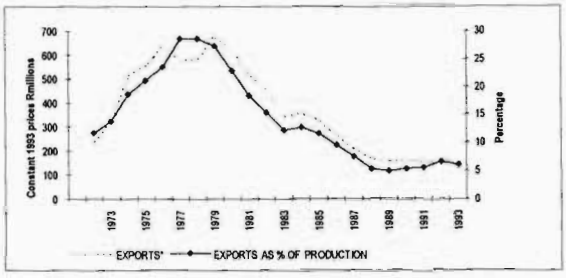
Figure 6-7 Exports of bakery products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Chocolates, sugar confectionery and biscuit exports seem to have benefited from GEIS. This is a combination of the opening of the African markets to South Africa and the positive effects of GEIS have resulted in considerable export growth. Factories have expanded in response to GEIS. In addition, this industry also enjoys rebates from the South African Sugar Association that have given it world input prices.

Figure 6-8 Export of other food products

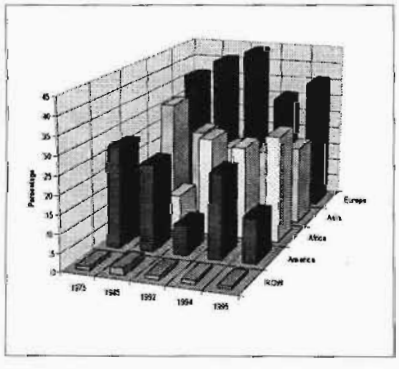


Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.8.5 South Africa's food markets

The graph below shows that Europe remains the major market for South African food products. Since 1992, Africa has become a more significant trading partner. This trend should continue, especially in processed food products.

Figure 6-9 Export of prepared food products



Source: Commissioner for Customs and Excise

6.3.8.6 Results of the regression for the food sector

To determine the effect GEIS has had on the export of the food sector, the following export function was estimated:

X90FOOD = 2,2569638e+08 - 0,86221729*GEIS90FOOD - 22784103*UUDEMFOOD + 522966,51*REERFOOD + 21492,156*OECDGDP90 - 66693182*SEAS1 + 27337154*SEAS2 + 45827498*SEAS3

with:

X90FFOOD	=	The real value of food exports (R million 1990=100)
GEIS90FOOD	=	The Real GEIS payments (1990=100) to food exporters
REERFOOD	=	The REER for the food sector
UUDEMFOOD	=	The percentage spare capacity of the food sector due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries
SEAS1/2/3/4	=	Dummy variable to test seasonal variations

The regression results are set out below. Figure 6-10 below shows the actual and fitted real export figures for processed food relative to the right hand scale, while the

residual is given on the left hand scale. The function gives a good representation of processed food exports.

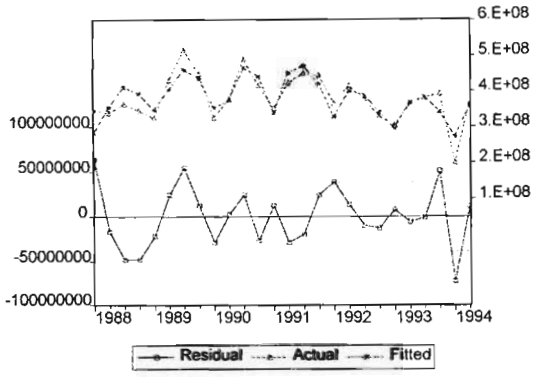
Complete data were not available at the 4-digit level and the sector was therefore analysed as a whole.

LS // Dependent Variable is X90FOOD
Sample: 1988:1 1994:2
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	2,26E+08	2,41E+08	0,938082	0,3606
GEIS90FOOD	-0,862217	0,501396	-1,719633	0,1026
UUDEMFOOD	-22784103	5303512,	-4,296041	0,0004
REERFOOD	522966,5	2188383,	0,238974	0,8138
OECDGDP90	21492,16	19936,24	1,078044	0,2952
SEAS1	-66693182	21864470	-3,050299	0,0069
SEAS2	27337154	26064027	1,048846	0,3081
SEAS3	45827498	23430774	1,955868	0,0662

R-squared	0,739587	Mean dependent var	3,80E+08
Adjusted R-squared	0,638315	S.D. dependent var	64481118
S.E. of regression	38779084	Akaike info criterion	35,19444
Sum squared resid	2,71E+16	Schwartz criterion	35,58155
Log likelihood	-486,4202	F-statistic	7,303000
Durbin-Watson stat	1,868752	Prob(F-statistic)	0,000321

Figure 6-10 Residuals, actual and fitted real values of food exports



Retaining the principle of parsimony, maintaining the model as simple as possible, the R-squared of 0,739587 is acceptable. With the F-statistic of 7,030 we can reject the hypothesis that the slope coefficients are simultaneously equal to zero at the 99 per cent level. The Durbin-Watson value of 1,868752 provides an inconclusive test for serial correlation, and the null hypothesis cannot therefore be rejected. The Breusch-Godfrey Serial Correlation LM test was applied which allowed the rejection of the null hypothesis that there was serial correlation. The Akaike Information Criterion, or

AIC, is a guide to the selection of the number of terms in an equation. It is based on the sum of squared residuals but places a penalty on extra coefficients. The Schwarz criterion is an alternative to the AIC with the same interpretation but a larger penalty for extra coefficients.

The individual T-tests of significance shows that only the industry's capacity utilisation explains the levels of exports at the 99 per cent level of significance. When there is a drought, the industry's total capacity will be lower and therefore so are exports. Many of the food products that South Africa exports are not essential. Further, we can confidently predict, at 99 per cent level of significance, that exports in the first quarter will be lower.

6.3.9 Beverages (SIC 313)

This sector consists of three subsectors: distilleries and wineries; malt liquors and malt; and soft drinks and carbonated waters. Wine, however, is the major exporting subsector. Although the South African wine industry has a long history stretching back to 1679, since the mid-1980s the demand for "New World Wines" from countries such as America, Australia, Chile, and South Africa has increased. Wines were boycotted during the sanction years. The volume of wine exported has increased since. South African wine producers have nevertheless responded to the international demand and increased production. Despite sanctions, exports as a percentage of production have nevertheless increased since the late-1980s.

6.3.9.1 Structure of the beverage industry

The distilleries and wineries, and the malt liquor sectors are controlled by the Liquor Act, 1989 (Act number 27 of 1989). Consequently, the number of producers is limited. The industry was further hampered by exporters required to obtain permission to export. Import regulations in most countries are complex and serve as a non-tariff barrier.

6.3.9.2 International comparison

From Appendix A, a picture of the international trade from 1990 to 1994, and South Africa's role can be drawn. South Africa only has a small share of the world market of 0,4 per cent. As can be expected, after official sanctions were lifted, and South Africa

became an accepted member of the international community, South African wine was in great demand. South African wine exports increased by 36,4 per cent per annum while the world trend was only 3,1 per cent. Consequently, the competitiveness indicator is also positive. South African beverages have a revealed comparative advantage of 1,55 indicating a comparative advantage relative to other upper-middle income countries.

6.3.9.3 Development assistance

Table 6-6 Nominal levels of protection of distilleries and wineries, malt liquors and malt, soft drinks and carbonated water

	wine	malt	soft drink
Average nominal protection	20	5	20
Ad valorem (% of tariff headings))	16	23	76
Formula (% of tariff headings)	89	47	100
Import control (% of tariff headings)	94	77	100
Import surcharge (% of tariff headings)	84	23	100

Source: IDC, 1992.

The nominal protection of 20 per cent give to the distilleries, wineries, and soft drink producers on 15 May 1992 was in line with the manufacturing sector's nominal protection. Malt on the other hand received considerably less nominal protection. The industry is however very regulated.

Table 6-7 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A R million			
	1982	1983	1984	1985
Beverages	0,06	0,10	0,03	0,01
	Category B R million			
	1982	1983	1984	1985
Beverages	1,24	1,82	1,55	1,42

Source: Board of Trade and Industry, 1987.

In 1995 this sector received less than 0,02 per cent of total Category A payments and 0,01 per cent of Category B. The sector is estimate to have received R5,6 million Category D (Section 11bis) assistance of R231 million given to exporters in 1985. There were however only 4 exporters who used these benefits.

Table 6-8 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Beverages	1,13	1,77	1,55	1,00	0,78	0,63	0,72	0,63	1,44

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: Belli et al, 1993 and IDC, 1990.

Protection on inputs was estimated at 14,6 per cent on inputs and 13,8 per cent on output. The industry would be competitive if it obtains its inputs at world prices, with or without GEIS. However, the industry would not be able to compete internationally without GEIS and purchasing at local prices. (Belli *et al*, 1993)

Table 6-9 GEIS and Phase VI export incentives paid to soft drink, spirits and wine, and malt liquor exports in 1992

		Soft drinks	spirit and wine	Malt
GEIS exclusions	% of tariff headings	0	0	0
	% of export value	0	0	0
Primary products	% of tariff headings	0	0	0
	% of export value	0	0	0
Beneficiated primary product	% of tariff headings	37	3	77
	% of export value	0	0	0
Material intensive	% of tariff headings	25	10	8
	% of export value	84	23	0
Manufactured	% of tariff headings	38	87	15
	% of export value	16	77	100
Phase VI	% of tariff headings	0	0	0
	% of export value	0	0	0

Source: IDC, 1992.

Assistance provided to the industry under the GEIS regime advantageous as most products were classified under either Category 3 or 4.

6.3.9.4 Export of beverages

Figure 6-11 Distilleries and wineries

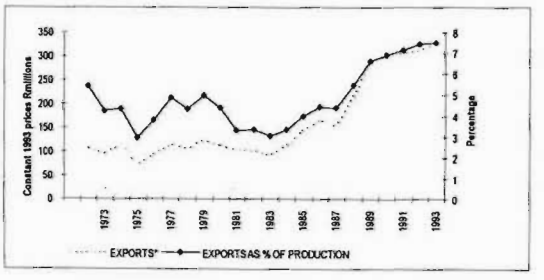


Figure 6-12 Malt and malt liquors

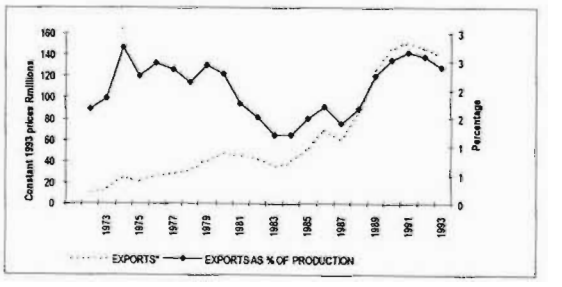
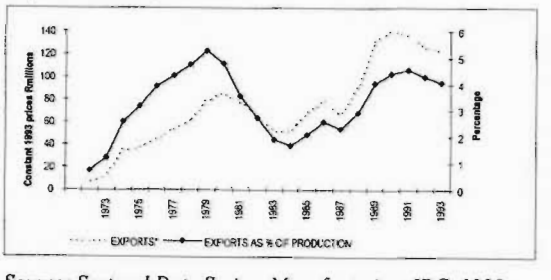


Figure 6-13 Soft drinks



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Over the past decade, with perhaps the exception of 1992 and 1993, the industry as a whole are exporting more each year of their production. Exports take place to a

number of countries, with Southern African countries taking up more South African exports.

6.3.9.5 Results of regression for the beverage sector

In order to determine the effect GEIS has had on the export of the beverage sector, the following export function was estimated:

X90BEV = -5,3955125e+08 - 0,73406948*GEIS90BEV - 1465451,5*UUDEMBEV + 555661,7*REERBEV + 37780,834*OECDGDP90 - 29008726*SEAS1 - 825862,25*SEAS2 - 19769760*SEAS3

with:

X90BEV	=	The real value of beverage exports (R million 1990=100)
GEIS90BEV	=	Real GEIS payments (1990=100)
REERBEV	=	The REER for the beverage sector
UUDEMBEV	=	The percentage capacity utilisation of beverage industry
OECDGDP90	=	The weighted index of the GDP index of the OECD countries
SEAS	=	The dummy variable to test seasonal variations

The regression results are set out below.

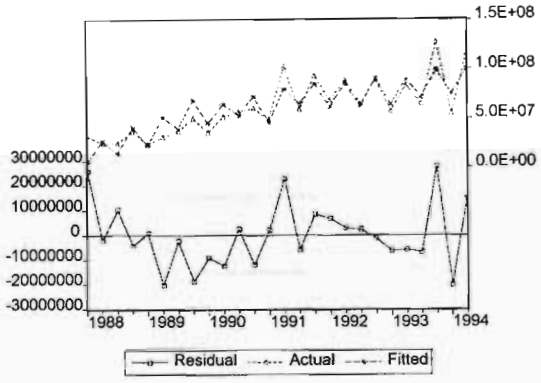
Figure 5-14 below shows the actual and fitted real export figures for beverage exports relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of beverage exports.

LS // Dependent Variable is X90BEV
Sample: 1988:1 1994:2
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-5,40E+08	99901978	-5,400806	0,0000
GEIS90BEV	-0,734069	1,661455	-0,441823	0,6639
UUDEMBEV	-1465451,	1345918,	-1,088812	0,2906
REERBEV	555661,7	655047,5	0,848277	0,4074
OECDGDP90	37780,83	7038,849	5,367473	0,0000
SEAS1	-29008726	8749352,0	-3,315528	0,0038
SEAS2	-825862,3	9641775,0	-0,085655	0,9327
SEAS3	-19769760	9101341,0	-2,172181	0,0434

R-squared	0,793119	Mean dependent var	60445207
Adjusted R-squared	0,712665	S.D. dependent var	28400032
S.E. of regression	15223443	Akaike info criterion	33,32435
Sum squared resid	4,17E+15	Schwarz criterion	33,71146
Log likelihood	-462,1090	F-statistic	9,858077
Durbin-Watson stat	2,200314	Prob(F-statistic)	0,000047

Figure 6-14 Residuals, actual and fitted real values for the export of beverages



In this simple model the R-squared of 0,793119 is acceptable. As there is no lag dependent variable, the Durbin-Watson statistic of 2,200314 indicates that serial correlation is not present. No further tests were applied. The F-statistic of 9,858077 allowed the rejection of the null hypothesis that the coefficients are simultaneously equal to zero at the 99 per cent level.

Seasonal fluctuations are a very strong, as can be expected in this industry. However, the OECD's GDP is significant at the 99 per cent level and has had an impact on the sector. As income increased and the taste moved away from spirits and malts, the export of South African wines improved. Although most of the products in this industry enjoyed a category 4 status, GEIS proved to be insignificant in the promotion of exports. Funds spend on promoting exports would have been better employed creating additional capacity or improving productivity.

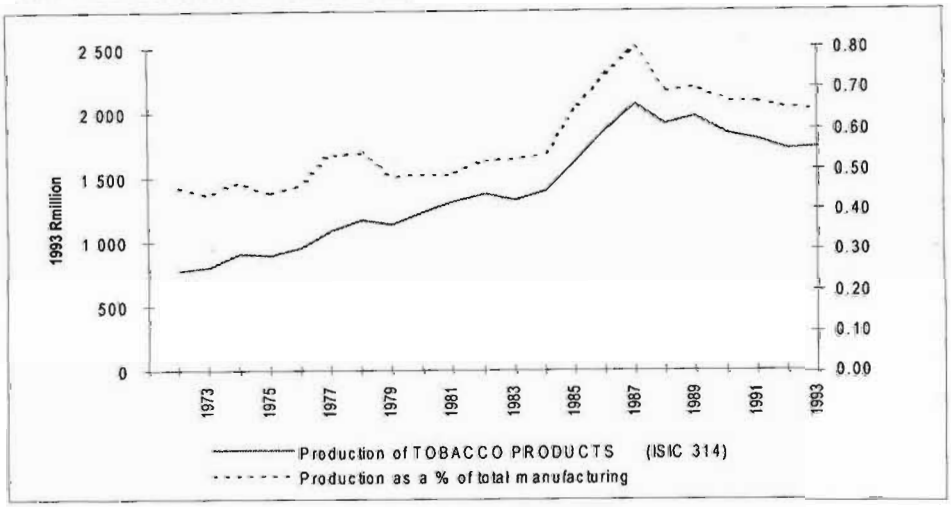
6.3.10 Tobacco (SIC 314)

This sector covers the manufacture of tobacco products such as cigarettes, cigars, smoking, chewing and homogenised tobacco, and snuff.

6.3.10.1 Structure of the tobacco industry

This sector is largely dependent on agricultural conditions and contributes represents approximately half a per cent of total South African manufacturing. Despite concerted campaigns to dissuade consumers from using tobacco products, the international demand has not decreased.

Figure 6-15 Production of tobacco products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.10.2 International comparison

Table 6-10 International demand for South African exports

SITC	Product	Imports SACU US$ m	from SACU 1994	trend 90-94 % p.a.	World	trend 90-94 % p.a.	Market-share %	Competitive Indicator %	RCA
12	Tobacco		50,5	5,8	5,5		0,3	0,3	0,80

Source: ITC, 1996.

From Table 6-10 International demand for South African exports South Africa's exports have shown a growth rate of 5,8 per cent and have only been slightly above the world average growth of 5,5 per cent and therefore the competitiveness indicator is positive but very small. This table also indicates that South Africa does not have a revealed comparative advantage in the production of tobacco relative to upper-middle income countries.

6.3.10.3 Development assistance

Table 6-11 Nominal levels of protection

Average nominal protection	40
Ad valorem (% of tariff headings)	50
Formula (% of tariff headings)	80
Import control (% of tariff headings)	90
Import surcharge (% of tariff headings)	100

Source: IDC, 1992.

Table 6-12 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Tobacco	1,56	1,22	1,12	1,00	0,90	1,28	1,40	1,28	1,74

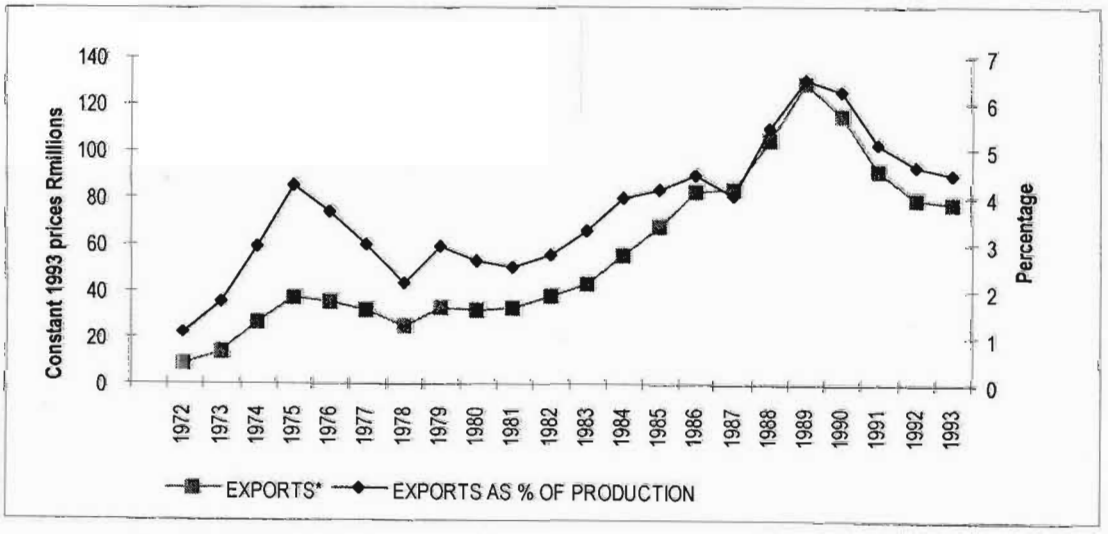
Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: Belli et al, 1993 and IDC , 1990.

This sector has a very high average nominal rate of protection and hence there is an anti-export bias irrespective whether they have access to inputs at world prices or GEIS.

The entire sector benefits from category 3 GEIS incentives.

6.3.10.4 Export

Figure 6-16 Exports of tobacco



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Until 1989, exports in this sector were improving with most of the production consumed in Southern Africa. The volume of exports of tobacco products has grown constantly from the late-1970s until early 1990s with the imposition of GEIS. The production in this sector has declined from 1987.

6.3.10.5 Results of regression for tobacco products

In order to determine the effect GEIS has had on the export of the tobacco sector, the following export function was estimated:

X90TOBSM = 4756192,8 + 0,70347744*X90TOBSM(-1) + 44,778302*GEIS90TOB + 54108,82*UUDEMTOB + 60350,119*REERTOB - 679,88773*OECDGDP90 - 906599,17*SEAS4 + [AR(1) = -0,35379371]

with:

X90TOBSM	=	The real value of tobacco exports smoothed using exponential smoothing techniques (R million 1990=100)
GEIS90	=	Real GEIS payments (1990=100)
REERTOB	=	The REER for the tobacco sector
CAPUT	=	The percentage capacity utilisation of tobacco sector
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below. The function gives a good representation of tobacco exports.

LLS // Dependent Variable is X90TOBSM
Sample (adjusted): 1988:2 1994:2
Included observations: 25 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7806894,	11604942	-0,672722	0,5092
X90TOBSM(-1)	0,646586	0,160758	4,022116	0,0007
GEIS90TOB	30,75566	20,49870	1,500371	0,1500
UUDEMTOB	54967,40	82985,77	0,662371	0,5157
REERTOB	39173,86	56575,95	0,692412	0,4971
OECDGDP90	295,6160	832,3594	0,355154	0,7264

R-squared	0,890405	Mean dependent var	4054551,
Adjusted R-squared	0,861564	S.D. dependent var	2929418,
S.E. of regression	1089948,	Akaike info criterion	28,00884
Sum squared resid	2,26E+13	Schwarz criterion	28,30138
Log likelihood	-379,5840	F-statistic	30,87305
Durbin-Watson stat	2,348353	Prob(F-statistic)	0,000000

The R-squared of 0,890405 is good, and this together with a F-statistic of 30,87305 indicates that the variables explain the reasons for this sector's exports. The Durbin-Watson statistic of 2,348353 would indicate that there is no serial correlation had there not been a dependent lagged variable. The Breusch-Godfrey Serial Correlation LM test was applied which confirmed that there was serial correlation, which was corrected using First Order Autoregressive (AR) procedures.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4769981,	10529677	0,453004	0,6566
X90TOBSM(-1)	0,703014	0,143162	4,910600	0,0002
GEIS90TOB	44,88685	24,02621	1,868245	0,0802
UUDEMTOB	54072,79	70027,19	0,772168	0,4513
REERTOB	60165,85	56476,11	1,065333	0,3025
OECDGDP90	-679,5754	796,6426	-0,853049	0,4062
SEAS4	-907229,9	574226,6	-1,579916	0,1337
AR(1)	-0,352608	0,248284	-1,420178	0,1747

R-squared	0,907553	Mean dependent var	4156221,
Adjusted R-squared	0,867107	S.D. dependent var	2947023,
S.E. of regression	1074321,	Akaike info criterion	28,03560
Sum squared resid	1,85E+13	Schwarz criterion	28,42829
Log likelihood	-362,4817	F-statistic	22,43883
Durbin-Watson stat	2,130272	Prob(F-statistic)	0,000000
Inverted AR Roots	-.35		

The significance of the lagged dependent variable indicates that once the market for a product has been established, it is maintained and strengthened. Since most of this industries products are branded and heavily advertised, it is to be expected that they would retain their market-share.

The coefficient for GEIS is significant at 90 per cent. Further, this estimation has a very high coefficient that would indicate GEIS did play a role in promoting exports. Since it appears that once a market is established, it is kept, and further developed, the funds spend on promoting tobacco, should result in increased exports in the long term.

6.3.11 Textiles, excluding clothing and footwear (SIC 321)

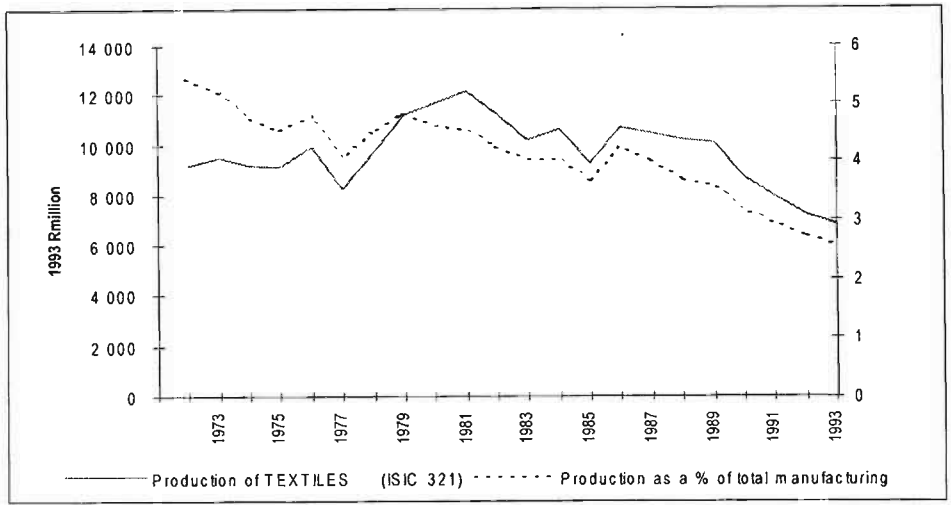
This sector includes spinning and weaving of textiles, made-up textile goods such as household furnishings, hosiery knitting mills, carpets and rugs, and cordage rope and twine. The fabrics produced range from standard grey cotton cloth to highly specialised fabrics used in the parachute industry.

6.3.11.1 Structure of the textile industry

There are almost 700 manufacturers producing textiles. Together they employ 68 000 workers. On average each producer has R1,8 million invested in fixed assets. (Clothfed, 1996).

Output increased since the late-1970s, peaked in 1982, and has gradually declined since. Exports have declined along with the decline of output.

Figure 6-17 Production of textiles



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The Textile industry is one of the "sensitive" industries in international trade. Traditionally, in developed countries, this industry has provided considerable employment. Exports from Asian countries have increased over the past two decades and therefore developed countries have imposed additional protection in the form of the Multi Fibre Agreement (MFA). The international conditions, which face South African exporters, are therefore tough. Technology in the textile industry has also responded to the increased competition. Before World War II English spinning and weaving technology of natural fibres was dominant. From the mid-1930s to the 1960s USA technology of synthetic and blended fibre dominated the market. Both these periods were characterised by labour intensive manufacture. Since the 1950s there has been considerable improvements in the technology and it was "nigh impossible for any but the most technically advanced textile firms to develop all the requisite skill" to compete internationally. (Maree, 1995)

South Africa's textile industry was established in 1891 with the manufacture of blankets but really only developed after World War II with state assistance; finance was provided by the IDC and protection was given by the Board of Trade and Industry. However over the past two decades, capital investment in the textile industry has lagged behind capital investment in industry in South Africa as can be seen in Figure 6-18 below. As a result the age of the machinery in South Africa is old.

Figure 6-18 Investment in the textile industry in 1993 prices

Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Table 6-13 Comparative age of textile machinery, 1988

	% of machinery more than ten years old				
	Short-staple spindles	Long-staple spindles	Open-end rotors	Shuttle looms	Shuttleless looms
W Germany	79,5	64,7	0,0	98,7	38,5
Italy	50,7	79,4	0,0	99,5	44,5
Turkey	82,2	69,5	19,9	96,4	88,1
Taiwan	63,5	18,2	16,2	88,9	63,5
S Korea	68,0	81,7	8,4	67,0	88,7
Hong Kong	69,2	N/A,	0,0	97,4	54,9
Indonesia	74,8	33,8	14,6	87,2	92,8
Thailand	75,3	22,6	0,0	96,8	96,5
China	98,6	89,5	1,5	99,9	98,1
Australia	N/A	83,8	34,5	98,8	40,0
South Africa	**78,2**	**71,0**	**32,2**	**100,0**	**65,9**

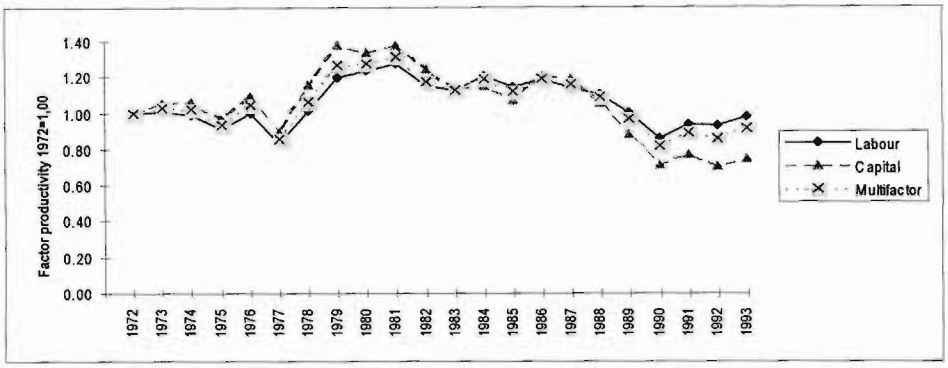
Source: Maree (1995)(Using UNIDO 1990)

South Africa has therefore fallen behind in international trends and is therefore unable to face up to international competition.

Labour productivity

In the late-1970s productivity improved. Productivity gradually declined until 1990. Largely because of an improvement in labour productivity, this trend has reversed since 1990.

Figure 6-19 Factor productivity for textiles



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.11.2 International comparison

Table 6-14 International demand for South African textile exports

SITC	Product	Imports from SACU 1994 US$ m	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market-share %	Compet. %	RCA
26	TEXTILE FIBRES	252,7	-13,6	0,1	1,1	-13,7	2,36

Source: ITC (1996)

Although the South African Textile industry enjoys a revealed comparative advantage relative to other upper-middle countries, exports have decreased over the 1990 to 1994 period.

6.3.11.3 Development assistance

Table 6-15 Nominal levels of protection.

	Sector	ave.nominal protection	Percentage of tariff headings Ad valorem	Formula	Import control	Import sucharge
Wool and cotton processing	32110-32113	10	44	0	16	16
Spinning and weaving of textiles	32114-32116	40	99	80	1	84
Made-up textile goods	3212	35	95	30	22	97
Garment and hosiery knitting mills	32130	80	96	74	76	94
Other knitting mills	32139	55	99	12	0	95
Carpets and rugs	3214	30	100	12	0	100
Cordage rope and twine	3215	20	100	25	0	80
Other textile	3219	20	82	11	7	51

Source: IDC (1992)

Table 6-16 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Textiles	0,44	0,61	0,70	0,80
	Category B			
	1982	1983	1984	1985
Textiles	1,27	1,77	2,31	2,87

Source: Board of Trade and Industry (1987)

Table 6-17 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Textiles	1,66	1,90	0,88	1,00	-0,02	0,87	1,88	0,87	-106,10

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices, ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

Even if it could purchase inputs at world prices, the industry suffers from an export bias. GEIS benefits to the industry do not neutralise the anti-export bias if inputs are purchased locally. It is therefore important that the industry be given access to inputs at international prices.

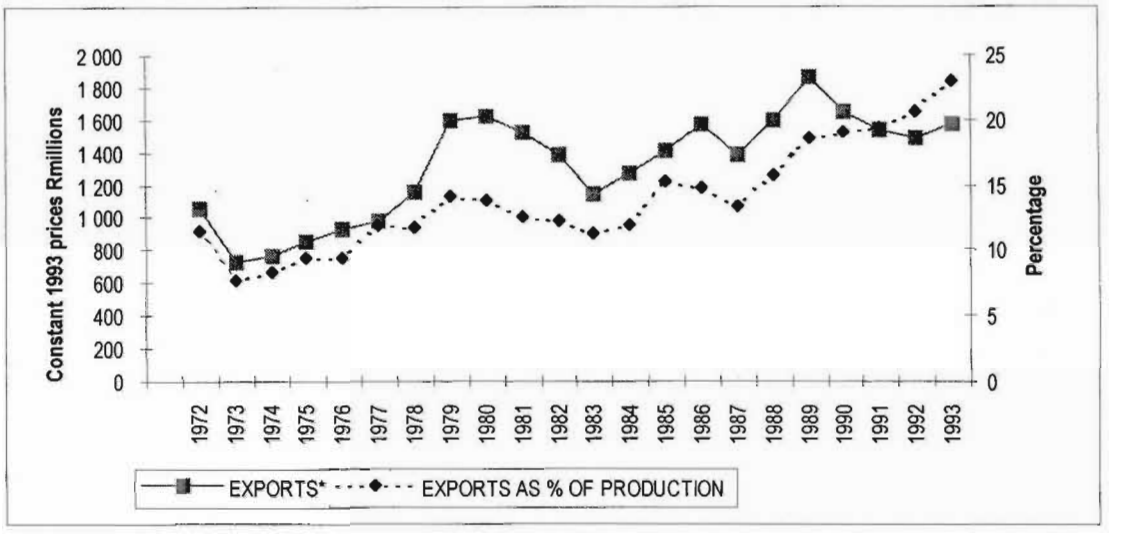
Table 6-18 GEIS and Phase VI export incentives paid in 1992 percentage of tariff headings

	Sector	Geis exclusions	Primary products	Beneficiated primary	Material intensive	Manaufactured
Wool and cotton processing	32110-32113	14	0	70	16	0
Spinning and weaving of textiles	32114-32116	0	0	0	99	1
Made-up textile goods	3212	0	0	0	20	80
Garment and hosiery knitting mills	32130	0	0	0	1	99
Other knitting mills	32139	0	0	0	100	0
Carpets and rugs	3214	0	0	0	0	100
Cordage rope and twine	3215	0	0	0	100	0
Other textile	3219	0	0	0	85	14

Source: IDC (1992)

6.3.11.4 Export

Figure 6-20 Export of textiles



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-21 Exports of spinning and weaving of textiles

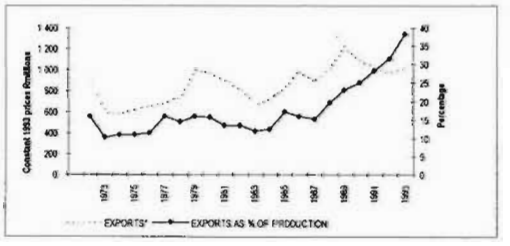
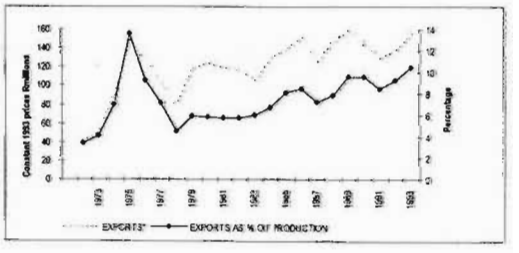


Figure 6-22 Exports of made-up textile goods



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-23 Exports of garment and hosiery knitting mills

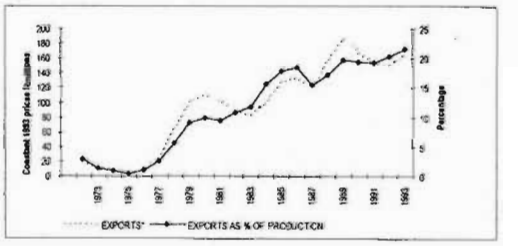


Figure 6-24 Export of other knitting mills

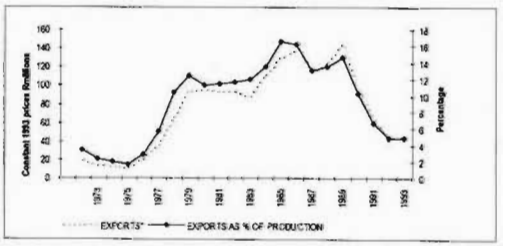


Figure 6-25 Exports of carpets and rugs

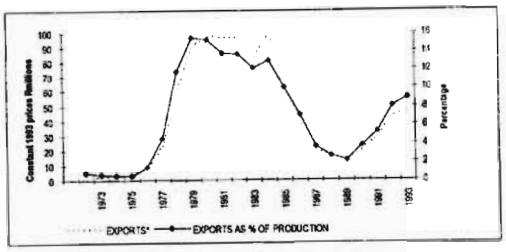


Figure 6-26 Exports of cordage, rope and twine

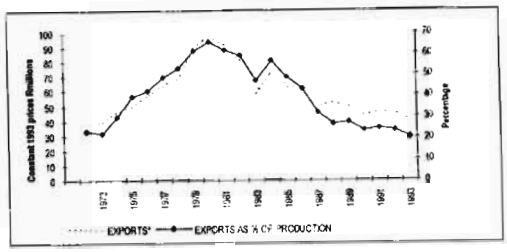
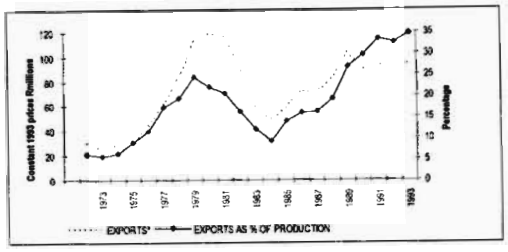


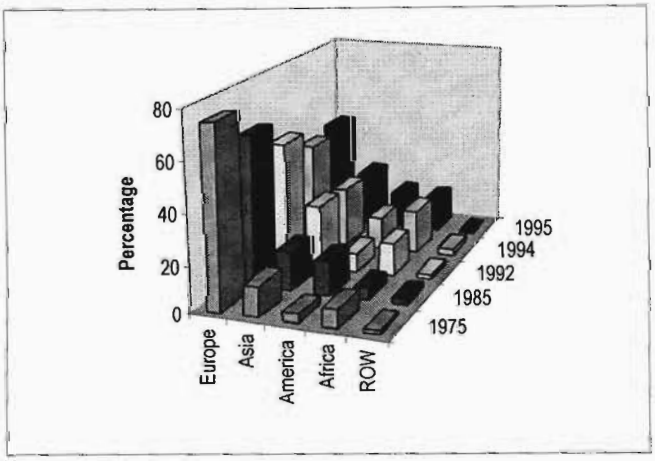
Figure 6-27 Export of other textiles



Source: Sectoral Data Series: Manufacturing, IDC, 1995

Exports from most of the textile subsectors have improved; exceptions are cordage and other knitting mills. Exports from the spinning and weaving subsectors represent the largest portion of exports from the textile industry. Exports as a percentage of production have increased consistently since 1988 and exports now comprise almost 40 per cent of the industry production.

Figure 6-28 Exports of textiles and clothing



Source: Customs and Excise

Since 1975, the exports to Europe have gradually decreased, however this market remains South Africa's largest. The Asian and African markets are becoming more significant. The American market improved until the mid-1980s when sanctions put an end to that market. The growth in this market should become more significant as textile manufacturers venture into the Americas.

6.3.11.5 Results of regression for textiles

In order to determine the effect GEIS has had on the export of the textile sector, the following export function was estimated:

X90TEXT = 1,3671648e+09 + 0,73436105*GEIS90TEXT + 4277123,4*UUDEMTEXT + 3096210,3*REERTEXT - 100235,5*OECDGDP90 - 12483487*SEAS1 + 6695739,4*SEAS2 - 18895845*SEAS3 + [AR(4)=-0,43310906]

with:

X90TEXT	=	The real value of textile exports (Rmillion 1990=100)
GEIS90 TEXT	=	real GEIS payments (1990=100)
REER TEXT	=	The REER for the textile sector
UUDEM TEXT	=	The percentage unutilised capacity of textile due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below. Figure 6-29 below shows the actual and estimated real export figures for textiles relative to the left hand scale, while the error term is given on the right hand scale. The function gives a good representation of textile exports.

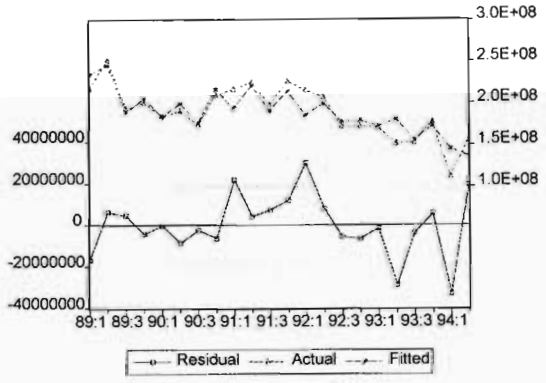
LS // Dependent Variable is X90TEXT
Sample: 1989:1 1994:2
Included observations: 22 after adjusting endpoints
Convergence achieved after 6 iterations

Variable	Coefficient	Std, Error	T-Statistic	Prob,
C	1,87E+09	4,06E+08	4,591918	0,0005
GEIS90TEXT	-0,291322	2,261171	-0,128837	0,8995
CAPUTTEXT	-3891188,	1784996,	-2,179942	0,0482
REERTEXT	1872831,	1575162,	1,188977	0,2557
OECDGDP90	-100915,3	12919,21	-7,811261	0,0000
SEAS1	-11240741	6820505,	-1,648080	0,1233
SEAS2	3674554,	7367414,	0,498758	0,6263
SEAS3	-19521294	6920367,	-2,820847	0,0144
AR(4)	-0,605072	0,229940	-2,631433	0,0207

R-squared	0,821992	Mean dependent var	1,90E+08
Adjusted R-squared	0,712448	S,D, dependent var	31497626
S,E, of regression	16890247	Akaike info criterion	33,57658
Sum squared resid	3,71E+15	Schwartz criterion	34,02292
Log likelihood	-391,5591	F-statistic	7,503785
Durbin-Watson stat	2,063024	Prob(F-statistic)	0,000821

Inverted AR Roots ,62+,62i ,62 -,62i -,62 -,62i -,62+,62I

Figure 6-29 Residuals, actual and fitted real values of the textile industry



The R-squared of 0,821992 is acceptable. With the F-statistic of 7,503785 at least one of the variables will not be zero. Before correcting for serial correlation, the Durbin-Watson statistic of 1,475653 indicated that there is no serial correlation was present. The Breusch-Godfrey Serial Correlation LM test confirmed this and First Order Autoregressive correction techniques were used to correct the problem.

GEIS played an insignificant role in the development of exports in the textile sector. The capacity utilisation on the other hand appears to be significant. The REER does not influence exports as strongly as one would have determined a priori.

The OECD's GDP has played a completely opposite role as can be expected. This can perhaps be explained as follows: As the OECD GDP increases consumers' demand improved higher-grade fabrics and clothing. Advanced machinery is needed to

manufacture these fabrics. Foreign firms have therefore kept pace of technological developments and have been able to meet the new needs. South African firms have not upgraded their machinery nor improved the technology and have consequently lost market-share. They have retained the lower end of the market and are able to supply this sector when demand for higher-grade fabrics decrease.

6.3.12 Clothing, excluding footwear (SIC 322)

This sector covers the manufacture of clothing by cutting and sewing fabrics, leather, fur, plastic, rubber, and other materials and the making of hoods, hats, and other accessories.

Clothing is generally seen as an important employer of lower skilled workers. It is usually targeted as a potential industry in developing countries. Because of its status as an employer, the industry is generally protected in industrialised countries. In South Africa, the clothing industry has also been the focus of government intervention. In the early 1920s, the clothing industry was seen as an ideal vehicle to generate work for poor white women. Later, through the decentralised policies, the clothing industry again received attention. "The state promoted its development with the implementation of import substitution policies, as was the norm in many countries at that time." (Altman, 1994).

Table 6-19 The evolution of protection of the clothing industry in South Africa

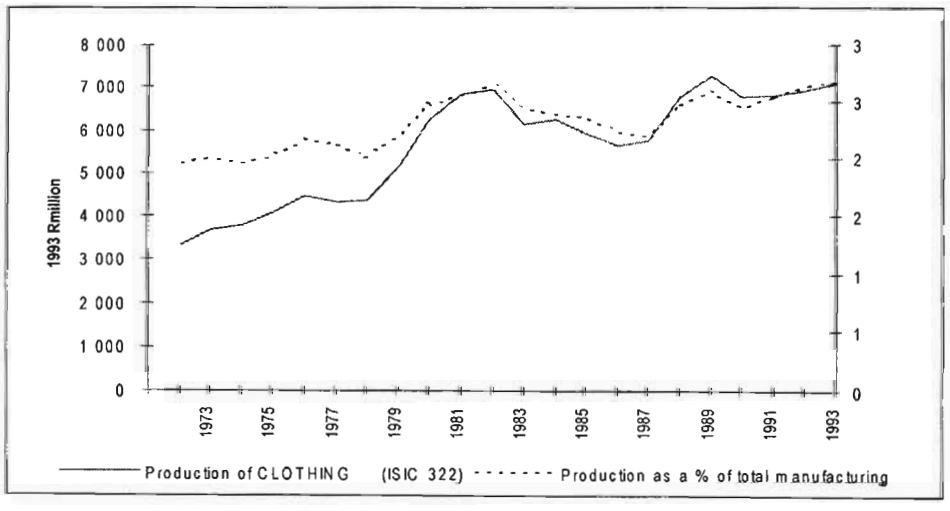
Period	Average tariff	Type of tariff	Justification
Pre-1920s	10 %	Ad valorem	Revenue
1925	20 %	Ad valorem	Poor white problem, infant industry, disruptive imports
1932		Dumping duty	Cheap Polish imports
1939	25 %	Ad valorem & Specific	Increased import competition
1954	20 - 30 %	Ad valorem & Specific	First industry application Higher fabric duties and labour costs
1974	35 %	Ad valorem & Formula	Simplified duty structure Disruptive competition due to Rand appreciation due to gold export boom
1982	N/A,	Ad valorem & Formula	Asian competition High cost of local fabric
1989	30 % (130 %)	Ad valorem & Formula	New tariff schedule in conjunction with SAP
05/92	60 % (166 %)	Ad valorem & Specific	In expectation of end of SAP Hatty committee
11/92	100 % (142 %)	Ad valorem & specific	In expectation of Long-term restructuring committee

Source: Altman, 1994, (Based on Bell (1992) and Cassim (1991) Government Gazettes, Zarenda (1977)) and IDC (1996))

6.3.12.1 Structure of clothing industry

This sector consists of approximately 1 600 manufacturers and employs 170 000 workers. (Clothfed, 1996). Barriers to entry are low which would explain why there are so many start up companies, several of which fail each year. The clothing industry only forms three per cent of the South Africa's manufacturing. The industry is threatened by cheap (often illegal) imports. Branded goods enjoy higher consumer demand and therefore higher prices. The cost of creating a job in the clothing industry is cheap (R10 000 per employment opportunity). (Altman, 1994).

Figure 6-30 Production of clothing



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Although the clothing industry is perceived as consisting of many small firms, in fact a number of large firms dominate the industry. Larger firms though not manufacturers, control the industry through their power in marketing clothing.

6.3.12.2 International comparison

An important trend in the clothing industry internationally, is that developing countries are exporting more proportionately to industrialised countries, while industrialised countries have lost market-share in both their home and export markets.

Table 6-20 Trade between industrialised and developing countries

	1955	1963	1970	1979	1988 *
Total Trade (Current US $ billion)	0,8	2,2	6,2	34,9	89,5
Proportion of World Exports %	1955	1963	1970	1979	1988 *
IC to IC	46	53	55	44	37
IC to DC	20	12	6	5	3
DC to IC	5	10	18	31	40
DC to DC	5	4	3	4	4
ETA to ETA	18	16	10	7	4
World	100	100	100	100	100

(IC = Industrialised country, DC = Developing counties, and ETA = Economies in transition)

Source: De la Torre (1994) and The South African Clothing Handbook 1995 (1995)

6.3.12.3 Development assistance

The South African clothing industry provides a large percentage of local demand. Historically, the industry has enjoyed high levels of protection against imports as can be seen in Table 6-21 below.

Table 6-21 Nominal levels of protection as at 15 May 1992

Average nominal protection	70
Ad valorem (% of tariff headings))	97
Formula (% of tariff headings)	50
Import control (% of tariff headings)	61
Import surcharge (% of tariff headings)	98

Source: IDC, 1992.

Although the nominal tariffs are very high, there are duty free permits offered by the SAP export promotion scheme (Duty Credit Scheme). The industry has also been plagued by illegal imports due to the high levels of protection, which has rendered the protection ineffective, especially in the lower end of the market.

Although GEIS payments of approximately 19 per cent were available to the clothing industry, it was insufficient to compensate for the higher costs of inputs and export sales were so unprofitable as to render value added in exports negative. The clothing

industry therefore has a negative anti-export bias coefficient and exports take place at the cost of domestic sales.

Table 6-22 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(Iw)	(Id)	(Iw)	(Id)	(Iw)	(Id)	(Iw)	(Id)
Clothing	3,39	2,84	1,60	1,00	-0,24	1,19	2,12	1,19	-14,21

Note: Iw indicates that value was calculated assuming that inputs are purchased at world prices, Id indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: Belli et al, 1993 and IDC, 1990.

Table 6-23 below gives the actual nominal payment to the clothing industry of Category A and Category B incentives. The nominal level of export development assistance determined by the Board of Trade and Industry (1987) was six per cent for the clothing and footwear industry, while the effective rate was more than double at 17 per cent.

Table 6-23 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A (R millions)			
	1982	1983	1984	1985
Clothing and footwear	1,31	1,32	2,90	3,02
	Category B (R millions)			
	1982	1983	1984	1985
Clothing and footwear	1,63	1,62	4,17	5,22

Source: Board of Trade and Industry, 1987.

The clothing industry has enjoyed category 4 GEIS assistance (there are a few items which qualify for category 3), however, the industry also enjoyed additional benefits given under the SAP (Duty Credit Scheme). Clothing therefore enjoyed more benefits than any sector other than those benefiting from Phase VI.

Table 6-24 GEIS and Phase VI export incentives paid in 1992

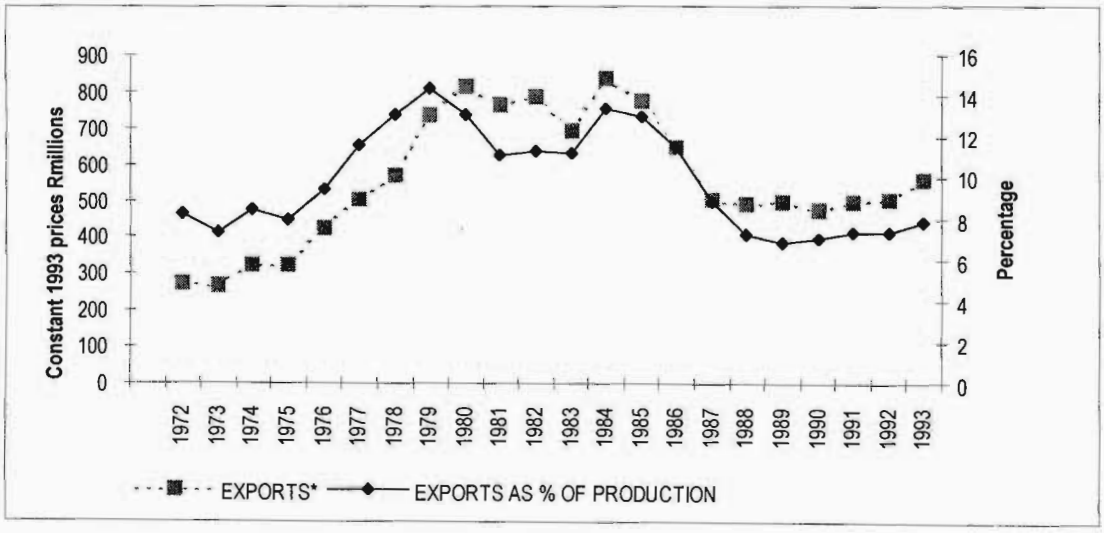
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	4
	% of export value	6
Manufactured	% of tariff headings	96
	% of export value	94
Phase VI	% of tariff headings	0
	% of export value	0

Source: IDC, 1992.

6.3.12.4 Export

Since the mid-1980s the value of exports has dropped but recovered again in the early 1990s. This drop was probably a result of sanctions and consumer boycotts aimed at South African products. Clothing was a very visible consumer item and in most developed countries, labels indicating the country of origin had to be placed in a conspicuous place inside the garment. In most countries the textile and clothing manufacturers lobby is strong and therefore clothing was an unfortunate victim of South Africa's apartheid policies. Figure 6-31 shows the Southern African Customs Unions exports on a monthly basis since 1988.

Figure 6-31 Exports of clothing



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Table 6-25 International demand for South African clothing exports

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % pa,	World trend 90-94 % pa,	Market-share %	*CI* %	RCA
26	Textile fibres	252,7	-13,6	0,1	1,1	-13,7	2,36
65	Textile yarn, fabric, etc,	135,9	4,0	2,2	0,1	1,8	0,23
84	Clothing and accessories	218,9	11,5	6,0	0,1	5,2	0,28

Source: ITC, 1996.

South Africa's exports have increased at a faster rate (11,5 per cent) for the 1990 to 1994 period than the world trend (six per cent). This is reflected by the competitiveness index of 5,2 per cent. This growth is from a very small base. South Africa has less than $^{1}/_{10}$ per cent of the $170 billion world market (Clothfed, 1996). South African clothing exporters also faced sanctions and consumer boycotts during the late-1980s and early 1990s.

The South African clothing industry does not have a positive revealed comparative advantage.

6.3.12.5 Results of regression for the clothing industry

In order to determine the effect GEIS has had on the export of the clothing sector, the following export function was estimated:

X90CLOTH = -82735838 - 0,022714207*X90CLOTH(-1) + 3,4504333*GEIS90CLOTH + 5597888,3*UUDEMCLOTH(-1) + 307505,46*REERCLOTH + 2958,9389*OECDGDP90 - 4752782,4*SEAS4

with:

X90CLOTH	=	The real value of clothing exports (R million 1990=100)
GEIS90 CLOTH	=	Real GEIS payments (1990=100)
REER CLOTH	=	The REER for the clothing sector
UUDEM CLOTH	=	The percentage unutilised capacity of clothing due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries
SEAS4	=	The dummy variable for the 4th quarter

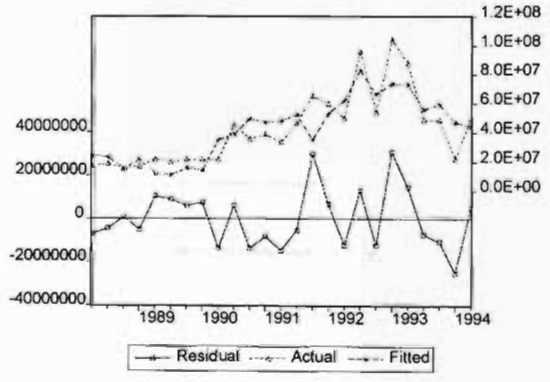
The regression results are set out below. Figure 6-32 below shows the actual and fitted real export figures for clothing relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of clothing exports.

LS // Dependent Variable is X90CLOTH
Sample: 1988:2 1994:2
Included observations: 25 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob,
C	-82735838	1,33E+08	-0,620813	0,5425
X90CLOTH(-1)	-0,022714	0,229323	-0,099049	0,9222
GEIS90CLOTH	3,450433	2,473879	1,394746	0,1801
UUDEMCLOTH(-1)	5597888,	2100508,	2,665017	0,0158
REERCLOTH	307505,5	795563,0	0,386526	0,7036
OECDGDP90	2958,939	10772,41	0,274677	0,7867
SEAS4	-4752782,	7582183,	-0,626836	0,5386

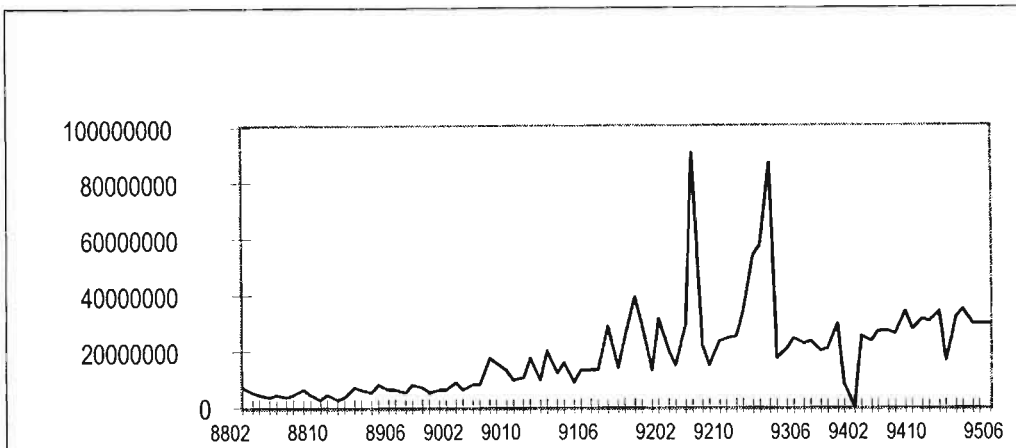
R-squared	0,707099	Mean dependent var	42476805
Adjusted R-squared	0,609466	SD dependent var	25264159
SE of regression	15788268	Akaike info criterion	33,38105
Sum squared resid	4,49E+15	Schwartz criterion	33,72234
Log likelihood	-445,7366	F-statistic	7,242376
Durbin-Watson stat	1,969415	Prob(F-statistic)	0,000474

Figure 6-32 Residuals, actual and fitted real values for the export of clothing



It would seem as though the most important factor in exports of clothing is the spare capacity in the industry. There are a few peaks and troughs in the export pattern as can be seen in Figure 6-33 below:

Figure 6-33 Monthly exports of clothing, nominal value.



However there are rather violent fluctuations in the third quarter of 1992, the second quarter of 1993 and the first quarter of 1994. This is caused by "announcement" effects. Not only has clothing benefited from receiving category 4 GEIS, but also from the Structural Adjustment Programmes and later the Duty Credit Scheme. (See section 3.3.6.2.) In anticipation of the announcement, exporters would either export more or hold out an export later to qualify for the benefit. The lack of a medium or preferably a long-term strategy for the clothing industry has been disadvantageous. The lack of vision has been complicated by the fact that the clothing lobby is very strong and in perpetual conflict with the textile industry. Further, an additional factor to the lack of a coherent policy was the fact that there have been regular changes in the Minister of Trade and Industry. New Ministers have to be briefed on policies and then given time to make decisions. [21]

The following equation was estimated using a dummy variable to make provision for the "announcement effect":

[21] The folowing ministers have controlled trade policy in recent years: DJ de Villiers (1985), DW Steyn (1988), KDS Durr (1990), G Marais (1991), DL Keys (1993), TA Manuel (1994), A Erwin (1996). (Source: Department of Trade and Industry Annual Reports - Minster on 31 December of the respective year.)

X90CLOTH = -1,082674e+08 + 3,638521*GEIS90CLOTH + 3878695,2*UUDEMCLOTH(-1) + 160359,11*REERCLOTH + 6203,2006*OECDGDP90 + 24249751*DUMMYCLOTH

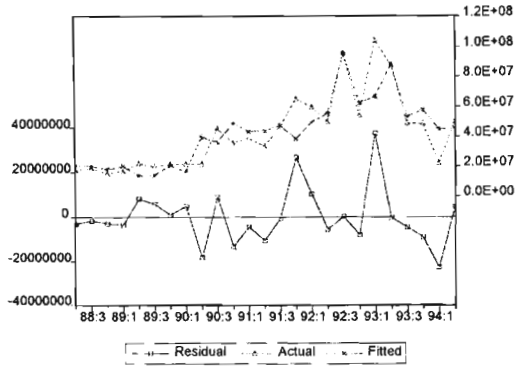
LS // Dependent Variable is X90CLOTH
Date: 11/15/96 Time: 10:47
Sample: 1988:2 1994:2
Included observations: 25 after adjusting endpoints

Variable	Coefficient	Std.Error	T-Statistic	Prob,
C	-1,08E+08	1,18E+08	-0,920190	0,3690
GEIS90CLOTH	3,638521	2,204513	1,650487	0,1153
UUDEMCLOTH(-1)	3878695,	1917915,	2,022350	0,0574
REERCLOTH	160359,1	640190,9	0,250486	0,8049
OECDGDP90	6203,201	9763,146	0,635369	0,5328
DUMMYCLOTH	24249751	12658274	1,915723	0,0706

R-squared	0,748973	Mean dependent var	42476805
Adj R-squared	0,682914	SD Dependent var	25264159
SE of regression	14226357	Akaike info criterion	33,14678
Sum squared resid	3,85E+15	Schwartz criterion	33,43931
Log likelihood	-443,8082	F-statistic	11,33783
Durbin-Watson stat	2,084727	Prob(F-statistic)	0,000036

The R-squared of 0,748973 is good and together with the F-statistic of 11,33783 we can say that at least one variable is not zero at 99 per cent significance. The Durbin-Watson statistic of 2,084727 indicates that there is no serial correlation. This is also confirmed by Figure 6-34 below.

Figure 6-34



The dummy variable is significant at 95 per cent confidence level. Although GEIS is significant at the 88 per cent level, the spare capacity is the main driving force in this industry. Excessive levels of protection have helped to create this spare capacity.

Neither price (REERCLOTH) nor demand (OECDGDP90) are relevant in determining South Africa's clothing exports. This would seem to confirm Belli's (1993:23) finding that the anti-export bias is such that exports are so unprofitable as to

render the value added in exports negative. Manufacturers therefore only sell into foreign markets when there is spare capacity and exports help keep the factory going during the slump.

6.3.13 Leather and leather products (SIC 323)

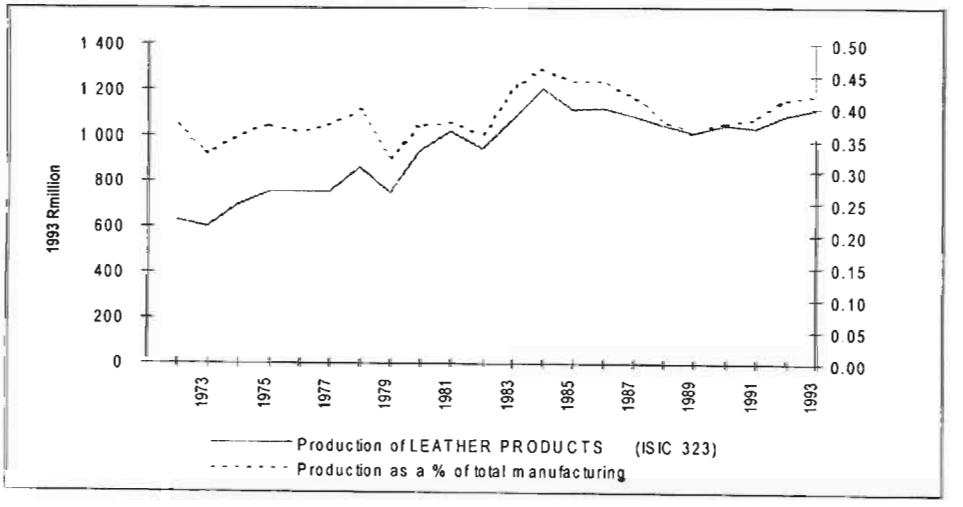
This sector covers tanning, currying, finishing, embossing and japanning, bleaching and dyeing of leather. It also covers the manufacture of products such as luggage, handbags, saddlery, harnesses and similar articles made from leather, plastic and other leather substitutes.

6.3.13.1 Structure of the leather and leather products sector

The sector is very small relative to the South African manufacturing sector and represents less than 0,5 per cent of total manufacturing.

The quantity of leather in South Africa available for local consumption and exports is limited by natural factors. South Africa did have an absolute advantage in the production of ostrich leather, being the only producer internationally. Regrettably, ostrich leather was dependent on international fashions. In the mean time the ostrich farming has developed internationally and will provide competition to South African producers.

Figure 6-35 Production of leather and leather products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.13.2 International comparison

SITC	Product	Imports from SACU 1994 US$ m	SACU trend 90-94 % pa,	World trend 90-94 % pa,	Market-share %	CI%	RCA
21	Hides, skins, fur skins, raw	75,0	-4,3	-1,0	1,2	-3,3	9,85
61	Leather, leather goods	159,5	13,2	4,2	1,1	8,7	1,07

Source: ITC, 1996.

Raw hides and skins have lost market-share internationally even though the sector enjoyed a revealed comparative advantage. It would seem as though the raw hides have been beneficiated into leather and leather products since even though the revealed comparative advantage is average, the average growth has been 13,2 per cent compared to world growth of only 4,2 per cent.

6.3.13.3 Development assistance

Table 6-26 Nominal levels of protection

Average nominal protection	25
Ad valorem (% of tariff headings))	98
Formula (% of tariff headings)	6
Import control (% of tariff headings)	0
Import surcharge (% of tariff headings)	100

Source: IDC, 1992.

The average nominal protection for the leather sector was 25 per cent at 15 May 1992, which was higher than the manufacturing sector's average of 20 percent. Table 6-27 below gives the effective level of protection and shows the anti-export bias. GEIS was able to neutralise the anti-export bias and a neutral trade regime existed with GEIS and purchases at local prices. Exporters able to purchase at world prices benefited and exporting was more profitable than local sales.

Table 6-27 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Leather	1,22	1,32	1,22	1,00	0,90	0,92	1,00	0,92	1,35

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices, ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

Table 6-28 GEIS and Phase VI export incentives paid in 1992

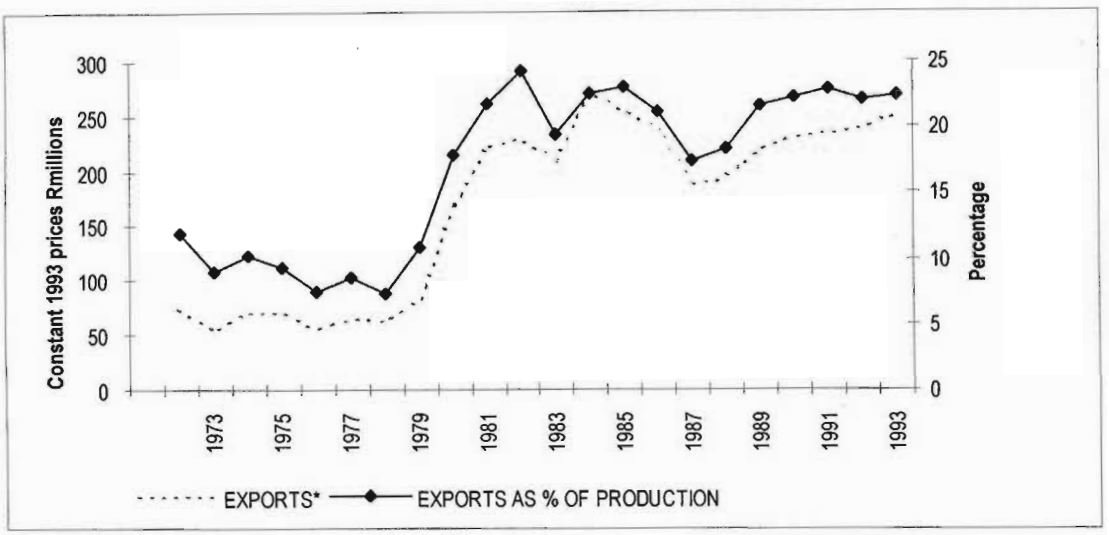
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	0
	% of export value	0
Manufactured	% of tariff headings	100
	% of export value	100
Phase VI	% of tariff headings	0
	% of export value	0

Source: IDC, 1992.

Although the IDC calculated that all the exports from this sector received category 4 assistance, leather car seats were exported and claimed Phase VI benefits.

6.3.13.4 Export

Figure 6-36Export of leather and leather products



Source: Sectoral Data Series: Manufacturing, IDC, 1995

In 1980 the sector expanded production, which was preceded by an increased export demand as shown in Figure 6-36Export of leather and leather products. Exports increased steadily until the mid-1980s, since when they represented between 15 and 23 per cent of total production. Figure 6-38 below shows most of the growth came from products of leather and not the raw products. This sector had therefore started with beneficiation of raw material before GEIS was introduced, there has nevertheless been a more pronounced increase in the export of manufactured products since 1990.

Figure 6-37 Export of tannery and leather finishing industry (SIC 3231)

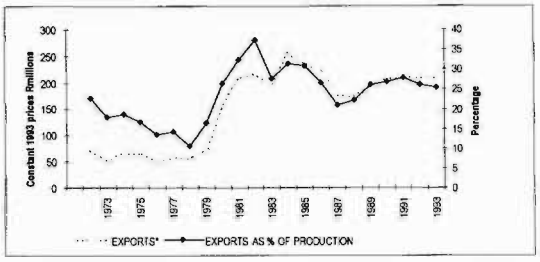
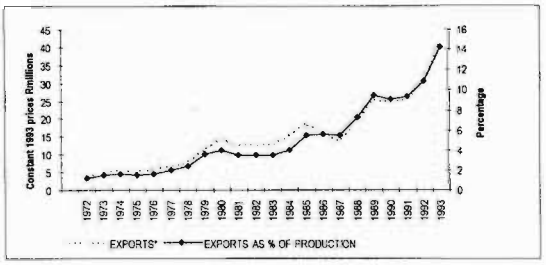


Figure 6-38 Exports of leather products and substitutes



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

This sector began exporting in the early 1980s. Most of the exports are sent to Italy (35 per cent), and the USA and Japan (each with approximately 18 per cent). These products are raw leather falling under category 2 or 3 while raw hides are excluded from receiving any export benefit.

6.3.13.5 Results of regression for the leather and leather products sector

In order to determine the effect GEIS has had on the export of the leather sector, the following export function was estimated:

XMANLEAT = -93,604959 + 0,096253773*GEISXLEAT + 0,009045442*UUDEMLEAT(-1) - 0,41526432*REERLEAT + 0,0099068663*OECDGDP90 + 2,4742209*SEAS4 + [AR(1)=0,25331863]

with:

XMANLEAT	=	Exports of leather as a proportion of total manufacture
GEISX LEAT	=	GEIS as a proportion of exports
REER LEAT	=	The REER for the leather sector
UUDEM LEAT	=	The percentage unutilised capacity of leather manufacturing due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below, Figure 6-39 below shows the actual and fitted real export figures for the leather sector relative to the right hand scale, while the residual is given on the left hand scale. The function gives a fair representation of leather exports.

From the regressions below, GEIS did not contribute significantly to the development of leather exports. The REER and the OECD's GDP were contributing factors.

LS // Dependent Variable is XMANLEAT
Sample: 1988:2 1994:2
Included observations: 25 after adjusting endpoints
Convergence not achieved after 50 iterations

Variable	Coefficient	Std, Error	T-Statistic	Prob,
C	-50,76435	30,95988	-1,639682	0,1184
GEISXLEAT	0,209185	0,137284	1,523740	0,1450
UUDEMLEAT	0,101486	0,324086	0,313145	0,7578
REERSARB	-0,584904	0,250631	-2,333726	0,0314
OECDGDP90	0,007987	0,002624	3,043333	0,0070
SEAS4	2,702231	1,189578	2,271589	0,0356
AR(1)	0,328875	0,225210	1,460307	0,1614

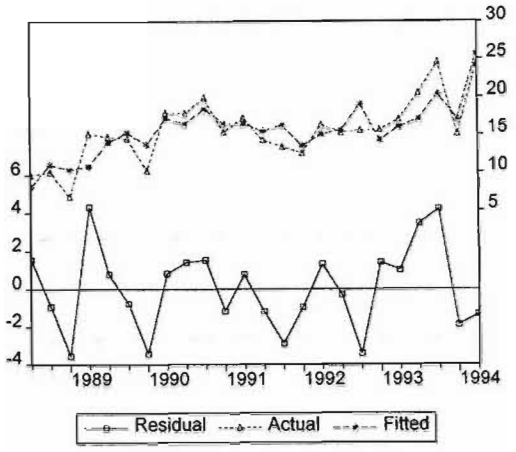
R-squared	0,672304	Meandependent var	15,32505
Adjusted R-squared	0,563071	S,D, dependent var	4,238545
S,E, of regression	2,801702	Akaike info criterion	2,291950
Sum squared resid	141,2917	Schwartz criterion	2,633236
Log likelihood	-57,1228	F-statistic	6,154816
Durbin-Watsonstat	1,776397	Prob(F-statistic)	0,001194

Inverted AR Roots ,33

The R-squared and adjusted R-squared are acceptable. The F-statistic indicates that at least one of the variables is not zero. Serial correlation that was indicated by the Durbin-Watson statistic was corrected using First Order Autoregression techniques.

The T-tests, conducted at the both the 90 and 95 per cent levels, indicated that both the GEIS and spare capacity variables had coefficients that were statistically not different from zero. This leads us to conclude that neither GEIS nor spare capacity had an influence on the leather sector's level of exports. Although GEIS has not had significant impact on the exports of the sector, there has been a move away from exporting raw hides to the export of leather and leather products. It would therefore appear as though GEIS did achieve one of its objects in increasing the export of value added products. Leather exports are influenced by the REER. Although the impact of the growth of the OECD countries GDP was significant the coefficient is quite small and, therefore will not have such an impact. Exports are dependent seasonal fluctuations,.

Figure 6-39 Residuals, actual and fitted real values for the export of leather exports



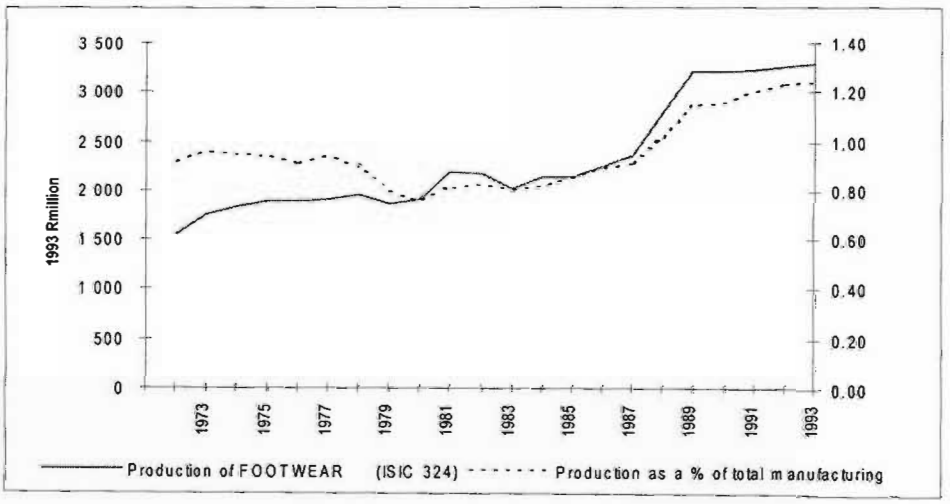
6.3.14 Footwear (324)

This sector covers the manufacture of leggings, gaiters and footwear from leather, fabrics and other materials excluding rubber and plastic. The manufacturing of boot and shoe cut stock is included.

6.3.14.1 Structure of the footwear manufacturing sector

The footwear industry is relatively small comprising less than 1,5 per cent of South Africa's total manufacturing. Output has however increased by almost fifty per cent from 1985 to more than R3 000 million in 1990. The volume of production has however decreased by almost 30 per cent from 1990 to 1994. Imports have risen from R40 million per quarter in 1990 to R140 million in the fourth quarter of 1994.

Figure 6-40 Production of footwear



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

South Africa's consumption trend is toward lower value shoes such as footwear with plastic, rubber, synthetic and fabric uppers,

The industry is centred around KwaZulu/Natal and the Western Cape with four manufacturers, Conshu, Amshoe, Futura and the Bolton Group, which dominate the industry.

6.3.14.2 International comparison

Table 6-29

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % pa,	World trend 90-94 % pa,	Market-share %	CI %	RCA
21	Hides, skins, fur skins	75,0	-4,3	-1,0	1,2	-3,3	9,85
61	Leather, leather goods	159,5	13,2	4,2	1,1	8,7	1,07
85	Footwear	16,7	52,7	5,3	0,0	45,0	0,07

Source: ITC, 1996.

South Africa has virtually no share of the world footwear market, Exports have however grown at ten times the world rate for the period 1990 to 1994. This has resulted in a very favourable competitiveness index of 45 per cent. South Africa does not a have a revealed comparative advantage.

6.3.14.3 Development assistance

From Table 6-30 below the footwear sector has enjoyed nominal protection of 35 per cent, considerably higher than the industry average of 20 per cent,

Table 6-30 Nominal levels of protection

Average nominal protection	35
Ad valorem (% of tariff headings)	87
Formula (% of tariff headings)	51
Import control (% of tariff headings)	2
Import surcharge (% of tariff headings)	75

Source: IDC, 1992.

The sector does suffer from an anti-export bias and GEIS is needed for the sector to export if inputs are purchased at domestic prices. However, with inputs at world prices, South African footwear exports should compete internationally.

Table 6-31 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Footwear	1,87	2,52	1,94	1,00	0,43	0,74	0,96	0,74	4,38

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices, ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: Belli, 1993 and IDC, 1990.

The Board of Trade and Industry (RSA, 1987) determined that the footwear and clothing industries received nominal export assistance of six per cent but enjoyed effective rate of export assistance of 17 per cent. Of all the sectors manufacturing final products, it had the lowest export development assistance.

Table 6-32 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A R million			
	1982	1983	1984	1985
Clothing and footwear	1,31	1,32	2,90	3,02
	Category B R million			
	1982	1983	1984	1985
Clothing and footwear	1,63	1,63	4,71	5,22

Source: Board of Trade and Industry, 1987.

Under the new GEIS, most footwear products enjoyed category 4 assistance and therefore received the maximum incentive permitted under the scheme.

Table 6-33 GEIS and Phase VI export incentives paid in 1992

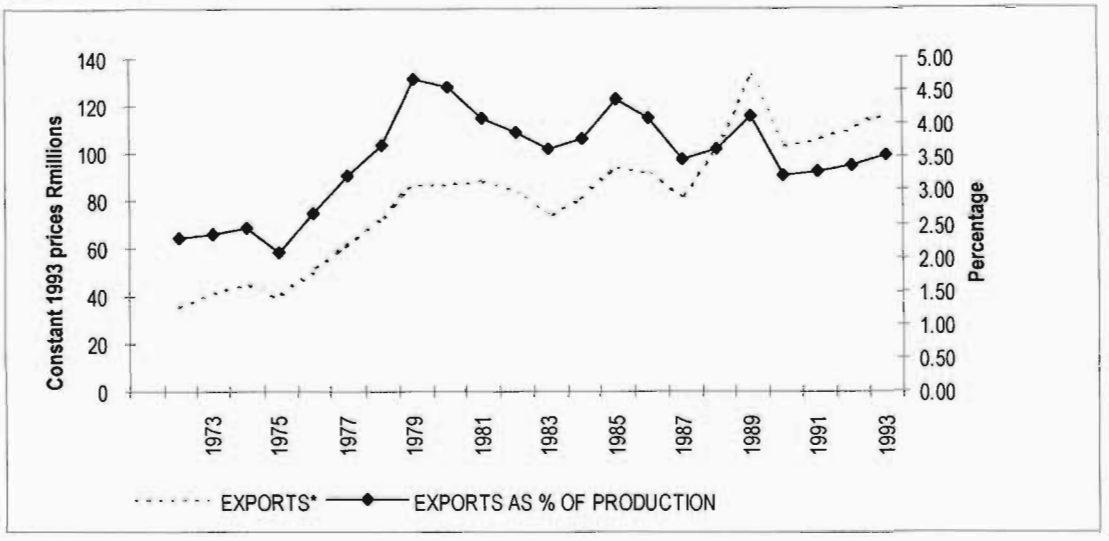
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	23
	% of export value	5
Manufactured	% of tariff headings	77
	% of export value	95
Phase VI	% of tariff headings	0
	% of export value	0

Source: IDC, 1992.

6.3.14.4 Export

The sector is not at all export oriented, exporting between three and four per cent of production, This percentage has grown steadily since the 1970s when only one per cent of production was exported.

Figure 6-41 Exports of footwear



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

South Africa's export market for footwear is shifting to African countries, with Mozambique, Zimbabwe, Reunion, and Malawi accounting for 20 per cent of export turn over. The UK, USA, and Germany remain the important customers, taking 45 per cent of South Africa's exports.

6.3.14.5 Results of regression for the footwear sector

In order to determine the effect GEIS has had on the export of the footwear sector, the following export function was estimated:

X90FOOT = -73897972 + 2,8657302*GEIS90FOOT + 170258,1*CAPUTFOOT - 138389,57*REERFOOT + 5109,6287*OECDGDP90 + [AR(1)=0,60381501]

with:

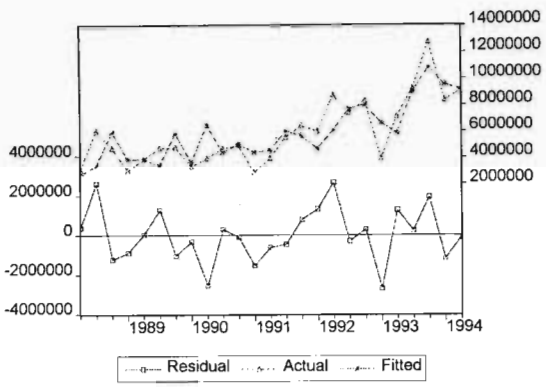
X90 FOOT	=	The real value of footwear exports (R million 1990=100)
GEIS90 FOOT	=	Real GEIS payments (1990=100) to footwear sector
REER FOOT	=	The REER for the footwear sector
CAPUT FOOT	=	The utilisation capacity of footwear manufacturing
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below. Figure 6-42 below shows the actual and fitted real export figures for footwear relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of footwear exports.

LS // Dependent Variable is X90FOOT
Sample: 1988:2 1994:2
Included observations: 25 after adjusting endpoints
Convergence achieved after 7 iterations

Variable	Coefficient	Std, Error	T-Statistic	Prob,
C	-73897972	31100259	-2,376121	0,0282
GEIS90FOOT	2,865730	1,409944	2,032513	0,0563
CAPUTFOOT	170258,1	65172,19	2,612435	0,0171
REERFOOT	-138389,6	81499,11	-1,698050	0,1058
OECDGDP90	5109,629	1957,986	2,609635	0,0172
AR(1)	0,603815	0,162902	3,706615	0,0015
R-squared	0,690648	Mean dependent var	851811,	
Adjusted R-squared	0,609240	S,D, dependent var	477677,	
S.E. of regression	1548815,	Akaike info criterion	8,71156	
Sum squared resid	4,56E+13	Schwartz criterion	9,00410	
Log likelihood	-388,3680	F-statistic	8,483760	
Durbin-Watson stat	2,124354	Prob(F-statistic)	,000234	
Inverted AR Roots .60				

Figure 6-42 Residuals, actual and fitted real values for the export of footwear



The acceptable R-squared of 0,690648 and F-statistic of 8,48376 provides the evidence that the variables chosen give an affable equation. First order autoregressive technique was used to correct for serial correlation.

This one of the few sectors where GEIS had an impact. The T-statistic of 2,032513 allows us to estimate, at the 95 per cent confidence level, that R3,00 new exports were generated by each R1,00 invested by the Department of Trade and Industry. However, the rising income of the OECD, capacity utilisation, and the REER all contributed significantly to the exports of footwear.

As the industry is quite small, participants know each other quite well and are influenced by each other's actions. This confirmed by the analysis in Table 6-29. This is not to suggest that there is any collusion, but rather, that once one manufacturer has shown it is possible to export, other follows - a copycat syndrome. South Africa's

exports of footwear have grown at a faster rate than the world rate. Although this is from a low base, it would appear as though an export culture has developed in the sector and the sector could benefit from further supply-side measures in order to develop its competitiveness.

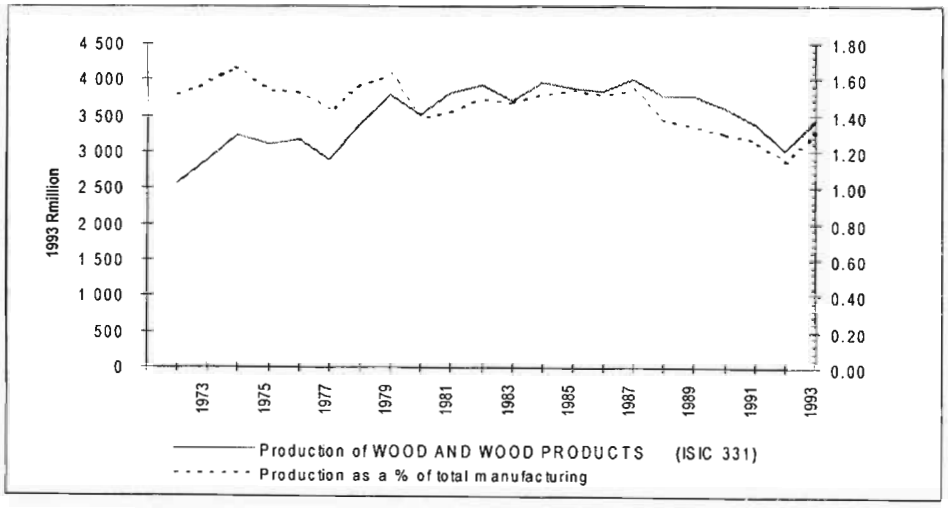
6.3.15 Wood and wood products, excluding furniture (SIC 331)

This sector covers the sawing, planing of wood and the manufacture of wooden and canes containers.

6.3.15.1 Structure of the timber industry

Local production meets most of South Africa's needs. There are approximately 120 sawmills in South Africa, 16 pulp and board mills, 32 mining timber manufacturers, and two match factories. Although there are a number of timber farmers, many of the plantations are own by large conglomerates such as Sappi or Mondi, and the State.

Figure 6-43 Production of wood and wood products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The sector contributes less than 1½ per cent of total manufacturing. Production has remain steady in real terms, which is understandable as a new plantation takes a number of years before it becomes productive and contributes to the manufacturing sector's output.

6.3.15.2 International comparison

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
24	Cork and wood	207,5	26,8	6,2	0,5	19,4	0,69
63	Cork, wood manufactures	57,2	6,6	7,7	0,2	-1,0	0,37

Source: ITC, 1996.

South African timber exports have grown by over 25 per cent per annum since 1990. This is considerably better than the world average of 6,2 per cent. However, manufactured products of wood performed worse on the international markets than the world average. The raw materials therefore have a competitive indicator of 19,4 per cent while manufactured products have a negative indicator. Neither the raw material nor the manufactured products have a revealed comparative advantage. Possible reasons for this discrepancy are discussed below. However, the fact that GEIS was given to raw materials at a category 3 level could have contributed to the fact that the raw products have a high competitive indicator while the manufactured products are negative.

6.3.15.3 Development assistance

Table 6-34 Nominal levels of protection

Average nominal protection	20
Ad valorem (% of tariff headings))	71
Formula (% of tariff headings)	10
Import control (% of tariff headings)	17
Import surcharge (% of tariff headings)	41

Source: IDC, 1992.

Table 6-35 Total Category A and B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Wood	0,17	0,17	0,17	0,31
	Category B			
	1982	1983	1984	1985
Wood	0,58	0,79	0,74	0,73

Source: Board of Trade and Industry, 1987.

Table 6-36 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Wood and wood products	1,38	1.60	1,22	1,00	0,62	0,86	1,13	0,86	2,.21

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: IDC (1990)

Table 6-37 GEIS and Phase VI export incentives paid in 1992

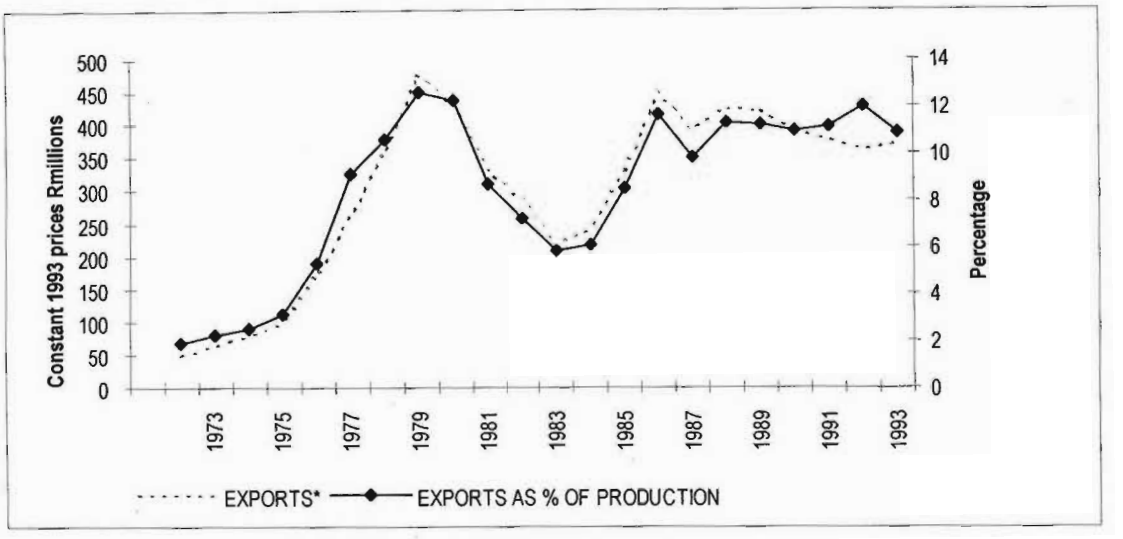
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	6
	% of export value	1
Beneficiated primary product	% of tariff headings	35
	% of export value	54
Material intensive	% of tariff headings	34
	% of export value	18
Manufactured	% of tariff headings	24
	% of export value	27
Phase VI	% of tariff headings	1
	% of export value	0

Source: IDC, 1992.

Over half the exports, in rand terms received category 2 assistance and therefore received at least 2½ per cent of the fob of their export value. Almost a third received the full category 4 assistance and the remainder category 3 assistance.

6.3.15.4 Export

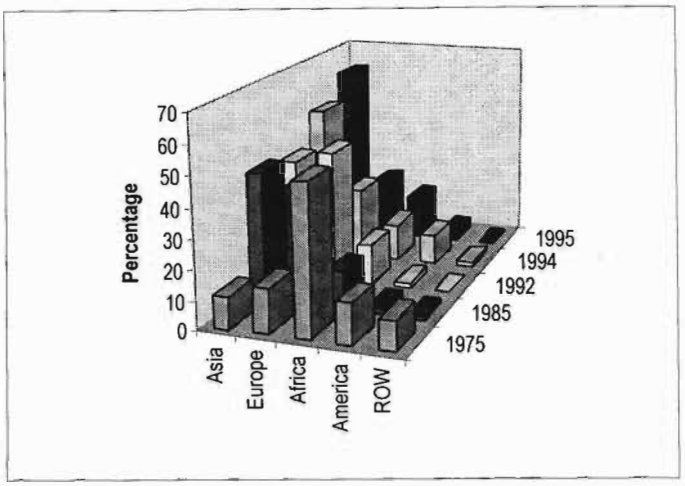
Figure 6-44 Export of wood and wood products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The value of exports increased gradually since 1972 until the late-1970s when the volume decreased. It increased again in the mid-1980s until, in the late-1980s it reached the previous levels in real terms. The increase in exports in the mid-1980s was as a result of exports to Asia. Much these exports consisted of wood chips that were processed and exported from Richard's Bay. Approximately 40 per cent of exports are to diversified countries. The UK buys approximately 23 per cent of South Africa's sales; South Korea approx. 10 per cent; Germany, US, and Mozambique between 5 and 10 per cent each.

Figure 6-45 Destination of South African exports



Source: Commissioner for Customs and Excise

6.3.15.5 Results of regression for wood and wood products

In order to determine the effect GEIS has had on the export of the wood and wood products sector, the following export function was estimated:

X90WOOD = -6463145,6 + 0,18770465*X90WOOD(-1) - 0,54697963*GEIS90WOOD + 123426,23*CAPUTWOOD - 1266675,5*REERWOOD + 10514,808*OECDGDP90 - 12236815*SEAS1 - 6065377,1*SEAS2 - 1981636,9*SEAS3 + [AR(1) =0,42734676]

with:

X90 WOOD	=	The real value of wood exports (R million 1990=100)
GEIS90 WOOD	=	Real GEIS payments (1990=100)
REER WOOD	=	The REER for the wood sector
CAPUTWOOD	=	The percentage capacity of wood utilised
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below. Figure 6-46 below shows the actual and fitted real export figures for wood relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of wood exports.

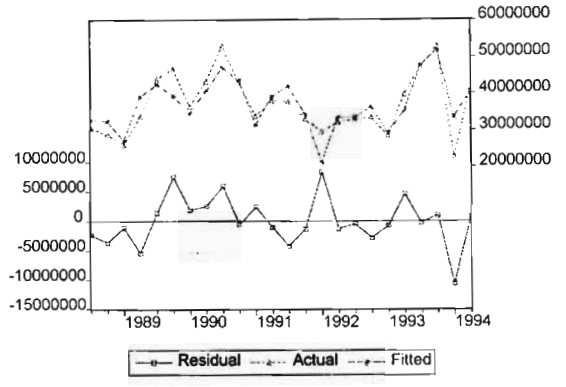
LS // Dependent Variable is X90WOOD
Sample: 1988:3 1994:2
Included observations: 24 after adjusting endpoints
Convergence achieved after 21 iterations

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-6463146,0	1,39E+08	-0,046492	0,9636
X90WOOD(-1)	0,187705	0,226869	0,827370	0,4219
GEIS90WOOD	-0,546980	1,003720	-0,544952	0,5944
REERWOOD	-1266676,	412680,1	-3,069388	0,0083
CAPUTWOOD	123426,2	873402,6	0,141317	0,8896
OECDGDP90	10514,81	6171,701	1,703713	0,1105
SEAS1	-12236815	2725813,0	-4,489235	0,0005
SEAS2	-6065377,0	4408128,	-1,375953	0,1904
SEAS3	-1981637,	3432012,	-0,577398	0,5728
AR(1)	0,427347	0,379484	1,126127	0,2790

R-squared	0,738723	Meandependent var	37003270
Adjusted R-squared	0,570759	S.D.dependent var	8109324,
S.E. of regression	5312944,	Akaike info criterion	31,26565
Sum squared resid	3,95E+14	Schwartz criterion	31,75651
Log likelihood	-399,2423	F-statistic	4,398105
Durbin-Watson stat	1,893012	Prob(F-statistic)	0,006844

Inverted AR Roots .43

Figure 6-46 Residuals, actual and fitted real values for the export of wood



The volume of production in this sector has gradually declined.

The Durbin-Watson statistic indicated that serial correlation was present and this was corrected using First Order Autoregression techniques. Price as indicated by the REERWOOD variable was significant at the 99 per cent level, while seasonal variations were also significant. The OECD's GDP was significant at the 10 per cent level. GEIS played an insignificant role in this sector. The REER was much more prominent indicating that the industry responded to price.

There are excellent opportunities for further beneficiation of timber. GEIS hindered rather than contributed to the beneficiation. Assistance should have been aimed at making the paper and furniture sectors more competitive and creating capacity for

further beneficiation. The volume of timber produced internationally is limited by nature. Demand for timber-based products continually increases. South Africa will maximise its welfare if these products can be manufactured rather than exporting of raw material. Firstly, international demand was such that subsidies were not necessary to promote exports, and secondly the policies to promote exports in this sector was counter-productive when evaluating the aim of the GEIS scheme to promote beneficiated products.

6.3.16 Furniture (SIC 332)

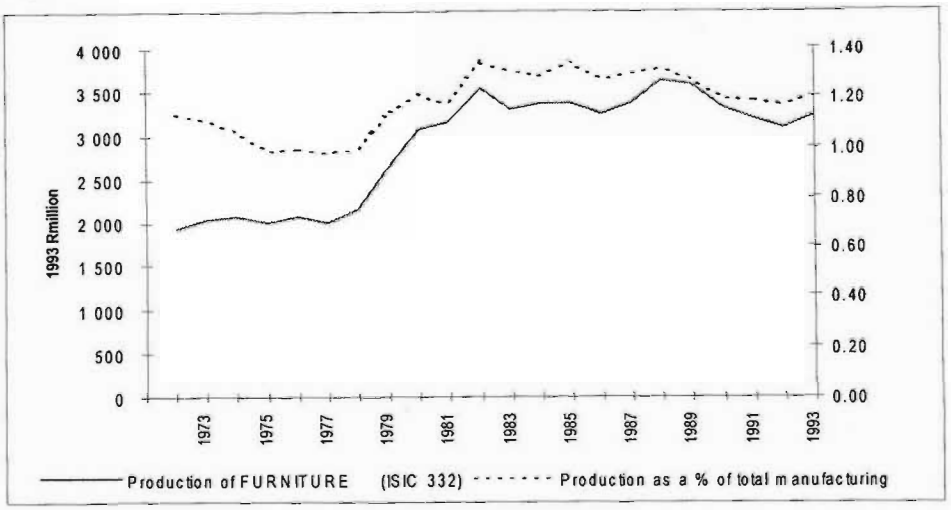
This sector covers the manufacture of all household, office, professional and restaurant furniture and fixtures (excluding certain items made of metal). Also included are the manufacture of upholstered furniture, mattresses and window and door screens and shades.

Although South Africa is not blessed with abundant natural forests, the furniture industry is one of its oldest manufacturing industries. Forests have in the meantime been planted and contributed to the development of this industry. The industry has developed an outward orientation since the early 1980s probably in response to the Categories A and B schemes and the devaluation of the South African currency.

6.3.16.1 Structure of the furniture industry

The relatively small South African furniture industry accounts for just over one per cent of total manufacturing output. The industry grew rapidly in the late-1970s until 1983 when it levelled off.

Figure 6-47



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The volume of production decreased from 1989 until 1993 when production started to pick up.

6.3.16.2 International comparison

Table 6-38

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
82	FURNITURE,BEDDING,ETC	233,3	31,3	3,9	0,7	26,3	1,40

Source: ITC, 1996.

The export of furniture has grown by 31,3 per cent from 1990 to 1994, almost ten times the world trend albeit from a small base. This gives South Africa a high competitiveness index for furniture. In addition, the industry also has a revealed comparative advantage.

6.3.16.3 Development assistance

The furniture industry received nominal protection of 25 per cent that was higher than the industry average of 20 per cent in May 1992.

Table 6-39 Nominal levels of protection

Average nominal protection	25
Ad valorem (% of tariff headings)	90
Formula (% of tariff headings	7
Import control (% of tariff headings	0
Import surcharge (% of tariff headings	100

Source: IDC, 1992.

GEIS effectively removed the anti-export bias experienced by the furniture industry. However, the incentive to export would have been higher if inputs could be purchased at world prices.

Table 6-40 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Furniture	1.45	2.11	1.83	1,00	0,72	0,69	0,80	0,69	2.03

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: Belli et al (1993) and IDC (1990)

According to the Board of Trade and Industry (1987), furniture and accessories enjoyed nominal export assistance at 10 per cent and an effective protection rate of 25 per cent.

Table 6-41 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A R million			
	1982	1983	1984	1985
Furniture	0,19	0,19	0,21	0,17
	Category B R million			
	1982	1983	1984	1985
Furniture	0,57	0,50	0,40	0,44

Source: Board of Trade and Industry, 1987.

Under the 1990 export incentive package, the furniture industry is classified as a category 4 exporter, although a few products do qualify for Phase VI assistance.

Table 6-42 GEIS and Phase VI export incentives paid in 1992

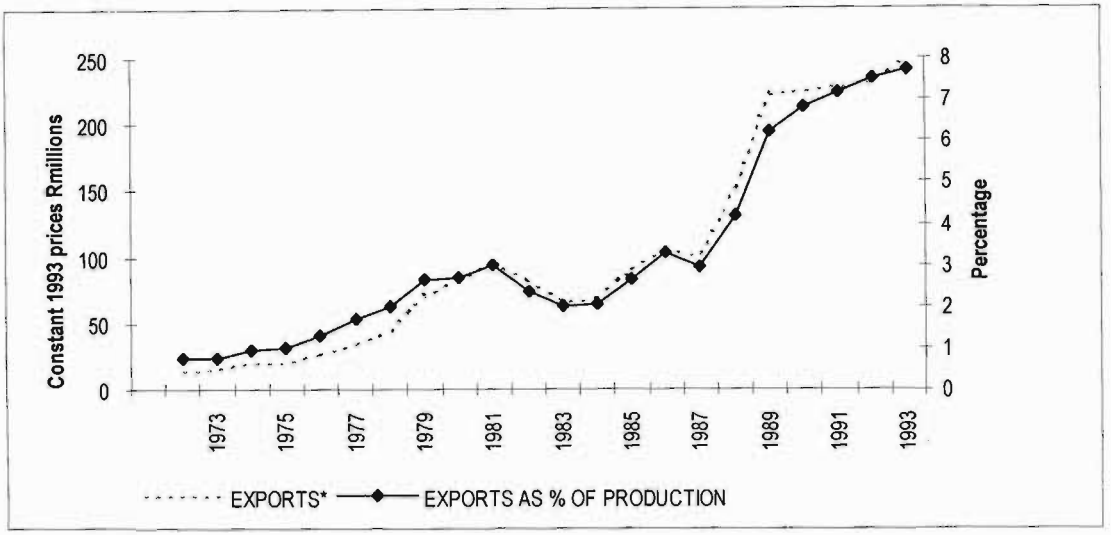
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	0
	% of export value	0
Manufactured	% of tariff headings	97
	% of export value	99
Phase VI	% of tariff headings	3
	% of export value	1

Source: IDC, 1992.

6.3.16.4 Export

The volume of exports has been rising constantly since 1988. The sector has become far more aware of the export markets. It has exported almost eight per cent of production in 1993 compared to only approximately one per cent in 1972.

Figure 6-48 Exports of furniture



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

South Africa's largest export market is the UK, which buys approximately 40 per cent of total exports. The USA follows with approximately ten per cent and France with five per cent. The Southern African markets are also significant customers and buy approximately 20 to 25 per cent of South Africa's furniture exports.

Pine furniture is successfully been exported to Europe and the USA. South African pine furniture manufacturers have carefully developed this market. They have formed the Timber Product Exporters Association, which has successfully negotiated with shipping lines for reduced freight costs. It has also lobbied the South African Lumber Millers Association for reduced raw material prices. Generally all the firms are relatively small and yet have successfully penetrated the European pine market that was dominated by Scandinavian countries.

6.3.16.5 Results of regression for the furniture sector

In order to determine the effect GEIS has had on the export of the furniture sector, the following export function was estimated:

LX90FURN = 4,8925883 + 0,01018872*LGEIS90FURN + 0,23943804*LUUDEMFURN - 0,054068078*LREERFURN + 0,60983368*LOECDGDP90 - 0,18909541*SEAS1 -

0,12508477*SEAS2 - 0,088308503*SEAS3

with:

X90Furn	=	The real value of furniture exports (R million 1990=100)
GEIS90 Furn	=	real GEIS payments (1990=100)
REER Furn	=	The REER for the furniture sector
UUDEM Furn	=	The percentage unutilised capacity of furniture due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

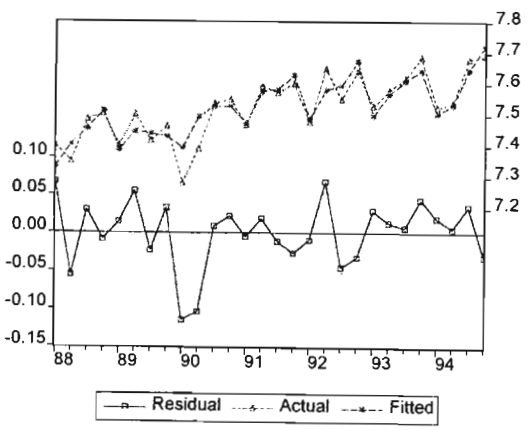
The regression results are set out below. Figure 6-49 below shows the actual and estimated real export figures for furniture relative to the left hand scale, while the error term is given on the right hand scale. The function gives a good representation of furniture exports. With R-squared of 0,823960 and F-statistic of 13,37289 we can say with 99 per cent confidence that the coefficients of the estimation are not simultaneously zero.

LS // Dependent Variable is LX90FURN
Sample: 1988:1 1994:4
Included observations: 28

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	4,892588	5,120115	0,955562	0,3507
LGEIS90FURN	0,010189	0,006545	1,556829	0,1352
LUUDEMFURN	0,239438	0,077647	3,083684	0,0059
LREERFURN	-0,054068	0,024530	-2,204179	0,0394
LOECDGDP90	0,609834	1,226462	0,497230	0,6244
SEAS1	-0,189095	0,036455	-5,187096	0,0000
SEAS2	-0,125085	0,034578	-3,617450	0,0017
SEAS3	-0,088309	0,032337	-2,730906	0,0129

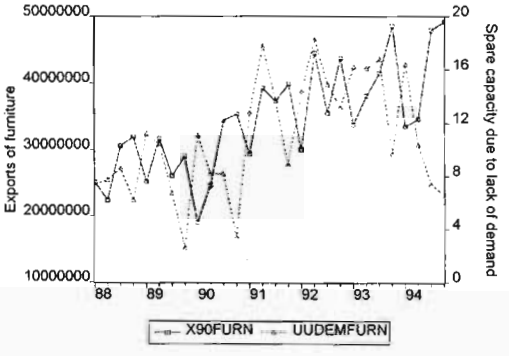
R-squared	0,823960	Mean dependent var	7,524342
Adjusted R-squared	0,762345	S.D. dependent var	0,104782
S.E. of regression	0,051081	Akaike info criterion	-5,713723
Sum squared resid	0,052186	Schwartz criterion	-5,333093
Log likelihood	48,26185	F-statistic	13,37289
Durbin-Watson stat	1,967622	Prob(F-statistic)	0,000003

Figure 6-49 Residuals, actual and fitted values for the export of the furniture industry



Approximately ten per cent of South Africa's furniture output is exported. The vast majority of furniture exported is relatively low-value knock-down pine furniture. The significant negative response to unutilised capacity due to lack of demand indicates that firms are manufacturing for the export market. This was confirmed in interviews. The industry has not been responsive to OECD's GDP. Forty per cent of the exports are destined for the UK. The rest of the exports are to Southern Africa countries. The South African manufacturers have targeted the lower utility-end of the market and this could explain the incorrect sign. The products seem to be income inelastic.

Figure 6-50



The industry has complained that its members have not been able to obtain raw materials. Exporters of timber planks received incentives under category 3. This unfortunately resulted in higher South African prices of raw materials. Selective export incentives therefore may be preferable. The quantity of wood produced in South Africa is limited and providing incentives to the raw material producers hampered down stream exports. Other problems hampering exports in this sector are lack of effective managerial skill, lack of suitable quality raw material and inadequate training and development in the industry. (NPI, 1994)

6.3.17 Paper (SIC 341)

This sector consists of three subsectors: pulp, paper and paperboard, containers of paper or paper substitutes, and other pulp and paper products such as envelopes, stationery, wallpaper, paper towels, toilet paper, straws, patterns, and paper maché.

Starting with a single small paper mill, relying on imported pulp in 1920, the South African paper industry saw considerable growth and is now considered one of the

country's industrial success stories. The paper industry provides 85 per cent of paper consumed domestically and exports a third of its production. South African companies such as Sappi and Mondi are important international companies and have even acquired foreign mills in Germany, Austria, and the UK.

South Africa is devoid of natural forests and there are only a few subtropical areas in the Eastern and Western Cape where commercial forests have been planted during the last century. Until the 1960s, most of the new forests were planted by the state. Since 1920, more than a million hectares of commercial timber were planted transforming South Africa from a net importer of timber to a net exporter. There are currently 1,37 million hectares of commercial plantations - about 1,1 per cent of the country's total surface area. Nearly three quarters of the forests are privately owned.

South African pulpwood has a number of comparative advantages: Its pulpwood grows quickly; plantations are well managed; and the quality of the timber is suited to the production of pulp.

However the future for additional development is poor because of limited natural resources (land and water), land disputes and the environmental impact. Furthermore, pulpwood prices will face upward pressure due to the commercialisation of state forests and unionisation of labour. (Bethlehem, 1994).

6.3.17.1 International comparison

South African paper exporters have been losing both market share and are exporting less than the world trend. Pulp on the other hand, although growing slowly, has gained market share, as the world trend is downward. Both pulp and paper exhibit revealed comparative advantages. It would therefore appear as though GEIS has not had the desired effect of promoting the export of manufactured goods in this sector.

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
25	Pulp and waste paper	280,7	0,6	-3,4	1,6	4,1	2,95
64	Paper, paperboard, etc.	226,7	-0,8	1,0	0,3	-1,7	1,64

6.3.17.2 Development assistance

This sector as a lower nominal protection than the manufacturing average of 20 per cent as determined by the IDC on 15 May 1992.

Table 6-43 Nominal levels of protection

	Pulp and paper	Container of paper	Other pulp and paper
Average nominal protection	10	15	15
Ad valorem (% of tariff headings))	71	92	60
Formula (% of tariff headings)	17	30	24
Import control (% of tariff headings)	44	0	7
Import surcharge (% of tariff headings)	1	100	31

Source: IDC, 1992.

Even though the sector does not have high levels of nominal protection, there is an anti-export bias which although neutralised by GEIS, presents a problem to exporters once GEIS has ceased and who do not have access to raw materials and other inputs at world prices.

Table 6-44 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Paper and paper products	1,31	1,88	1,56	1,00	0,68	0,70	0,84	0,70	1,92

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: IDC (1990)

Table 6-45 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Paper and paper products	1,74	2,11	2,30	2,00
	Category B			
	1982	1983	1984	1985
Paper and paper products	1,32	0,96	2,44	7,08

Source: Board of Trade and Industry, 1987.

Table 6-46 GEIS and Phase VI export incentives paid in 1992

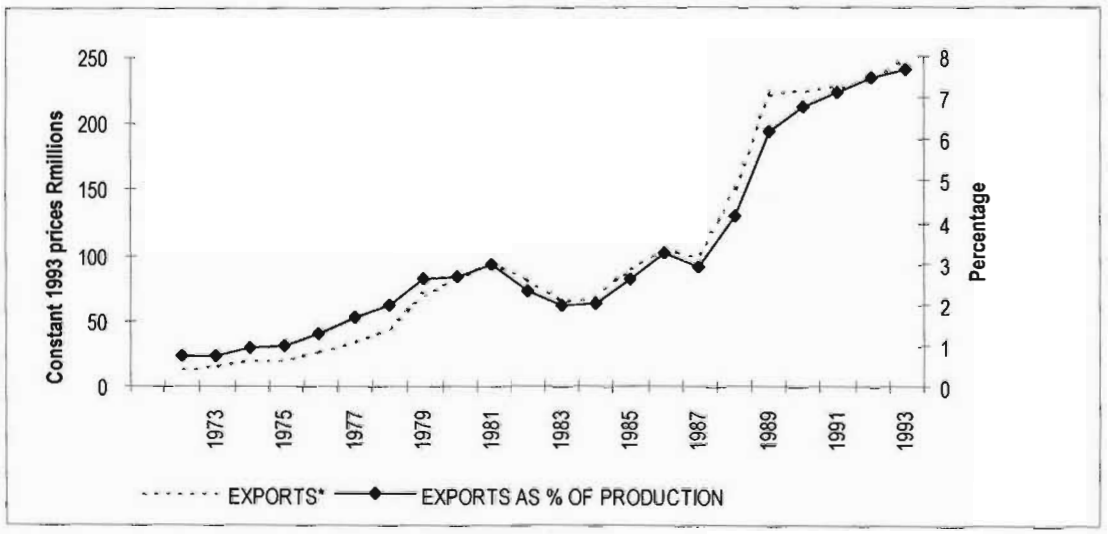
		Pulp and paper	Container of paper	Other pulp and paper
GEIS exclusions	% of tariff headings	0	0	0
	% of export value	0	0	0
Primary products	% of tariff headings	0	0	0
	% of export value	0	0	0
Beneficiated primary product	% of tariff headings	6	0	0
	% of export value	9	0	0
Material intensive	% of tariff headings	92	8	80
	% of export value	91	7	71
Manufactured	% of tariff headings	2	92	17
	% of export value	0	93	20
Phase VI	% of tariff headings	0	0	3
	% of export value	0	0	9

Source: IDC, 1992.

6.3.17.3 Export

Since 1988, the value of this sector's exports has grown substantially and has become more export oriented, relying less on the local market and more on the export market.

Figure 6-51 Export of paper and paper products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-52 Pulp, paper and paperboard

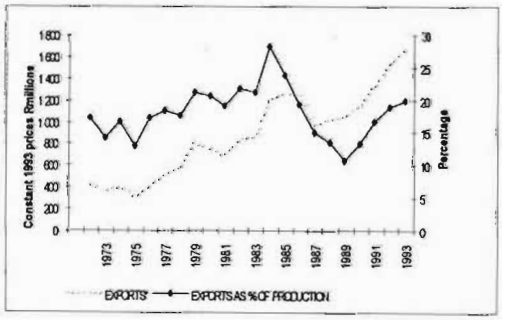


Figure 6-54 Other paper products

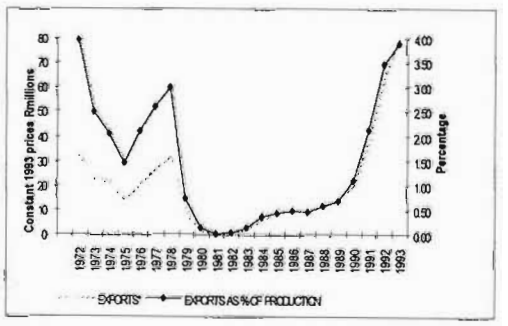
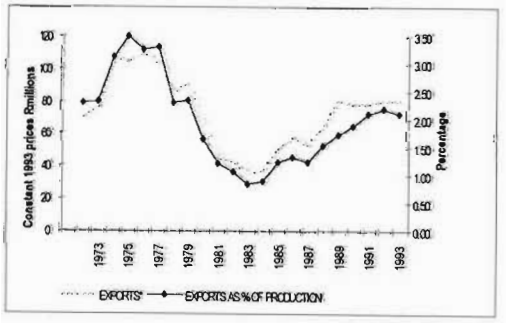


Figure 6-53 Containers of paper or paper substitutes



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.17.4 Results of regression for paper and paper products

In order to determine the effect GEIS has had on the export of the paper sector, the following export function was estimated:

LX90PAPER = -5,7964893 - 0,053569809*LGEIS90PAPER + 4,3878046*LCAPUTPAPER - 0,075732591*LREERPAPER + 1,4917821*LOECDGDP90

with:

LX90 paper	=	The real value of paper exports (R million 1990=100)
LGEIS90	=	Real GEIS payments (1990=100)
LREER paper	=	The REER for the paper sector
LUUDEM paper	=	The percentage unutilised capacity of paper due to lack of demand
LOECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below. Figure 6-55 below shows the actual and fitted real export figures for paper and pulp relative to the right hand scale, while the residual is given on the left hand scale. With a R-squared of 0,638749 the function gives good representation of paper and pulp exports. The F-statistic of 10,16691 indicates that at least one of the coefficients is not zero at the 99 per cent confidence level.

LS // Dependent Variable is LX90PAPER
Sample: 1988:1 1994:4
Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6,970382	7,108687	-0,980544	0,3370
LGEIS90PAPER	-0,004672	0,005981	-0,781132	0,4427
LREERPAPER	-0,074654	0,023601	-3,163249	0,0043
LCAPUTPAPER	4,043341	1,442607	2,802802	0,0101
LOECDGDP90	1,850985	1,277806	1,448564	0,1610

R-squared	0,638749	Mean dependent var	8,493693
Adjusted R-squared	0,575923	S.D. dependent var	0,078476
S.E. of regression	0,051104	Akaike info criterion	-5,787342
Sum squared resid	0,060068	Schwarz criterion	-5,549448
Log likelihood	46,29251	F-statistic	10,16691
Durbin-Watson stat	2,686629	Prob(F-statistic)	0,000069

The coefficient for GEIS is not statistically significantly different from zero that allows the conclusion that GEIS has contributed very little to the export of paper. Although GEIS forms as much as 50 per cent of the profit rate of some of the companies, many of the plants are of such a scale that the companies would have had to export in any event. Investment incentives have also played an important role in the sector's development. Many of the plants were established in decentralised areas when the benefits were at their highest. There were also favourable tax allowances on

capital equipment. It would therefore seem as though these factors rather than GEIS were the main contributing factors to the development of the industry and its exports.

Figure 6-55 Residuals, actual and fitted real values for the export of paper

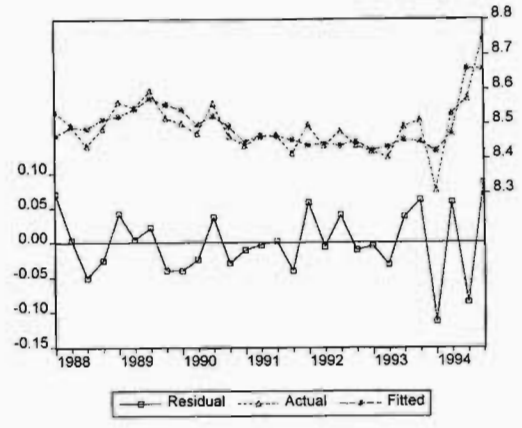
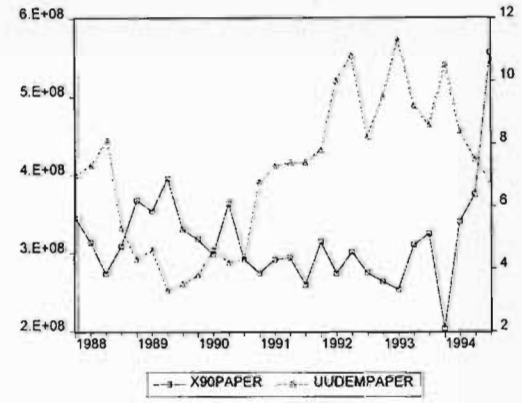
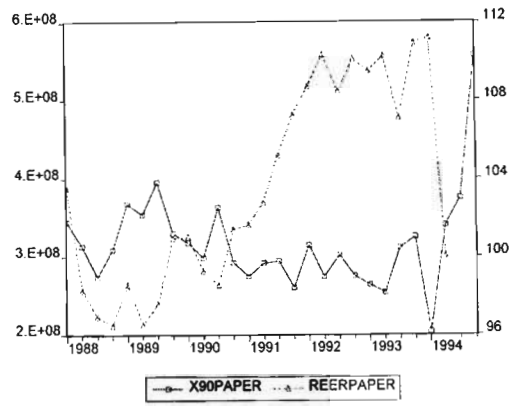


Figure 6-56 Real exports and spare capacity due lack of demand



The industry seems to act differently than can be expected regarding the spare capacity. A positive coefficient would be expected. The industry has matured and is a committed exporter. This is probably due to the fact that large investments have been made and the industry exports as much as it can without selling below its average price. The REER on the other hand is significant. This would confirm that the industry is indeed very price sensitive.

Figure 6-57 Real exports and the REER



Exports went to many different markets. Although obviously, the OECD countries were major customers, no single country bought more than 10 per cent of South Africa's exports. As is the case with many commodities, pulp and paper experience a boom and bust cycle. New mills tend to be large, as they are the most efficient. This results in large amounts of additional production coming on line simultaneously. The boom and busts results in both volatile prices and erratic profit margins.

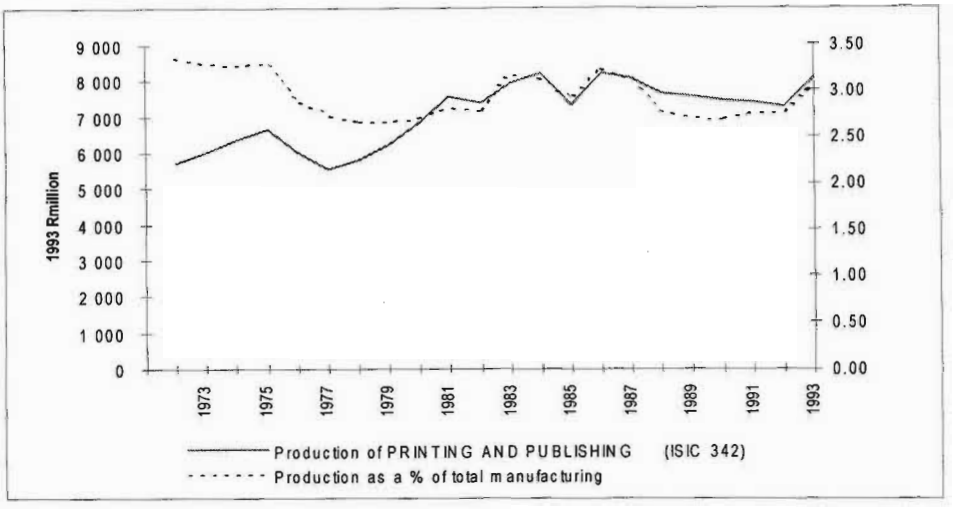
6.3.18 Printing and publishing (SIC 342)

The printing industry in South Africa is very diversified. Products include: stationery, business forms, newspapers, labels, business forms, magazines, envelopes, greeting cards and advertising material. There are over a thousand companies involved in this industry although it is dominated by four or five major players. Exports are marginal as the majority of the output is sold on the local market.

Equipment is outdated both in the upper end and in the lower end markets. Although a training college has been established for the printing industry and will probable contribute to improved productivity, it has been late in coming and has hampered the development of the industry. Because of cost, many books exclusively published for the South African market are often printed in the Far East where manufacturing costs are lower, even when taking the transportation costs into account.

6.3.18.1 Structure of Printing and publishing industry

Figure 6-58 Production of printed products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Production has increased very gradually over the past few years. Exports as a percentage production has in fact decreased since 1972, although it has remained constant during the past few years. The fact that production has decreased is regrettable as the population has grown and per capita production has therefore decreased substantially.

6.3.18.2 Development assistance

The nominal protection received by this sector is low. At 15 May 1992, the IDC calculated the nominal level of this sector to be only 10 per cent compared with an industry average of 20 per cent.

Table 6-47 Nominal levels of protection

Average nominal protection	10
Ad valorem (% of tariff headings))	61
Formula (% of tariff headings)	29
Import control (% of tariff headings)	12
Import surcharge (% of tariff headings)	61

Source: IDC, 1992.

The Board of Trade and Industry (1987) indicated that this sector received no Category A or B assistance. The industry exhibits an anti-export bias. However, since most of the products exported under this heading were category 4, GEIS contributed in neutralising this bias.

Table 6-48 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Printing and publishing	1,15	2.02	1.88	1,00	0,85	0,57	0,61	0,57	1,35

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

Table 6-49 GEIS and Phase VI export incentives paid in 1992

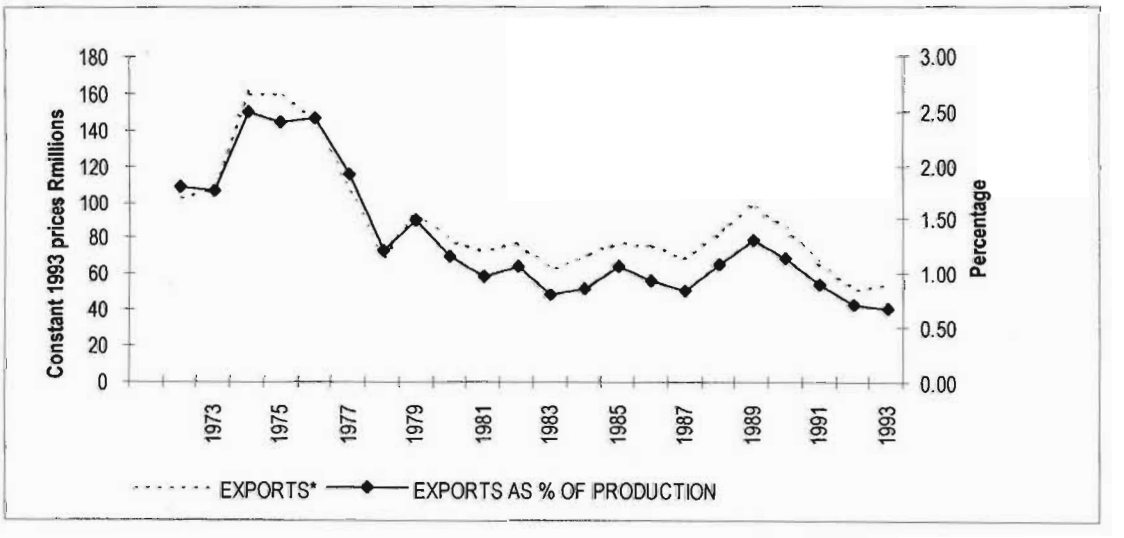
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	14
	% of export value	1
Manufactured	% of tariff headings	85
	% of export value	99
Phase VI	% of tariff headings	1
	% of export value	0

Source: IDC, 1992.

6.3.18.3 Export

From the late-1970s, this sector has exhibited a long-term downward trend in its exports. The industry produces mainly for home consumption, with exports accounting for less than one per cent of production in 1993.

Figure 6-59 Exports of printed products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.18.4 Results of regression for printing and publishing

In order to determine the effect GEIS has had on the export of the printing sector, the following export function was estimated:

XMANPRINT = -0,8630753 - 0,067846098*GEISXPRINT - 0,0098262022*CAPUTPRINT - 0,036839086*REERPRINT + 0,00055535505*OECDGDP90 - 0,1858409*DUMMYAB - 0,022570184*CAPUTPAPER(-1) + 0,080998795*SEAS4

with:

XMANPRINT	=	The real value of printing exports (R million 1990=100)
GEISXPRINT	=	Real GEIS payments (1990=100)
REERPRINT	=	The REER for the printing sector
UUDEMPRINT	=	The percentage unutilised capacity of printing due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

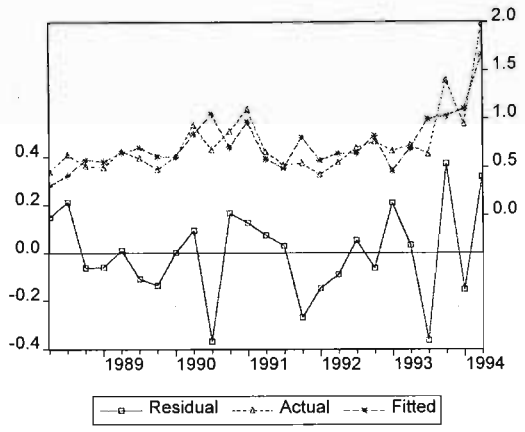
The regression results are set out below. Figure 6-60 below shows the actual and fitted real export figures for printing products relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of printed products exports.

LS // Dependent Variable is XMANPRINT
Date: 11/06/96 Time: 11:33
Sample: 1988:2 1994:2
Included observations: 25 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-0,863075	5,683287	-0,151862	0,8811
GEISXPRINT	-0,067846	0,024992	-2,714746	0,0147
CAPUTPRINT	-0,009826	0,029320	-0,335141	0,7416
REERPRINT	-0,036839	0,012125	-3,038318	0,0074
OECDGDP90	0,000555	0,000212	2,620817	0,0179
DUMMYAB	-0,185841	0,276951	-0,671024	0,5112
CAPUTPAPER(-1)	-0,022570	0,033190	-0,680030	0,5056
SEAS4	0,080999	0,129818	0,623943	0,5409

R-squared	0,692782	Mean dependent var	0,740645
Adjusted R-squared	0,566280	S.D. dependent var	0,339346
S.E. of regression	0,223484	Akaike info criterion	-2,742491
Sum squared resid	0,849069	Schwartz criterion	-2,352451
Log likelihood	6,807676	F-statistic	5,476468
Durbin-Watson stat	2,447622	Prob(F-statistic)	0,001989

Figure 6-60 Residuals, actual and fitted real values for the export of the printing and publishing industry



Although statistically significant, the printing and publishing sector's coefficients for the OECDGDP90 was low. This was probably due to the fact that South Africa's major customers are Mozambique, Zimbabwe, Zambia, the UK, and Malawi.

The REER has a low but significant coefficient. The printing of publications is internationally very competitive. Many US and European publishers use Asian printers to print and as technology improves, this trend will continue. The problem of sending proofs across the globe is reduced by the electronic technology. The publisher therefore will retain control until the final print is done.

Although the majority of the products covered in this sector are category 4, GEIS did not have a significant impact. As there were no incentives for the service sector,

exporters such as correspondence schools simply invoiced the tuition fees and the "text books" separately and were therefore entitled to receive GEIS payments on the export of the text books. As South Africa spend more on education and therefore more textbooks are printed, it would be expected that, using marginal costing, the sector would be able to sell more into anglophone Africa.

6.3.19 Chemicals (SIC 351-354)

There are almost ten million chemicals know to man and many thousands more being developed each year. It is a complicated industry making analysis in aggregate difficult. The sector consists of fertilisers and pesticides; synthetic resins and plastics; paints vanishes and lacquers; medicinal and pharmaceutical preparations; cleaning and toilet preparations and cosmetics; and other various other chemical and basic chemical products.

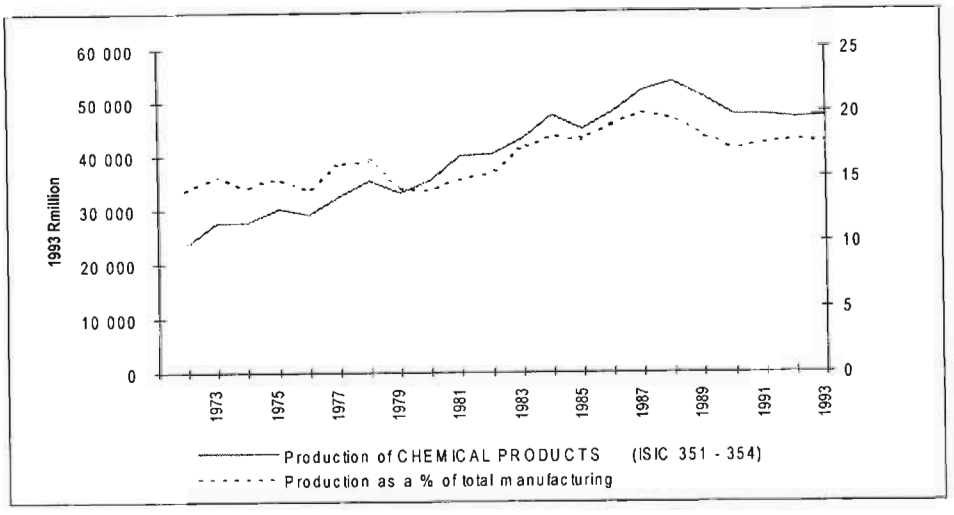
6.3.19.1 Structure of the chemical industry

The South African chemical industry developed from the need to supply mines with explosives and agriculture with fertilisers. South Africa also developed a process converting coal to oil (Sasol). This developed at the time South Africa was pursuing a policy of import substitution. It was given further impetus due to security needs of a country which was facing a "total onslaught". The South African chemical industry is dominated by three groups: Sasol, Sentrachem, and AECI. Due to the development of Sasol (mainly 2 and 3), the development of the South African petro-chemical has tended to move away from oil as a feed-stock to using coal. The Sasol and Mossgas projects were undertaken at large expense and have resulted in deteriorating productivity.

South Africa's chemical producers have lacked economies of scale and together with the reason mentioned above are high cost producers.

GEIS export incentives are applicable to polymer exports at Category 2 level (lower value added type products) and are not regarded as significant as the payments are very limited. It is probable that polymer producers would have exported with or without GEIS incentives, an example of GEIS's non-selective design" (Crompton, 1995) This is confirmed by the econometric analysis below.

Figure 6-61 Production of chemical products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.19.2 International comparison

The industry is concentrated in the EU, USA, and Japan with sales of $350 billion, $258 billion, and $188 billion respectively in 1989. This traditional dominance is now being challenged by Saudi Arabia, South East Asia, Nigeria, Trinidad, Thailand, Brazil, and Indonesia. South Africa on the other hand had only $10 billion turnover in 1989. (Crompton, 1995).

Figure 6-62

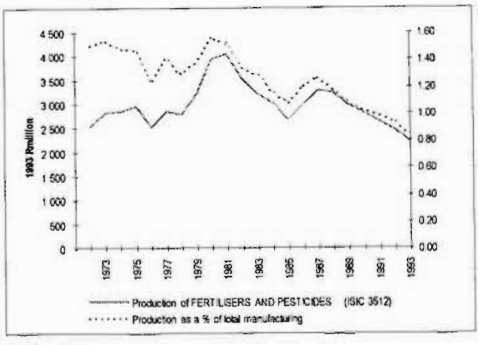
SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market-share %	CI %	RCA
27	Crude fertilizer, mineral	481,7	-1,6	-1,2	3,4	-0,4	7,43
32	Coal, coke, briquettes	1 681,4	-0,3	-2,2	8,5	1,9	91,47
33	Petroleum, petrol. Product	199,6	22,7	-4,1	0,1	28,0	0,07
51	Organic chemicals	212,2	20,3	4,4	0,2	15,2	0,63
52	Inorganic chemicals	359,9	-3,8	1,5	1,3	-5,2	4,10
53	Dyes, colouring materials	58,4	16,3	5,0	0,2	10,7	1,17
54	Medicinal, pharm. products	13,8	10,5	11,8	0,0	-1,1	0,24
55	Essentl.oils, perfume, etc.	14,0	9,2	8,9	0,1	0,2	0,35
56	Fertilizer, except grp272	39,4	17,1	-1,3	0,3	18,6	0,96
59	Chemical materials nes	66,6	12,0	4,4	0,2	7,3	0,97

Source: ITC, 1996.

South Africa has a positive competitiveness index in the petroleum, organic chemicals, and fertiliser subsectors indicating that her exports in these fields have been growing faster than the world trend. In the case of petroleum products, African markets have opened up since 1990 and South Africa has captured market share from other countries.

The production of fertiliser has been declining since the early 1980s. The increased exports are therefore due to lower demand by South African due the various droughts.

Figure 6-63 Production of fertiliser



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

South Africa has a revealed comparative advantage in crude fertiliser, inorganic chemicals, and dyes and colouring materials. However it is only in the dyes and colouring materials subsector where South Africa has both a positive competitiveness index and a revealed comparative advantage.

6.3.19.3 Development assistance

Table 6-50 Nominal levels of protection as at 15 May 1992

	Fertilizer	Synthetic resins and plastic	Paints and varnishes	Medicinal and pharmaceuticals	Other chemicals
Average nominal protection	15	30	25	20	15
Ad valorem (% of tariff headings))	30	44	77	48	58
Formula (% of tariff headings)	20	26	26	10	13
Import control (% of tariff headings)	43	51	0	26	4
Import surcharge (% of tariff headings)	0	0	71	37	39

Source: IDC, 1992.

The nominal protection given to the chemical industry is not exceptionally high compared with the industry average of 20 per cent. The IDC (Belli et al, 1993) calculated the protection of inputs at 4,8 and 13,3 per cent for industrial and other chemicals respectively and the protection on output was 14,8 and 21,5 per cent. The anti-export bias makes exporting unprofitable without GEIS if manufacturers purchase at domestic prices. However, if other chemical manufacturers could purchase inputs at world prices, they would not require any export incentives.

Table 6-51 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Industrial chemicals	1,54	1,20	1,01	1,00	0,81	1,28	1,52	1,28	1,91
Other chemicals	1,30	1,47	1,34	1,00	0,86	0,88	0,97	0,88	1,50

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: Belli et al (1993)

Chemical products enjoyed both Categories A and B assistance. The nominal rate of assistance however was only between 4,1 and 6,2 per cent. (BTI, 1987)

Table 6-52 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Chemical and chemical products	3,44	3,33	0,96	1,97
	Category B			
	1982	1983	1984	1985
Chemical and chemical products	15,23	10,74	9,72	15,22

Source: Board of Trade and Industry, 1987.

Under GEIS, most of the products qualify for category 3 assistance, with a few classified under categories 2 and 4.

Table 6-53 GEIS and Phase VI export incentives paid in 1992

		Fertilizer	Synthetic resins/plastic	Paints and vanishes	Medicinal pharmaceutical	Other chemicals
GEIS exclusions	% of tariff headings	0	4	0	0	1
	% of export value	0	20	0	0	1
Primary products	% of tariff headings	0	0	0	0	0
	% of export value	0	0	0	0	0
Beneficiated primary product	% of tariff headings	6	89	0	35	9
	% of export value	5	80	0	16	12
Material intensive	% of tariff headings	51	7	0	18	51
	% of export value	59	0	0	32	82
Manufactured	% of tariff headings	43	0	100	47	39
	% of export value	36	0	100	52	5
Phase VI	% of tariff headings	0	0	0	0	0
	% of export value	0	0	0	0	0

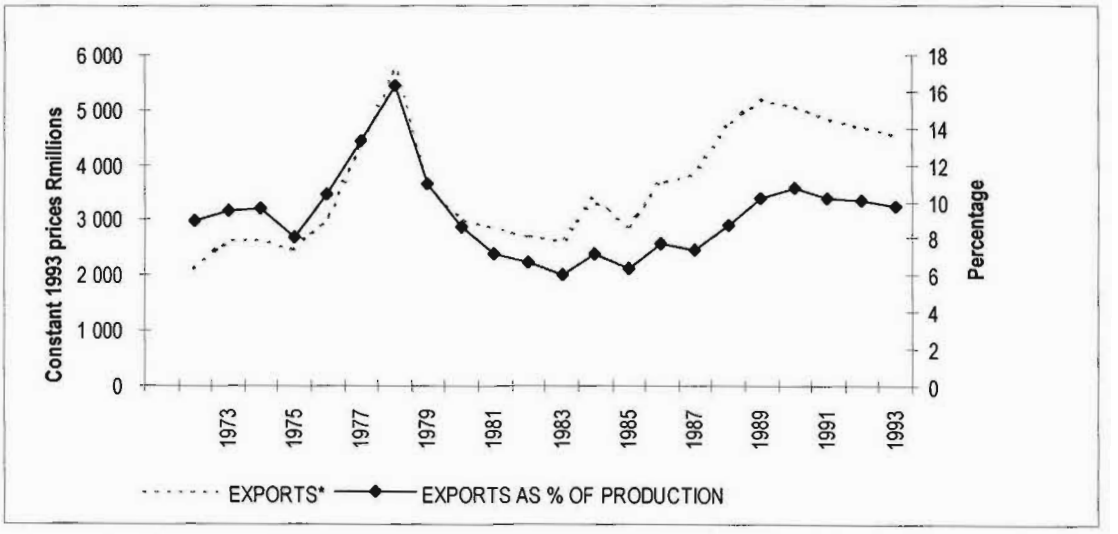
Source: IDC, 1992.

6.3.19.4 Export

The graph below shows South Africa's chemical exports in constant 1993 Rand and the percentage this represents of the industries' output. The industry has in fact fallen behind compared to the rest of the world's chemical exporters. South Africa's exports as a percentage of output were 7 per cent in 1972 while internationally the figure was

16 per cent. South Africa's exports to sales improved to 8,8 per cent in 1990, while internationally it rose from 16 to 30 per cent over the same period. (Crompton, 1995)

Figure 6-64 Exports of chemical products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-65 Export of fertilisers and pesticides (SIC 3512)

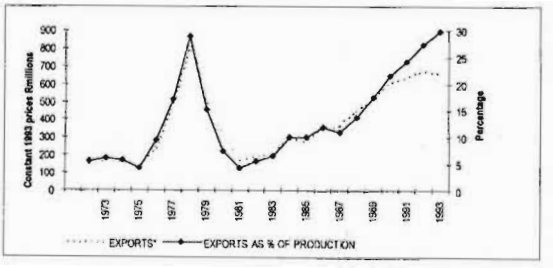


Figure 6-66 Export of synthetic resins and plastic materials (SIC 3513)

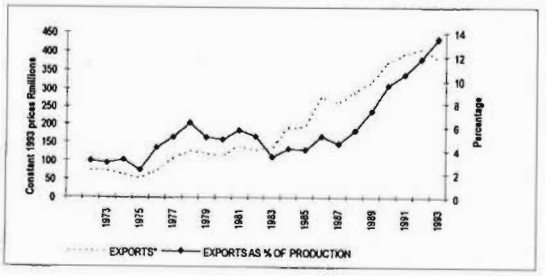


Figure 6-67 Exports of paints, varnishes and lacquers (SIC 3521)

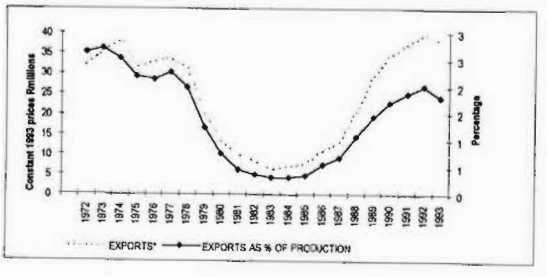


Figure 6-68 Exports of medicinal and pharmaceutical preparations

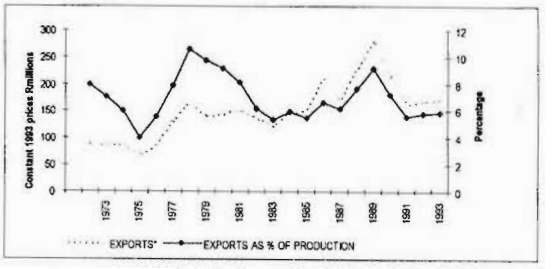
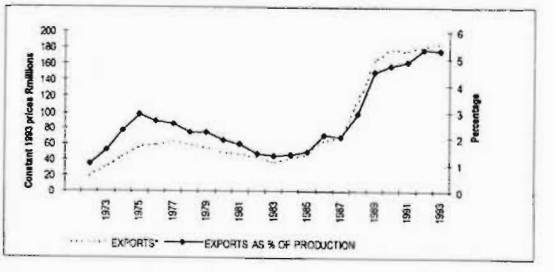


Figure 6-69 Cleaning and toilet preparations and cosmetics (SIC 3523)



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-70 Exports of other chemical products (SIC 3529)

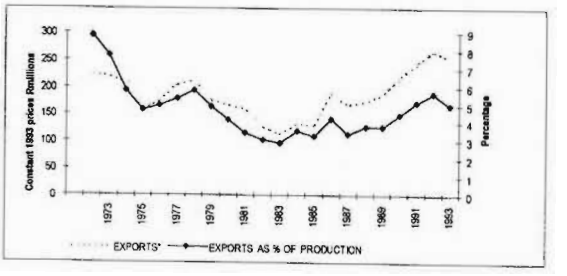
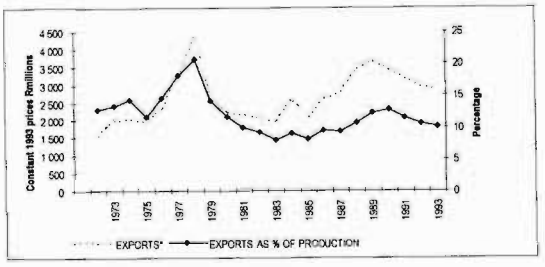
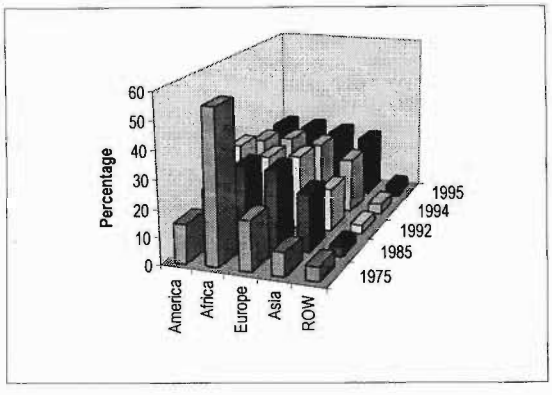


Figure 10 Exports of other basic chemical and petroleum products



Exports of chemical products have hovered around the R3 000 million since the late-1990s and averaged approximately 15 per cent of production. Other chemical products (SIC 3529) is the largest subsector and therefore the trend is similar to the total chemical industry. Exports of fertilisers have risen consistently since the early 1980s. The exports of synthetic resins has also increased since the mid 1980s.

Figure 6-71 Exports of chemical products to regions



Source: The Commissioner for Customs and Excise

The export of chemicals to the Americas, Asia and to a lesser extent Europe has grown proportionately at the expense of exports to Africa. It can be expected that exports of consumer chemicals such as medicinal and pharmaceuticals; cleaning and toilet preparations and cosmetics; and paint, varnishes and lacquers will increase as exporters establish and re-establish marketing channels.

6.3.19.5 Results of regression for the chemical industry

In order to determine the effect GEIS has had on the export of the chemical sector, the following export function was estimated:

X90CHEM = -6,8402104e+09 + 4,0587746*GEIS90CHEM - 11094968*UUDEMCHEM - 11042775*REERCHEM + 559330,64*OECDGDP90 + 1,2175362e+08*DUMMYAB + [AR(1)=0,49140681]

with:

X90CHEM	=	The real value of chemical exports (R million 1990=100)
GEIS90CHEM	=	Real GEIS payments (1990=100)

REER CHEM = The REER for the chemical sector
UUDEMCHEM = The percentage unutilised capacity of chemical due to lack of demand
OECDGDP90 = The weighted index of the GDP index of the OECD countries

The regression results are set out below. Figure 6-72 below shows the actual and fitted real export figures for the chemical industry relative to the right hand scale, while the residual is given on the left hand scale. With a R-squared of 0,850776 and a F-statistic of 17,10405, the function gives a good representation of chemical exports and it can be said that at the 99 per cent confidence level, the coefficients will not simultaneously equal zero. Serial correlation was corrected using First Order Autoregression techniques.

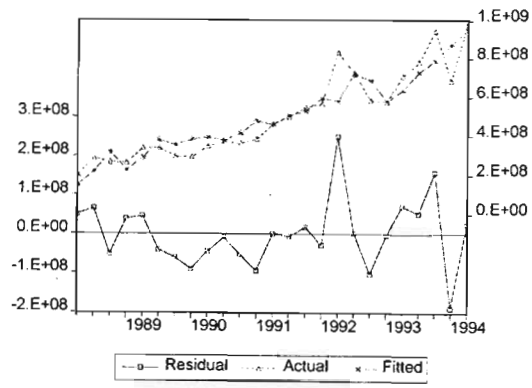
LS // Dependent Variable is X90CHEM
Sample: 1988:2 1994:2
Included observations: 25 after adjusting endpoints
Convergence achieved after 6 iterations

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-6,84E+09	1,85E+09	-3,691665	0,0017
GEIS90CHEM	4,058775	7,258654	0,559164	0,5829
UUDEMCHEM	-11094968	9641216,	-1,150785	0,2649
REERCHEM	-11042775	7982314,	-1,383405	0,1835
OECDGDP90	559330,6	126802,0	4,411057	0,0003
DUMMYAB	1,22E+08	1,57E+08	0,773185	0,4494
AR(1)	0,491407	0,192196	2,556805	0,0198

R-squared	0,850776	Mean dependent var	5,04E+08
Adjusted R-squared	0,801035	S.D. dependent var	2,26E+08
S.E. of regression	1,01E+08	Akaike info criterion	37,08974
Sum squared resid	1,83E+17	Schwartz criterion	37,43102
Log likelihood	-492,0952	F-statistic	17,10405
Durbin-Watson stat	2,139984	Prob(F-statistic)	0,000002

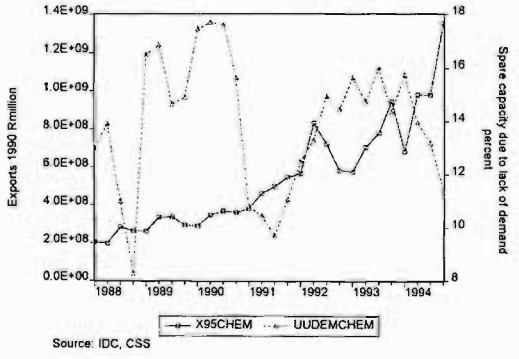
Inverted AR Roots .49

Figure 6-72 Residuals, actual and fitted real values for the export of chemical products



The coefficient for the OECDGDP is statistically significant at the 99 per cent confidence level and it would therefore appear as though the economic growth of the OECD countries had the major impact on the export of chemicals.

There are large fluctuations in the spare capacity due to lack of demand domestically. The response of the industry to spare capacity is not expected. Although not statistically significant, the coefficient is positive, capacity usage rose as exports rose, indicating that the industry is a maturer exporter in that it does not export when there is spare capacity. The fertiliser subsector exports a third of its production, which would tend to confirm this hypothesis.



As was expected, the REER was significant and did have an impact on the export of chemicals. The elasticity is rather low however at 0,02.

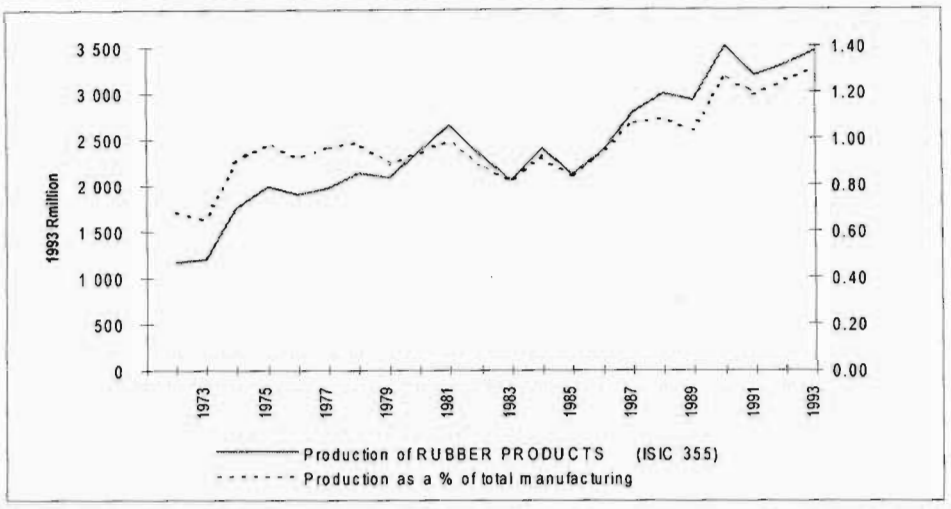
6.3.20 Rubber products (SIC 355)

This sector consists of the manufacture of tyres, tubes, and other rubber products such as gloves, mats, packings, pipes, sponges, and other vulcanised articles.

6.3.20.1 Structure of the rubber sector

Although the industry is relatively small, contributing only 1,3 per cent of South Africa's total production, there is an upward trend.

Figure 6-73 Residuals, actual and fitted real values for the export of rubber products



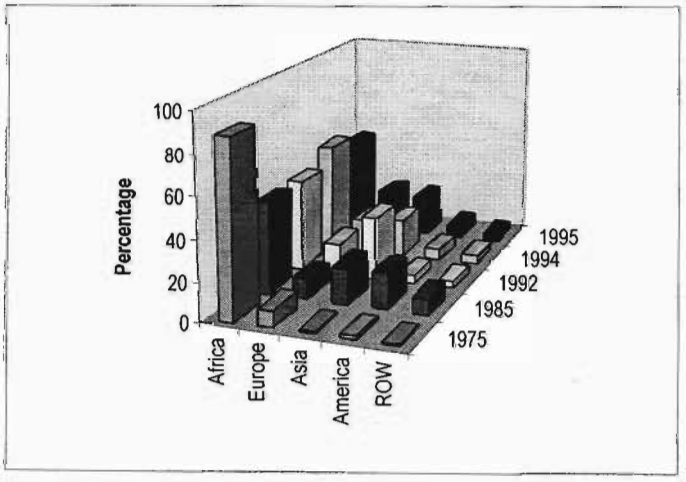
6.3.20.2 International comparison

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
62	Rubber manufactures	30,1	27,4	5,3	0,1	21,0	0,24

Source: ITC, 1996

Exports in this sector have grown rapidly since 1990 at 27 per cent per annum in US dollar terms, outstripping world growth of 5,3 per cent. The base from which this growth took place was low however. Therefore, even though there is a high competitiveness indicator, the industry does not have a revealed comparative advantage.

Figure 6-74 Destination of South African exports



Source: Commissioner for Customs and Excise

Surprisingly, this sector has not increased its exports proportionately to Africa. Both the European market and the especially the Asian market are taking more market share.

6.3.20.3 Development assistance

The levels of nominal protection afforded the sector are greater than the average for the total manufacturing sector according the IDC (1992). However, there are certain restrictions regarding the import of tyres which would account for the effective protection being higher.

Table 6-54 Nominal levels of protection

	Tyres and tubes	Other rubber products
Average nominal protection	35	25
Ad valorem (% of tariff headings))	74	74
Formula (% of tariff headings)	82	25
Import control (% of tariff headings)	100	79
Import surcharge (% of tariff headings)	100	62

Source: IDC, 1992.

Table 6-55 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Rubber products	1,57	1,28	0,98	1,00	0,70	1,23	1,60	1,23	2,24

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: IDC (1990)

Table 6-56 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Rubber products	0,19	0,23	0,25	0,12
	Category B			
	1982	1983	1984	1985
Rubber products	0,48	0,49	0,47	0,16

Source: Board of Trade and Industry, 1987.

This sector was not a major exporter and therefore the level of assistance received under the Categories A and B schemes was minimal. Even if the industry was able to obtain all its inputs at world prices, GEIS was not enough to reduce the anti-export bias. Perhaps if more of the products qualified for either as category 4 products or for Phase VI assistance, the anti-export bias may have been overcome.

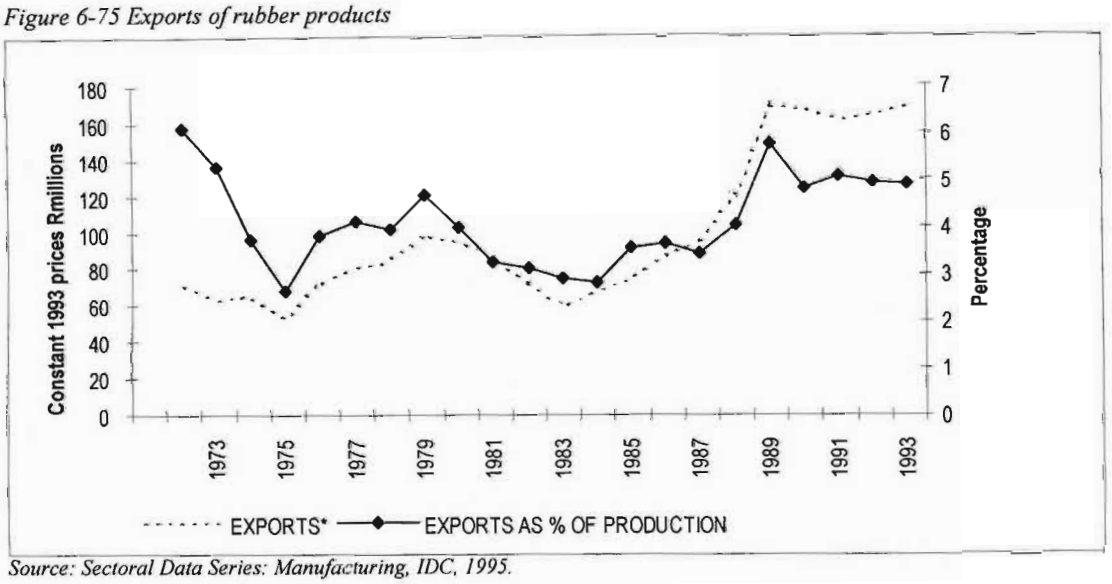
Table 6-57 GEIS and Phase VI export incentives paid in 1992

		Tyres and tubes	other rubber products
GEIS exclusions	% of tariff headings	0	3
	% of export value	0	0
Primary products	% of tariff headings	0	0
	% of export value	0	0
Beneficiated primary product	% of tariff headings	0	24
	% of export value	0	18
Material intensive	% of tariff headings	20	55
	% of export value	5	65
Manufactured	% of tariff headings	80	14
	% of export value	95	8
Phase VI	% of tariff headings	0	4
	% of export value	0	9

Source: IDC, 1992.

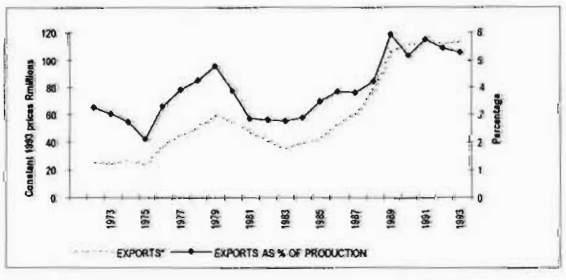
6.3.20.4 Export

Figure 6-75 Exports of rubber products



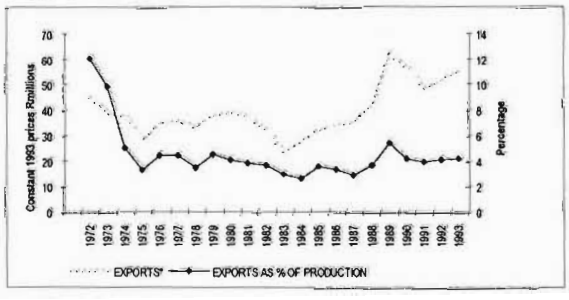
Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-76 Tyres and tubes



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-77 Exports of other rubber products



6.3.20.5 Results of regression for rubber products

In order to determine the effect GEIS has had on the export of the rubber sector, the following export function was estimated:

X90RUB = -1,1769604e+08 + 0,82932589*GEIS90RUB - 1530285,9*UUDEMRUB + 681684,18*REERRUB +

5859,1192*OECDGDP90 + 5863434,5*DUMMYAB - 6982479,5*SEAS1 + 3988233,3*SEAS3

with:

X90RUB	=	The real value of rubber exports (R million 1990=100)
GEIS90 RUB	=	Real GEIS payments (1990=100)
REERRUB	=	The REER for the rubber sector
UUDEMRUB	=	The percentage unutilised capacity of rubber manufacturers due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries
DUMMYAB	=	A dummy variable representing Categories A and B incentives

The regression results are set out below.

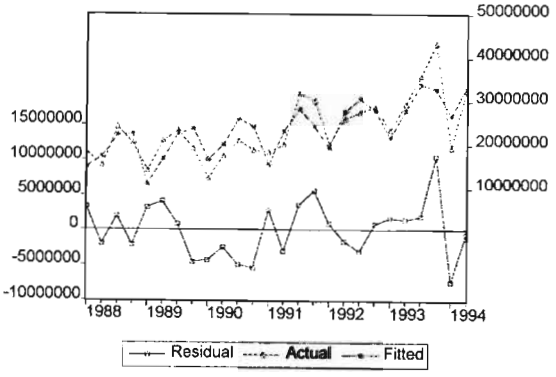
Figure 6-78 below shows the actual and fitted real export figures for rubber relative to the right hand scale, while the residual is given on the left hand scale. The function gives a fair representation of rubber exports.

LS // Dependent Variable is X90RUB
Sample: 1988:1 1994:2
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-1,18E+08	57107670	-2,060950	0,0541
GEIS90RUB	0,829326	2,453615	0,338002	0,7393
UUDEMRUB	-1530286,	643576,9	-2,377783	0,0287
REERRUB	681684,2	415077,1	1,642307	0,1179
OECDGDP90	5859,119	3344,280	1,751982	0,0968
DUMMYAB	5863435,	4838196,	1,211905	0,2412
SEAS1	-6982480,	2360261,	-2,958351	0,0084
SEAS3	3988233,	2393479,	1,666291	0,1130

R-squared	0,692156	Mean dependent var	23528044
Adjusted R-squared	0,572439	S.D. dependent var	7201473,
S.E. of regression	4708912,	Akaike info criterion	30,97759
Sum squared resid	3,99E+14	Schwartz criterion	31,36470
Log likelihood	-431,6011	F-statistic	5,781591
Durbin-Watson stat	1,939743	Prob(F-statistic)	0,001256

Figure 6-78 Residuals, actual and fitted real values for the export of rubber products



With the T-statistic of -2,377783, it can be concluded that at the 95 per cent confidence level, spare capacity is an important cause of exports in this scenario. Nevertheless, the OECD's GDP and the REER are important at the 90 per cent level.

Tyre manufacturing is an important subsector in the rubber sector and therefore enjoys Phase VI benefits. This would explain why GEIS is insignificant. Categories A and B are relatively more significant than GEIS. Further, most of the rubber sector's exports are destined to Southern African countries and therefore the OECD's GDP will not be a factor. The European and Asian markets are however taking up more of South Africa's exports which would account for most new export sales.

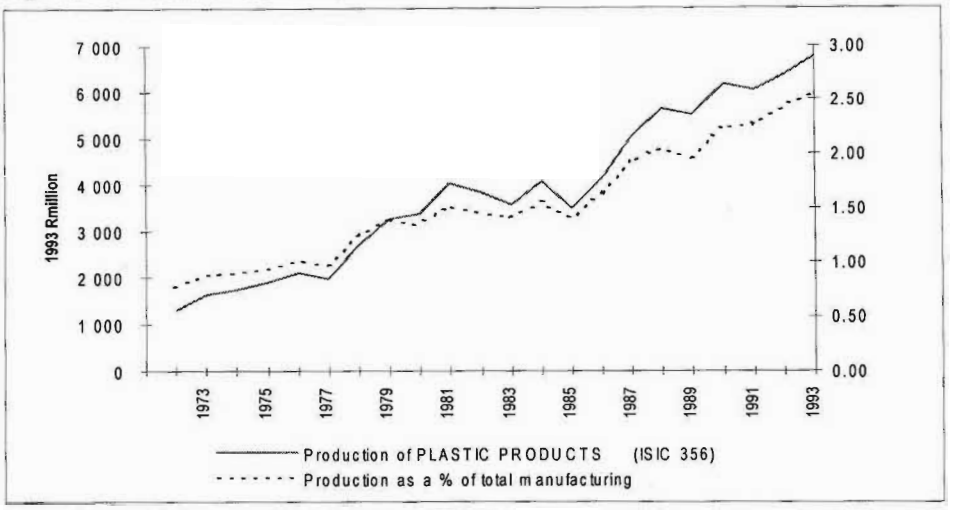
6.3.21 Plastics products (SIC 356)

The sector covers the manufacture of products by process of extruding or moulding resin, plastic, raw materials, or a combination of resin and glass fibre. It also includes the manufacture of plastic products such as film and sheets, kitchenware, furniture and footwear.

6.3.21.1 Structure of plastic products

This industry is characterised by a wide diversity of technologies and markets contributed just less than three per cent to the total production of the manufacturing sector in 1993. Compared with other newly industrialised countries, South Africa's performance is lagging, although there has been rapid growth especially since 1986. The largest single market is for packaging, contributing 50 per cent of turn over. In the injection moulding industry, the barriers of entry are low resulting in a number of new entrants who are mainly small businesses.

Figure 6-79 Production of plastic products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.21.2 International comparison

Since the end of World War II, the plastics industry has grown faster than any other industry. (Kuper and Cassim, 1996) This is probably because plastic technologies are new and rapid development and are therefore able to create and satisfy new markets for these products. However, even though South Africa's growth has outpaced that of the rest of the work and it has a high competitiveness indicator, the sector has a low revealed comparative advantage.

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
57	Plastics in primary form	69,0	10,9	2,3	0,1	8,4	0,28
58	Plastic, non-primary form	13,0	14,2	3,7	0,0	10,1	0,21

Source: ITC, 1996.

6.3.21.3 Development assistance

The IDC have calculated that at 15 May 1992 the nominal protection of 40 per cent is higher than the manufacturing industry average of 20 per cent.

Table 6-58 Nominal levels of protection

Average nominal protection	40
Ad valorem (% of tariff headings))	78
Formula (% of tariff headings)	34
Import control (% of tariff headings)	54
Import surcharge (% of tariff headings)	99

Source: IDC, 1992.

Although almost a third of the exports from this sector qualify for category 4 assistance, it is insufficient to compensate for the higher cost of inputs, and export sales are so unprofitable as to render value added in exports negative. Domestic

prices, higher due to protection, have therefore subsidised exports and have made a higher capacity utilisation possible. "This has led to some bizarre consequences. One plastic converter interviewed re-imports South African polymer from Zimbabwe because prices are lower than domestic prices." (Crompton, 1995:160)

Table 6-59 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Other plastic	3,13	3,66	2,46	1,00	-0,19	0,86	1,27	0,86	-16,37

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices
Source: IDC (1990)

Table 6-60 GEIS and Phase VI export incentives paid in 1992

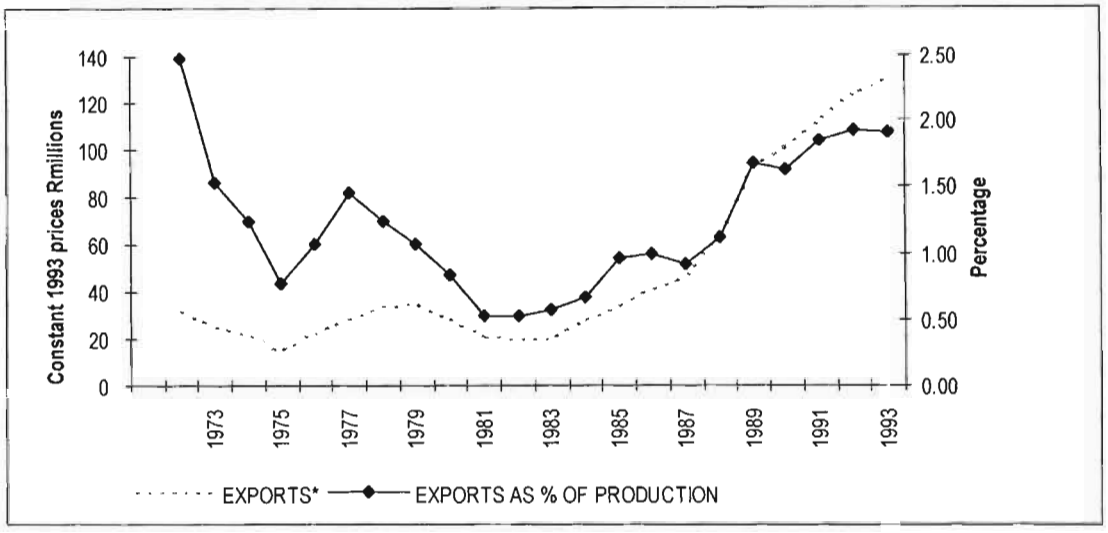
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	73
	% of export value	36
Manufactured	% of tariff headings	27
	% of export value	64
Phase VI	% of tariff headings	0
	% of export value	0

Source: IDC, 1992.

6.3.21.4 Export

Exports in this sector increased from the mid 1980s. The sector did not respond greatly to GEIS. The REER and the OECD's GDP have had the greatest influence on the quantities exported.

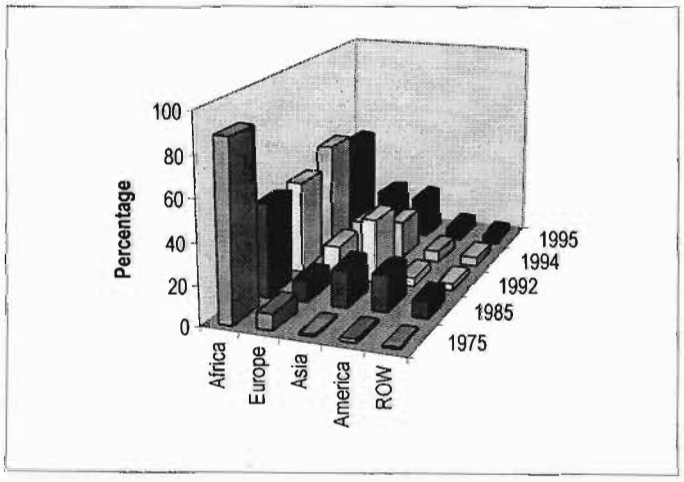
Figure 6-80 Export of plastic products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The exports, as can be expected with such a high anti-export bias, form a very small percentage of this sector's total turnover. An upward trend has been exhibited since approximately 1983. Africa remains the major market, although market share has shifted away from Africa to Asia and a lesser extent Europe.

Figure 6-81 Destination of South African exports



Source: Commissioner for Customs and Excise

6.3.21.5 Results of regression for plastic products

In order to determine the effect GEIS has had on the export of the plastic sector, the following export function was estimated:

X90PLAS = -1,0223437e+08 - 0,41063451*GEIS90PLAS + 137869,29*CAPUTPLAS + 230296,26*REERPLAS + 6088,9332*OECDGDP90 - 8005700,1*SEAS1

with:

X90PLAS	=	The real value of plastic exports (R million 1990=100)
GEIS90PLAS	=	Real GEIS payments (1990=100)
REERPLAS	=	The REER for the plastic sector
UUDEMPLAS	=	The percentage unutilised capacity of plastic due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

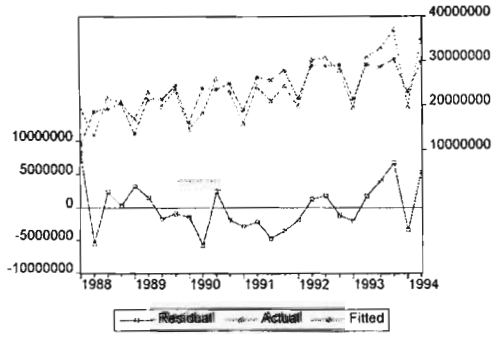
The regression results are set out below. Figure 6-82 below shows the actual and fitted real export figures for plastic relative to the right hand scale, while the residual is given on the left hand scale. With a R-squared of 0,669645 and a F-statistic of 8,108168 we can conclude that with 99 per cent confidence that at least one of the coefficients is not zero and the function gives a good representation of plastic exports.

LS // Dependent Variable is X90PLAS
Sample: 1988:1 1994:2
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-1,02E+08	41085350	-2,488341	0,0218
GEIS90PLAS	-0,410635	1,876873	-0,218787	0,8290
CAPUTPLAS	137869,3	218658,7	0,630523	0,5355
REERPLAS	230296,3	276921,6	0,831630	0,4154
OECDGDP90	6088,933	2472,770	2,462394	0,0230
SEAS1	-8005700,	2230848,	-3,588635	0,0018

R-squared	0,669645	Mean dependent var	23380912
Adjusted R-squared	0,587056	S.D. dependent var	6300960,
S.E. of regression	4049044,	Akaike info criterion	30,62716
Sum squared resid	3,28E+14	Schwartz criterion	30,91749
Log likelihood	-429,0454	F-statistic	8,108168
Durbin-Watson stat	1,881237	Prob(F-statistic)	0,000257

Figure 6-82 Residuals, actual and fitted real values for the export of plastics



Although South Africa exports a fairly large percentage of the this sector to African countries, the OECD GDP growth is significant at the 95 per cent level. This would indicate that OECD exporters of plastics would abandon the African markets when there is a boom leaving the markets open for South African exporters. The exports of this sector are hampered by the fact that there are no economies of scale as most firms established to serve only the South African market. Ageing machinery and poor

training and skills are responsible for a decline in the total productivity. Access to raw material at world prices and lower cost capital goods as well as improving the productivity will result in improved export performance. (Crompton, 1995).

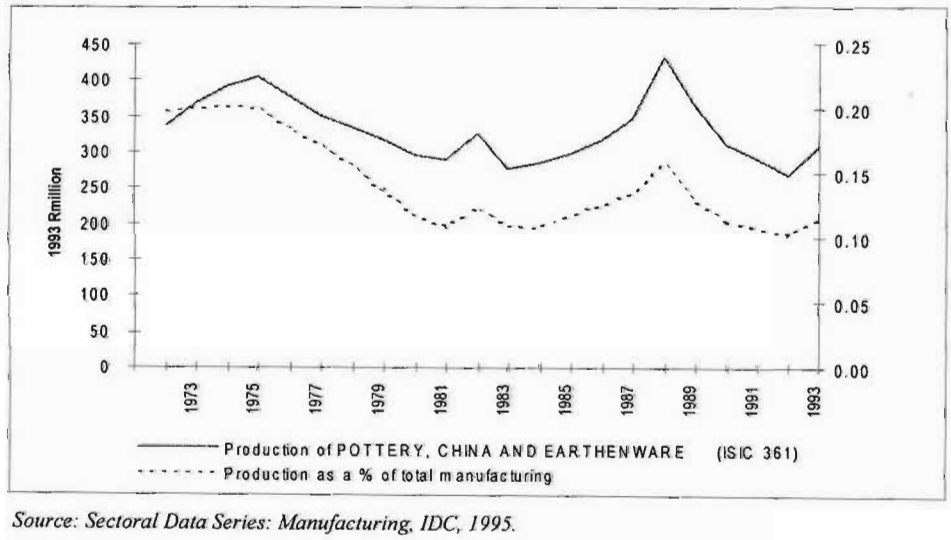
6.3.22 Pottery, china and earthenware (SIC 361)

This sector consists of the manufacture of vitreous and semi-vitreous china, table and kitchen articles; earthenware plumbing and bathroom fittings and fixtures; porcelain electrical supplies; art and other ornaments; industrial and laboratory pottery, stoneware and course earthenware; and florists' articles of pottery, china or earthenware.

6.3.22.1 Structure of the pottery, china and earthenware industry

This is one of South Africa's smallest sectors with manufacturing representing bearly 1/10 of a per cent. Since the sector is so small, fluctuations are common.

Figure 6-83 Production of pottery, china and earthenware



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.22.2 Development assistance

The IDC calculated that the sector received almost double the nominal rate of protection than did the total manufacturing in May 1992. This would explain the anti-export bias in Table 6-62. Buying inputs at domestic prices is high. With access to inputs at world prices, the anti-export bias is considerably less. GEIS almost compensated for the anti-export bias.

Table 6-61 Nominal levels of protection

Average nominal protection	35
Ad valorem (% of tariff headings)	88
Formula (% of tariff headings)	24
Import control (% of tariff headings)	6
Import surcharge (% of tariff headings)	100

Source: IDC, 1992.

Source: Board of Trade and Industry, 1987.

Table 6-62 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Pottery, china	5,21	5,59	5,17	1,00	0,58	0,93	1,01	0,93	8,99

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

The entire sector enjoyed category 4 GEIS incentives.

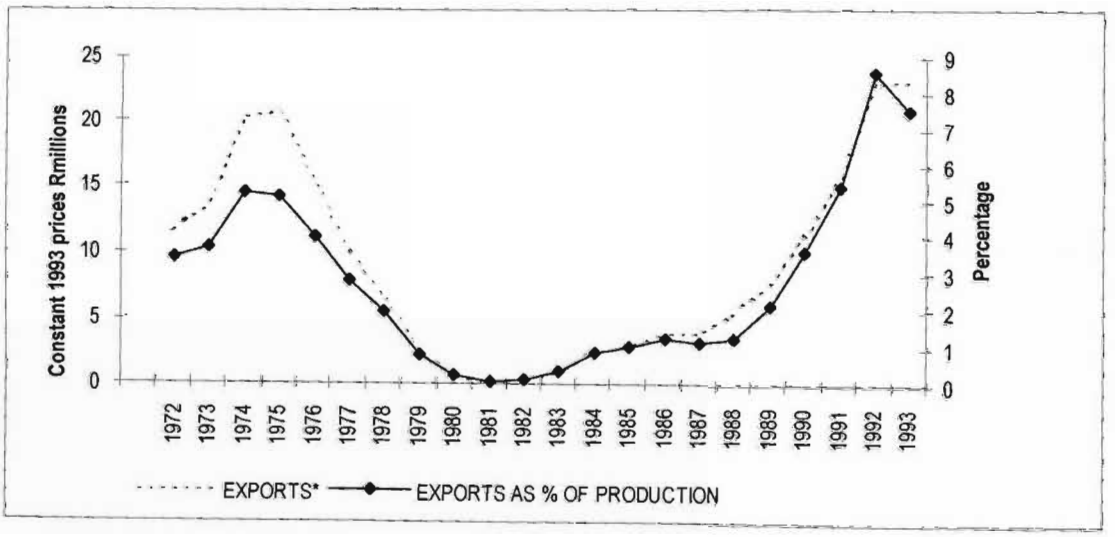
Table 6-63 GEIS and Phase VI export incentives paid in 1992

GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	0
	% of export value	0
Manufactured	% of tariff headings	100
	% of export value	100
Phase VI	% of tariff headings	0
	% of export value	0

Source: IDC, 1992.

6.3.22.3 Export

Figure 6-84 Export of pottery products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.22.4 Results of regression for pottery

In order to determine the effect GEIS has had on the export of the pottery sector, the following export function was estimated:

X90POT = -30281796 - 0,18776687*GEIS90POT + 149313,35*REERSARB + 91398,371*CAPUTPOT + 742,79939*OECDGDP90 - 1356413,3*SEAS1

with:

X90POT	=	The real value of pottery exports (R million 1990=100)
GEIS90 POT	=	Real GEIS payments (1990=100)
REER POT	=	The REER for the pottery sector
UUDEM POT	=	The percentage unutilised capacity of pottery due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

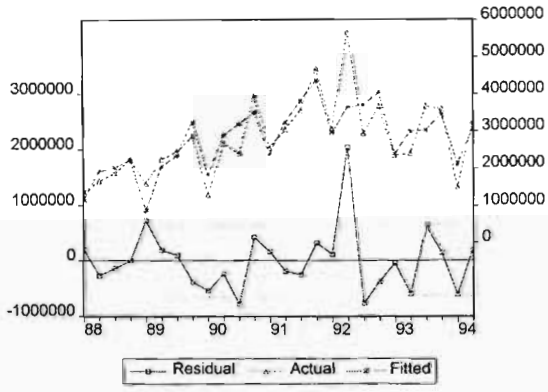
The regression results are set out below. Figure 6-85 Residuals, actual and fitted real values for the export of pottery below shows the actual and fitted real export figures for pottery exports relative to the right hand scale, while the residual is given on the left hand scale. The function gives a fair representation of pottery exports. The R-squared of 0,693029 is acceptable. Since there is no lag-dependent variable, the Durbin-Watson statistic of 2,267527 indicates that there is no serial correlation.

LS // Dependent Variable is X90POT
Sample: 1988:1 1994:2
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-30281796	8130536,	-3,724453	0,0013
GEIS90POT	-0,187767	0,339130	-0,553672	0,5859
REERSARB	149313,3	41597,45	3,589483	0,0018
CAPUTPOT	91398,37	47308,94	1,931947	0,0677
OECDGDP90	742,7994	317,1950	2,341775	0,0297
SEAS1	-1356413,	305546,2	-4,439307	0,0003

R-squared	0,693029	Mean dependent var	2782165,
Adjusted R-squared	0,616287	S.D. dependent var	1041048,
S.E. of regression	644873,1	Akaike info criterion	26,95279
Sum squared resid	8,32E+12	Schwartz criterion	27,24312
Log likelihood	-381,2787	F-statistic	9,030558
Durbin-Watson stat	2,267527	Prob(F-statistic)	0,000129

Figure 6-85 Residuals, actual and fitted real values for the export of pottery



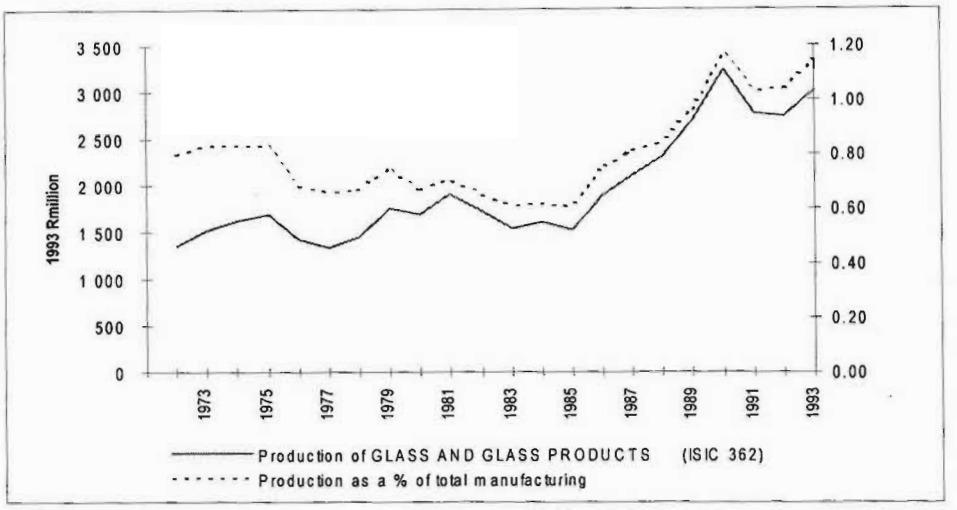
It would seem as though exports in this sector were opportunistic. Both the REER and the capacity utilisation have significant but incorrect sign. The volume of exports is low. It might be speculated that pottery exporters would go on holiday when their factories have done well, i.e. high capacity and go overseas when the rand is strong. Opportunistic exports would then arise. It is therefore not possible to estimate an export function for this industry.

6.3.23 Glass and glass products (SIC 362)

The sector consists of glass, glass fibres, glass products, and the processing of glass such as bevelling, engraving and polishing.

6.3.23.1 Structure of glass industry

Figure 6-86 Production of glass and glass products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The glass and glass products industry is relatively small and contributes less than 1,2 per cent to South Africa's total manufacturing. The growth, which the sector experienced since 1985, resulted in almost a doubling of output by 1990 worth R3 000 million.

6.3.23.2 Development assistance

The industry has only received an average of 15 per cent nominal protection that was lower than the industry average of 20 per cent on 15 May 1992. (IDC, 1992)

Table 6-64 Nominal levels of protection

Average nominal protection	15
Ad valorem (% of tariff headings))	81
Formula (% of tariff headings)	2
Import control (% of tariff headings)	0
Import surcharge (% of tariff headings)	85

Source: IDC, 1992.

The industry suffers from an anti-export bias irrespective of whether inputs are purchased locally or at world prices. GEIS has reduced the anti-export bias but never completely neutralised it.

Table 6-65 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Glass	1,25	1,19	1,13	1,00	0,94	1,05	1,11	1,05	1,34

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

The industry has developed a niche in the export of safety laminated glass for the automotive industry. These products qualified for Phase VI assistance. The rest of the products, with only a few exceptions, are material incentive and therefore only receive category 3 assistance.

Table 6-66 GEIS and Phase VI export incentives paid in 1992

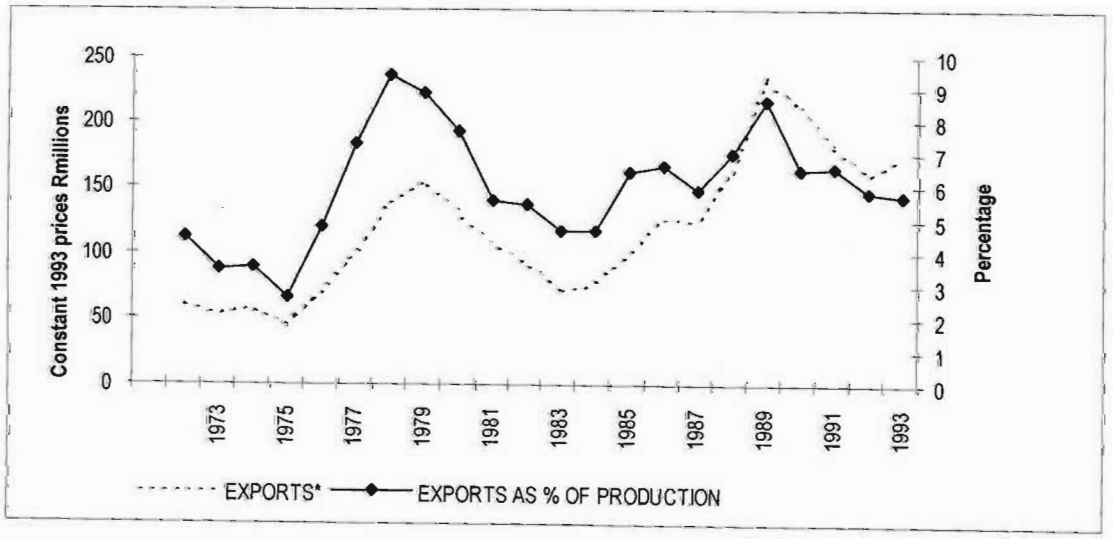
GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	5
	% of export value	0
Material intensive	% of tariff headings	55
	% of export value	57
Manufactured	% of tariff headings	38
	% of export value	5
Phase VI	% of tariff headings	2
	% of export value	38

Source: IDC, 1992.

6.3.23.3 Export

Exports increased sharply in 1976 until 1980 when the volume again decreased. South Africa has a trade deficit in this sector. Imports consist mostly kitchen or table glassware. The largest markets are the USA (25 per cent), the UK (12 per cent), and Germany (10 per cent). Exports to Southern Africa countries represent approximately 20 per cent of the local production.

Figure 6-87 Production of glass and glass products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.23.4 Results of regression for glass and glass products

In order to determine the effect GEIS has had on the export of the glass and glass products sector, the following export function was estimated:

X95GLASS = -2,1274486e+08 - 890523,15*GEISXGLASS + 74408,12*UUDEMGLASS + 572774,71*REERGLASS + 11667,703*OECDGDP90 - 6922818,8*SEAS1

with:

X90GLASS	=	The real value of glass exports (R million 1990=100)
GEIS90 GLASS	=	Real GEIS payments (1990=100)
REER GLASS	=	The REER for the glass sector
UUDEM GLASS	=	The percentage unutilised capacity of glass manufacturers due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

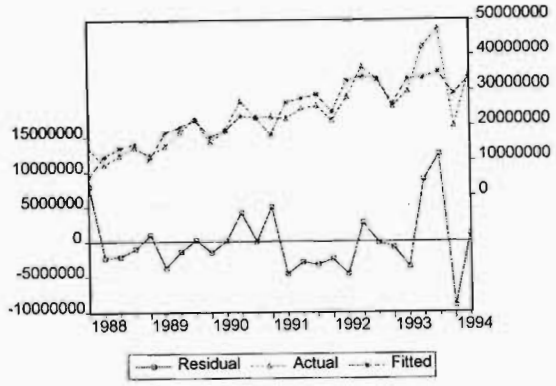
The regression results are set out below. Figure 6-88 Residuals, actual and fitted real values for the export of glass and glass products below shows the actual and fitted real export figures for glass exports relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of glass exports.

LS // Dependent Variable is X90GLASS
Sample: 1988:1 1994:2
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-2,13E+08	42013777	-5,063693	0,0001
GEISXGLASS	-890523,2	1163206,	-0,765577	0,4529
UUDEMGLASS	74408,12	223348,6	0,333148	0,7425
REERGLASS	572774,7	421504,0	1,358883	0,1893
OECDGDP90	11667,70	2909,052	4,010827	0,0007
SEAS1	-6922819,	2504214,	-2,764468	0,0120

R-squared	0,762805	Mean dependent var	23419571
Adjusted R-squared	0,703506	S.D. dependent var	9550475,
S.E. of regression	5200356,	Akaike info criterion	31,12765
Sum squared resid	5,41E+14	Schwartz criterion	31,41798
Log likelihood	-435,5518	F-statistic	12,86374
Durbin-Watson stat	2,049834	Prob(F-statistic)	0,000011

Figure 6-88 Residuals, actual and fitted real values for the export of glass and glass products



With a T-Statistic of 4,764468, the only significant factor influencing this sector's exports is the OECD's GDP, although seasonal fluctuations do seem to play a role. GEIS again has had no influence, while the spare capacity is also insignificant. There is evidence that especially the auto sector is developing an export culture and therefore exports as part of their total marketing strategy and not simply as a vent for surplus.

6.3.24 Other non-metallic mineral products (SIC 369)

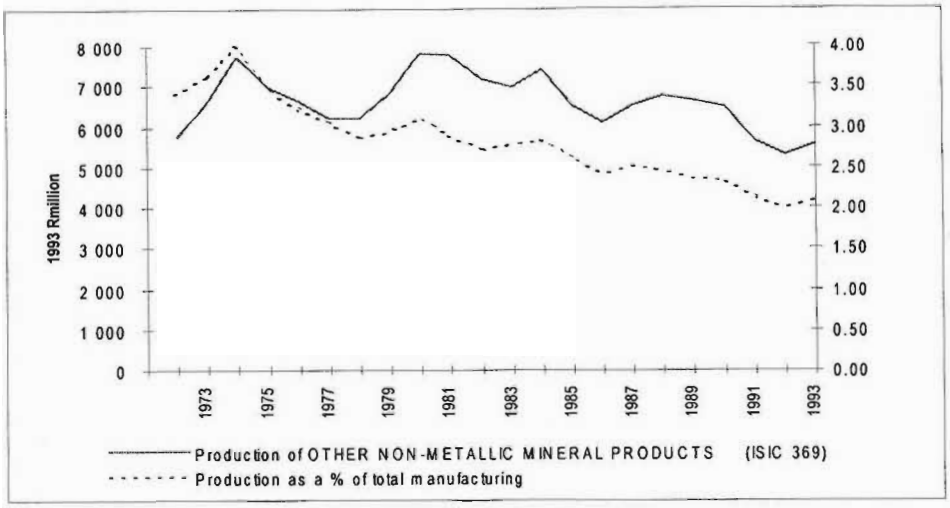
This sector consists of structural clay products; cement; and other non-metallic products such as slate, cut-stone products, asbestos, and graphite products.

6.3.24.1 Structure of non-metallic mineral products

Ngoasheng (1995) estimated that the number of brick works in South Africa has declined from 450 in 1980 to 105 in 1995. The industry is dominated by Corobrick, which has a market share between 30 and 50 per cent. Bricks are not generally traded on the world market. However, the South African brick industry has been successful in marketing to the Far East.

Internationally, the cement industry has grown since the end of World War II. Unlike other commodities, very little of the production is exported. As in South Africa, in most other countries the ownership of the industry is tightly controlled. The lack of competition has resulted in above average price increases and also above average profits.

Figure 6-89 Production of non-metallic mineral products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.24.2 International comparison

SITC	Product	Imports from SACU 1994 US$ m	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
66	Non-metal. mineral	635,9	-5,5	2,4	0,8	-7,7	3,22

Source: ITC, 1996.

Internationally this sector has grown by more than two per cent, while the value of South Africa's exports has decreased. South Africa has therefore not only exported less but has lost market share. The industry nevertheless does have a revealed comparative advantage.

Products from this industry have a low weight to value ratio and therefore have relatively high transport costs. It is therefore not surprising to see that in 1994, 30 per cent of exports were destined for Mozambique and Zimbabwe. Twenty five per cent of the exports were sold to the Far and Middle East, UAE, Japan and Thailand.

6.3.24.3 Development assistance

Table 6-67 Nominal levels of protection

	Structural clay prod	Cement	Other non-metal
Average nominal protection	30	10	15
Ad valorem (% of tariff headings))	39	17	61
Formula (% of tariff headings)	18	0	12
Import control (% of tariff headings)	0	0	0
Import surcharge (% of tariff headings)	39	0	67

Source: IDC, 1992.

In May 1992 nominal protection for bricks was higher than the manufacturing average. The other two subsectors, however, had a lower nominal protection. The cement industry was formed into a cartel and the nominal protection is therefore not relevant.

Table 6-68 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Other non-metal mineral products	1,34	1,14	1,09	1,00	0,95	1,18	1,23	1,18	1,41

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: IDC (1990)

Although GEIS assisted in reducing the anti-export bias, it was not successful in reducing it completely. GEIS assistance was however very low, with most products only receiving category 2 assistance and only a few qualifying for category 3. The assistance was minimal, which explains why GEIS did not reduce the anti-export bias completely.

Table 6-69 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Non-metal mineral products	1,32	1,58	1,21	1,11
	Category B			
	1982	1983	1984	1985
Non-metal mineral products	1,63	2,06	1,33	2,37

Source: Board of Trade and Industry, 1987.

Table 6-70 GEIS and Phase VI export incentives paid in 1992

		Clay products	Cement	Other
GEIS exclusions	% of tariff headings	0	0	0
	% of export value	0	0	0
Primary products	% of tariff headings	0	0	0
	% of export value	0	0	0
Beneficiated primary product	% of tariff headings	28	83	34
	% of export value	38	13	79
Material intensive	% of tariff headings	68	17	65
	% of export value	61	87	21
Manufactured	% of tariff headings	4	0	0
	% of export value	1	0	0
Phase VI	% of tariff headings	0	0	1
	% of export value	0	0	1

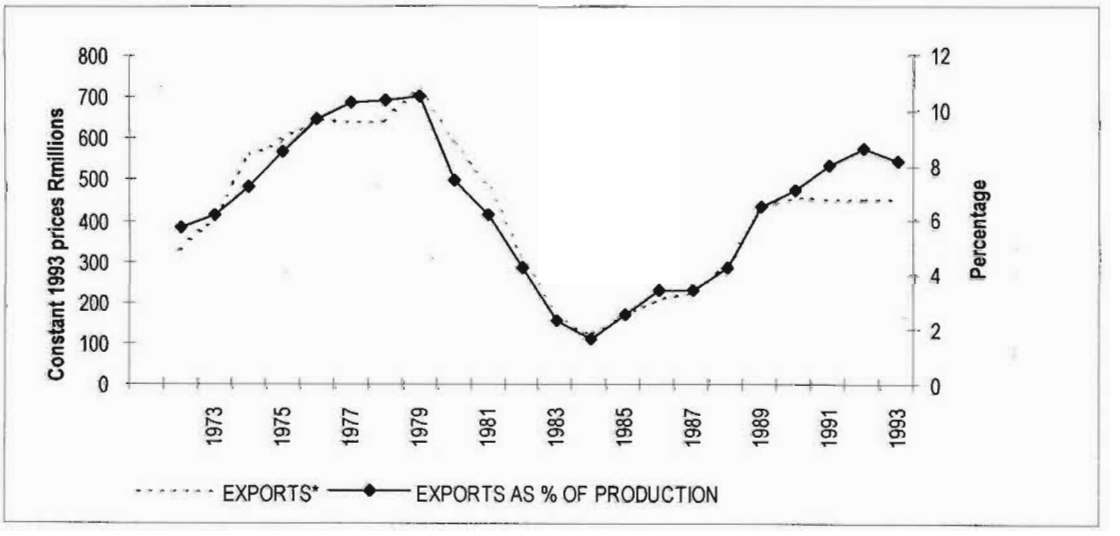
Source: IDC, 1992.

Most of the products in this group attracted category 2 assistance. In terms of value of exports, the majority is category 3. Therefore as a whole the industry was not meaningfully assisted.

6.3.24.4 Export

Because of the large weight to value ratio, transport costs are high, and raw materials are readily available in most countries, these commodities are not generally traded internationally. However, products such as Italian tiles have a relatively higher value to volume ratio, and can therefore be easily exported.

Figure 6-90 Exports of non-metallic products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

The decline in the export of non-metallic products, was the result of the poor performance of the cement exports. This is probably due to cement production coming on-line in other African countries and export sales going to these countries rather than South Africa.

Figure 6-91 Exports of structural clay products

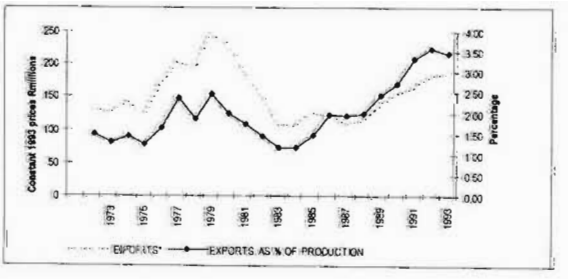


Figure 6-92 Exports of cement

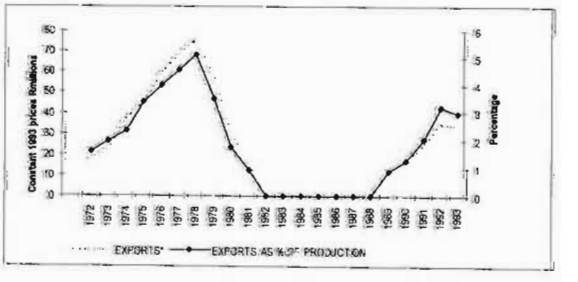
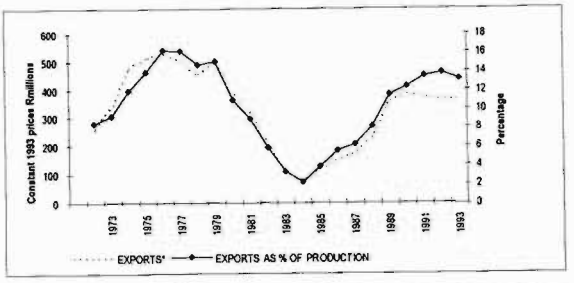


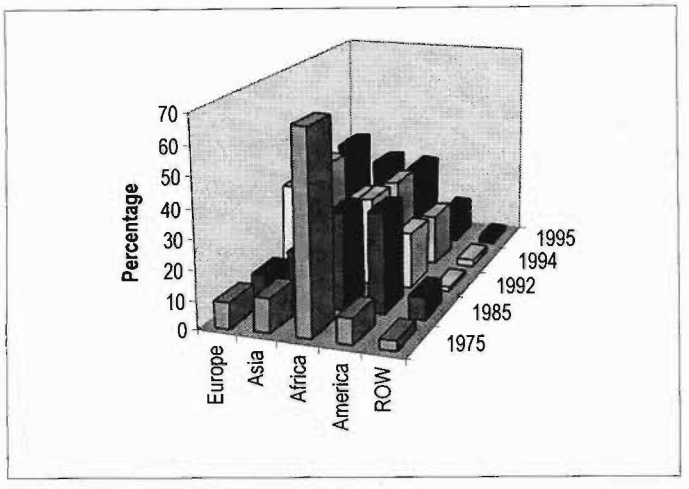
Figure 6-93 Exports of other non-metallic mineral products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Bricks were exported to Botswana and the Far East. Singapore was going through a building boom and required more bricks than they could produce. Once Corobrick could satisfy the importer that they could produce the quality and style required, they competed on price against other foreign exporters.

Figure 6-94 Destination of South African exports



Source: Commissioner for Customs and Excise

6.3.24.5 Results of regression for other non-metallic mineral products

In order to determine the effect GEIS has had on the export of the other non-metallic mineral products sector, the following export function was estimated:

X90NONMET = -1,5764615e+08 + 5,4634572*GEIS90NONMET + 919370,28*UUDEMNONMET - 295547,76*REERNONMET + 13990,288*OECDGDP90

with:

X90nonmet	=	The real value of other non-metallic mineral products exports (R million 1990=100)
GEIS90nonmet	=	Real GEIS payments (1990=100)
REERnonmet	=	The REER for the other non-metallic mineral products sector
UUDEMnonmet	=	The percentage unutilised capacity of other non-metallic mineral products manufacture due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below.

R-squared	0,806930	Mean dependent var	34814937
Adjusted R-squared	0,770155	S.D. dependent var	12000091
S.E. of regression	5753107,	Akaike info criterion	31,30154
Sum squared resid	6,95E+14	Schwartz criterion	31,54348
Log likelihood	-438,8125	F-statistic	21,94219
Durbin-Watson stat	2,291790	Prob(F-statistic)	0,000000

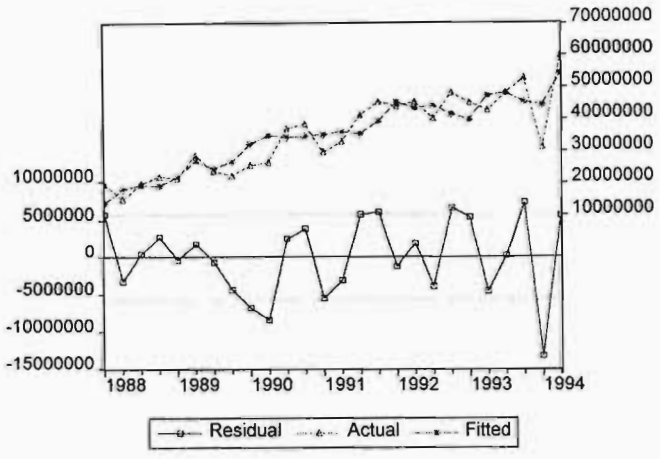
Figure 6-95 below shows the actual and fitted real export figures for non-metallic mineral sector relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of non-metallic mineral exports.

LS // Dependent Variable is X90NONMET
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-1,58E+08	59159767	-2,664753	0,0145
GEIS90NONMET	5,463457	6,543361	0,834962	0,4131
UUDEMNONMET	919370,3	494146,0	1,860523	0,0769
REERNONMET	-295547,8	284102,2	-1,040287	0,3100
OECDGDP90	13990,29	4039,637	3,463254	0,0023

R-squared	0,806930	Mean dependent var	34814937
Adjusted R-squared	0,770155	S.D. dependent var	12000091
S.E. of regression	5753107,	Akaike info criterion	31,30154
Sum squared resid	6,95E+14	Schwartz criterion	31,54348
Log likelihood	-438,8125	F-statistic	21,94219
Durbin-Watson stat	2,291790	Prob(F-statistic)	0,000000

Figure 6-95 Residuals, actual and fitted real values for the export of non-metallic products



Exports from this sector are influenced by the OECD's GDP growth (with a confidence level of 99 per cent) and by the spare capacity in the industry (with a confidence level of 95 per cent). This has been confirmed by interviews with the industry, although price is also an important factor inducing foreign importers to purchase. It is doubtful whether this industry, because of the impracticalities involved

in exporting the product, would ever develop capacity for export markets other than those in Southern Africa. GEIS therefore never contributed to sustainable exports.

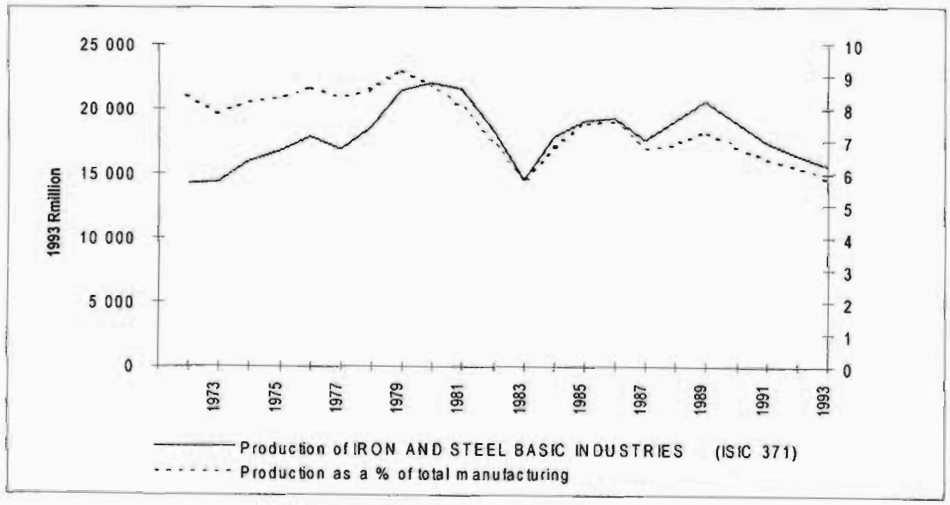
6.3.25 Iron and basic steel industries (SIC 371)

This sector covers the manufacture of primary iron and steel products, consisting of all process from smelting in blast furnaces to the semi-finished stage in rolling mills and foundries.

6.3.25.1 Structure of the iron and steel industry

Iscor began producing iron and steel in 1934 to supply a growing secondary industry with raw steel and steel products. The industry has grown to a point that in 1993 it represented six per cent of total manufacture.

Figure 6-96 Production of steel and iron



6.3.25.2 International comparison

South Africa's exports have grown by almost eight per cent per annum since 1990. This is very favourable compared to the world trend of 2,3 per cent. It probably represents the South African industry recapturing the US market after sanctions were lifted. South Africa enjoys about 1,5 per cent of the world market share. This translates into a positive comparative advantage.

Table 6-71 The competitiveness index and reveal comparative advantage of iron and steel

SITC	Product	Imports from SACU 1994 US$ m	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
67	Iron and steel	1 720,1	7,9	2,3	1,5	5,5	2,83

Source: ITC, 1996.

6.3.25.3 Development assistance

In May 1992, the IDC (1992) calculated that the sector had a nominal level of protection of only ten per cent, compared with an industry average of 20 per cent.

Table 6-72 Nominal levels of protection

Average nominal protection	10
Ad valorem (% of tariff headings)	90
Formula (% of tariff headings)	69
Import control (% of tariff headings)	12
Import surcharge (% of tariff headings)	12

Source: IDC, 1992.

The anti-export bias is negligible if the inputs are supplied at world prices. However, even with GEIS, there is still an anti-export bias if inputs are bought at domestic prices.

Table 6-73 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Basic iron and steel	1,27	1,24	1,13	1,00	0,90	1,02	1,12	1,02	1,42

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: IDC (1990)

The effective rate of export assistance given to this sector was calculated at 8,4 per cent in 1985. (Board of Trade and Industry, 1987) This was below the average given to the industry of 15,2 per cent.

Table 6-74 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A R million			
	1982	1983	1984	1985
Basic metals	10,15	10,78	11,32	18,60
	Category B R million			
	1982	1983	1984	1985
Basic metals	14,12	19,87	35,02	64,50

Source: Board of Trade and Industry, 1987.

Six per cent of the sector's exports were excluded from GEIS benefits. This was largely due to the agreement between the South African and US governments, that iron and steel exports would not receive any GEIS benefits. GEIS was countervailable and the South African government therefore did not have much option but to agree to the US request. The vast majority of iron and steel export qualified for category 3 assistance and a few received category 2. None however, received category 4 assistance.

Table 6-75 GEIS and Phase VI export incentives paid in 1992

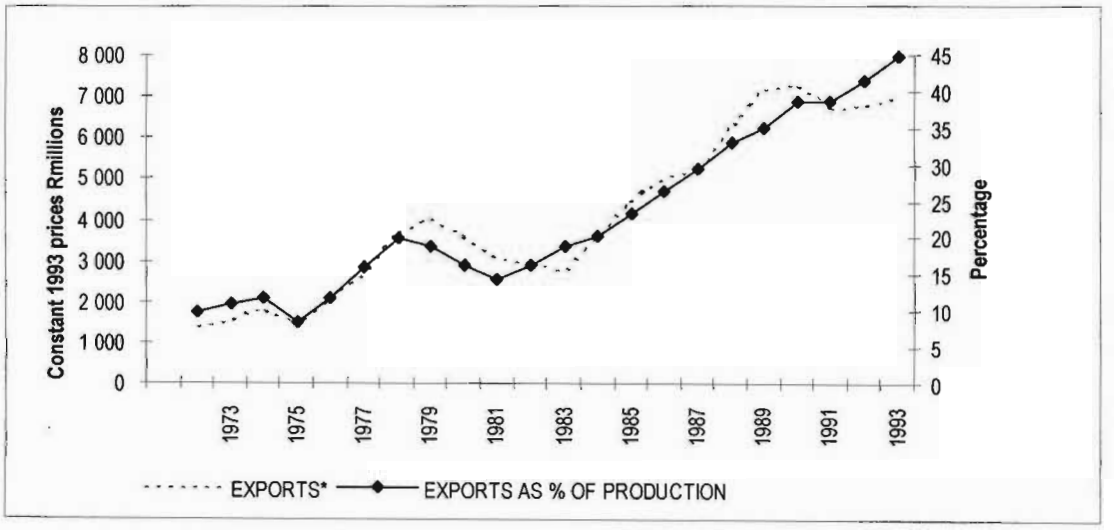
GEIS exclusions	% of tariff headings	6
	% of export value	38
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	2
	% of export value	10
Material intensive	% of tariff headings	92
	% of export value	51
Manufactured	% of tariff headings	0
	% of export value	0
Phase VI	% of tariff headings	0
	% of export value	0

Source: IDC, 1992.

6.3.25.4 Export

Since the early 1980s the iron and steel exporting sectors have consistently increased the value of exports from R3 000 million in 1982 to almost R8 000 million in 1993, measured in 1993 rand. The percentage exports of production increased from just over ten per cent to 45 per cent in 1993. The industry has become outward focused and has developed an export culture.

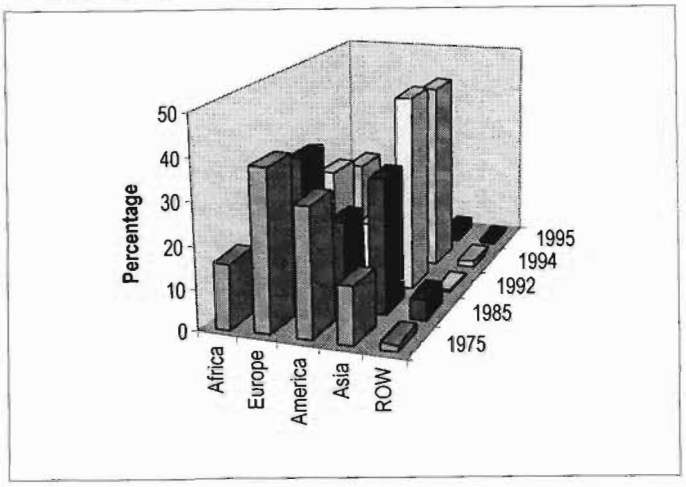
Figure 6-97 Exports of iron and steel



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

This sector has wide market spread and exports to many countries. However, exports to European and American markets have proportionately lost ground to exports to Asia. Thailand was responsible for 18 per cent of South African foreign purchase, while Japan, Taiwan, and South Korea each purchase between five and ten per cent of South Africa's total exports.

Figure 6-98 Destinations of South African exports



6.3.25.5 Results of regression for basic iron and steel products

In order to determine the effect GEIS has had on the export of the basic iron and steel sector, the following export function was estimated:

X90IRONSM = -2,2731555e+09 + 0,78252507*GEIS90IRON + 13422702*CAPUTIRON + 3210281*REERIRON + 126146,03*OECDGDP90 + 16363803*SEAS1 - 14974330*SEAS2 + 23246274*SEAS3

with:

X90	=	The real value of iron exports (R million 1990=100)
GEIS90	=	Real GEIS payments (1990=100)
REER	=	The REER for the iron sector
UUDEM	=	The percentage unutilised capacity of iron due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

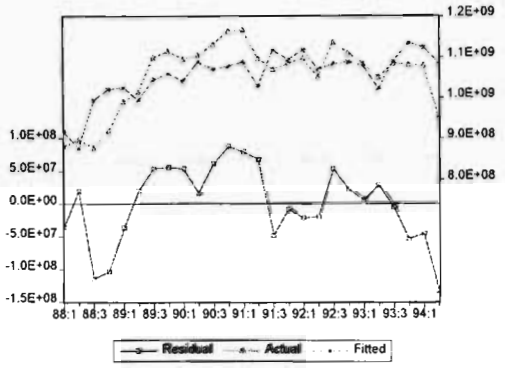
The regression results are set out below. Figure 6-99 below shows the actual and fitted real export figures for iron relative to the right hand scale, while the residual is given on the left hand scale. The function gives a poor representation of iron exports. The adjusted R^2 is 0,3159 and the equation therefore does not include all the factors that will influence this industry. A dummy variable to test for the impact of sanctions was used, as was a dummy for Categories A and B incentives. Neither of these improved the R^2. Although the Durbin-Watson statistic is also very low, the Breusch-Godfrey test was used and there was no evidence of serial correlation.

LS // Dependent Variable is X90IRONSM
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-2,27E+09	1,35E+09	-1,685114	0,1092
GEIS90IRON	0,782525	0,639894	1,222897	0,2371
CAPUTIRON	13422702	7867425,	1,706111	0,1052
REERIRON	3210281,	5457627,	0,588219	0,5637
OECDGDP90	126146,0	51629,97	2,443271	0,0251
SEAS1	16363803	45663758	0,358354	0,7242
SEAS2	-14974330	50375411	-0,297255	0,7697
SEAS3	23246274	46890380	0,495758	0,6261

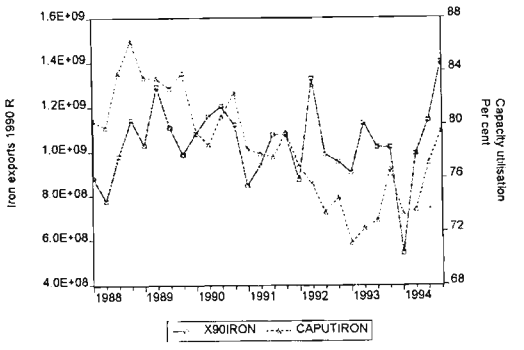
R-squared	0,507470	Mean dependent var	1,06E+09
Adjusted R-squared	0,315930	S.D. dependent var	84644758
S.E. of regression	70008412	Akaike info criterion	36,37591
Sum squared resid	8,82E+16	Schwartz criterion	36,76302
Log likelihood	-501,7793	F-statistic	2,649427
Durbin-Watson stat	0,762882	Prob(F-statistic)	0,045306

Figure 6-99 Residuals, actual and fitted for the export of iron and steel



The OECD's GDP is significant and positively contributes to the export of iron products as would be expected. Although only significant at the 10 per cent level, the spare capacity exhibits a positive sign. This industry has therefore become export oriented, has provided capacity for exporting, and does not simply export as a vent for surplus. As can be seen, the spare capacity is so large, that any sales, exports or local, are welcome, whenever they occur. As the sector becomes more export oriented the spare capacity plays less of a role and the firm would concentrate on producing at a point where the marginal cost is equal to the average cost. In other words the exporter treats the whole world as its market and tries to maximise profits within international constraints.

Figure 6-100

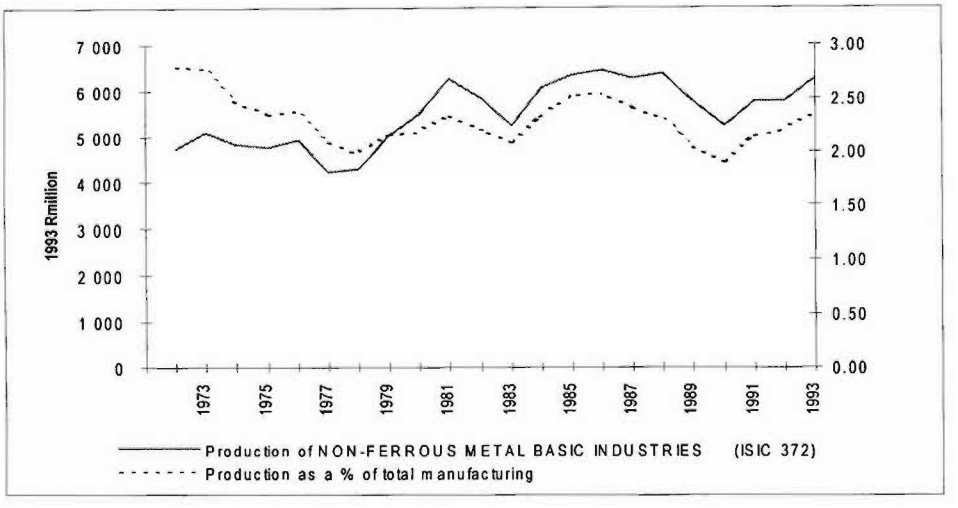


6.3.26 *Non-ferrous metal basic industries (SIC 372)*

This sector producers primary non-ferrous metal products, covering the smelting, alloying and refining, rolling, drawing, founding and casting for the manufacturing of bars, sheets, strips, rods, tubes, pipes, and wire rods and castings and extrusions.

6.3.26.1 Structure of the non-ferrous metal basic industries

Figure 6-101 Production of non ferrous metal



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.26.2 International comparison

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
68	Non-ferrous metals	2 207,0	-8,0	-1,0	3,0	-7,1	5,89

Since 1990, the value of world exports of non-ferrous metal has declined by one per cent. South Africa's exports have declined by eight per cent, resulting in a decline in international market share. South Africa does however have a revealed comparative advantage in this sector.

6.3.26.3 Development assistance

Table 6-76 Nominal levels of protection

Average nominal protection	10
Ad valorem (% of tariff headings))	58
Formula (% of tariff headings)	20
Import control (% of tariff headings)	8
Import surcharge (% of tariff headings)	20

Source: IDC, 1992.

This sector was given only half the nominal protection of the total manufacturing sector on the 15 May 1992.

Table 6-77 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Basic metals	10,15	10,78	11,32	18,60
	Category B			
	1982	1983	1984	1985
Basic metals	14,12	19,87	35,02	64,50

Source: Board of Trade and Industry, 1987.

Table 6-78 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Basic non-ferrous metal	1,16	1,03	0,98	1,00	0,95	1,13	1,19	1,13	1,23

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: IDC (1990)

The effective protection on domestic sales coefficient was 1,16, indicating that the price of the product sold was higher than the world market price. Since this was an important input in many down stream products, these were made uncompetitive internationally. GEIS had very little impact in reducing the anti-export and profits on the local market were greater locally than on export products. As can be seen from Table 6-79 below, most of the products manufactured by this sector were excluded and the remaining received category 3 assistance. Exporters in this sector felt that the difference between Category 3 and Category 4 assistance granted was too large and motivated that a "Category 3½" bridging the two categories. They received less under GEIS than under the old Category A and Category B assistance.

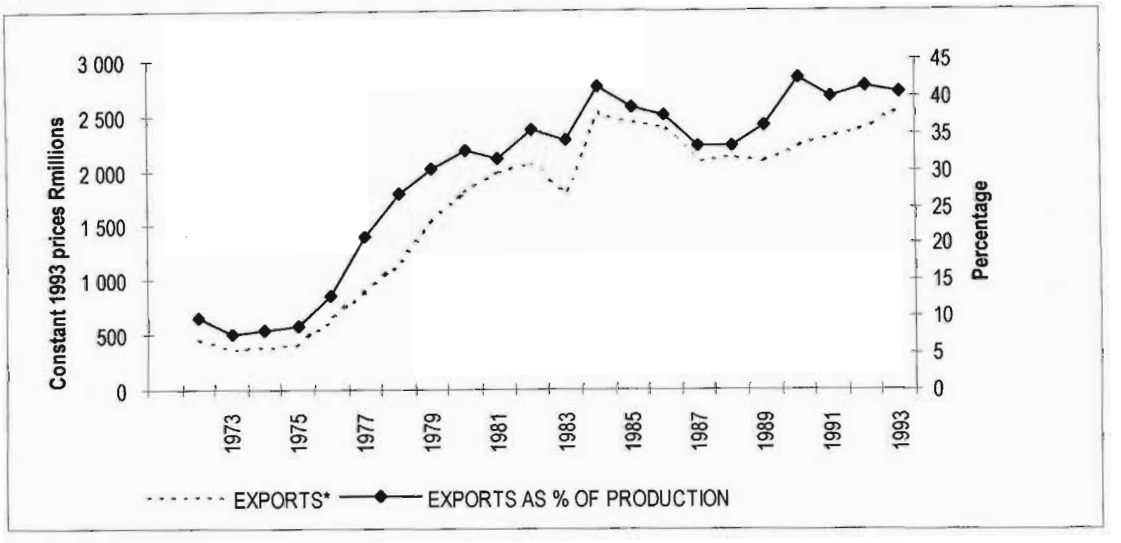
Table 6-79 GEIS and Phase VI export incentives paid in 1992

GEIS exclusions	% of tariff headings	23
	% of export value	88
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	10
	% of export value	0
Material intensive	% of tariff headings	66
	% of export value	12
Manufactured	% of tariff headings	1
	% of export value	0
Phase VI	% of tariff headings	0
	% of export value	0

Source: IDC, 1992.

6.3.26.4 Export

Figure 6-102 Exports of non-ferrous metals



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.26.5 Results of regression for non-ferrous metals

In order to determine the effect of GEIS has had on the export of the non-ferrous metal sector the following equation was estimated:

X90NONFER = 5,5493104e+08 - 45,728627*GEIS90NONFER + 16424611*REERSARB + 480749,89*ALUMPRICE(-2) - 152878,49*OECDGDP90 + 13303968*UUDEMNONFER + [AR(1)=-0,2929313,AR(4)=0,066431824]

with

X90NONFER	=	The real value of non-ferrous metal exports (R million 1990=100)
GEIS90NONFER	=	Real GEIS payments (1990=100)
REERNONFER	=	The REER for the non-ferrous metal* sector
UUDEMNONFER	=	The percentage capacity utilisation of non-ferrous metal* industry
OECDGDP90	=	The weighted index of the GDP index of the OECD countries
ALUMPRICE(-2)	=	London Metal Exchange (LME) price of aluminium sheet metal

The regression results are set out below. Figure 6-103 Residuals, actual and fitted real values for the export of non-ferrous metals below shows the actual and fitted real export figures for non-ferrous metal exports relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of non-ferrous metal exports.

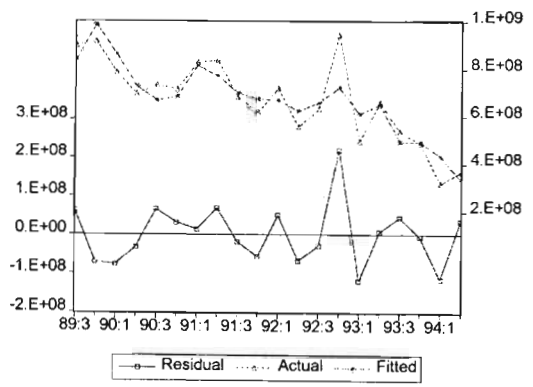
The R-squared of 0,800139 and adjusted R-squared of 0,683553 indicate that the fit is good. The F-Statistic of 6,86309 indicates with a 99 per cent confidence that at least one coefficient is not zero. The serial correlation was corrected with First Order Autoregression techniques.

LS // Dependent Variable is X90NONFER
Sample: 1989:3 1994:2
Included observations: 20 after adjusting endpoints
Convergence achieved after 7 iterations

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	5,55E+08	3,01E+09	0,184355	0,8568
GEIS90NONFER	-45,72863	34,51393	-1,324933	0,2099
REERSARB	16424611	7321944,	2,243204	0,0445
ALUMPRICE(-2)	480749,9	194822,0	2,467636	0,0296
OECDGDP90	-152878,5	154241,1	-0,991166	0,3412
UUDEMNONFER	13303968	7813146,	1,702767	0,1143
AR(1)	-0,292931	0,221825	-1,320551	0,2113
AR(4)	0,066432	0,231640	0,286789	0,7792

R-squared	0,800139	Mean dependent var	6,70E+08
Adjusted R-squared	0,683553	S.D. dependent var	1,74E+08
S.E. of regression	98140408	Akaike info criterion	37,09299
Sum squared resid	1,16E+17	Schwartz criterion	37,49129
Log likelihood	-391,3087	F-statistic	6,863090
Durbin-Watson stat	2,582567	Prob(F-statistic)	0,001990
Inverted AR Roots .45	-.07+.49i -.07 -.49i -.60		

Figure 6-103 Residuals, actual and fitted real values for the export of non-ferrous metals



GEIS again proved to be insignificant in the export of aluminium. The important market factors for aluminium are: world demand; production; and inventories. The LME price of aluminium is a determining factor with a T-Statistic of 2,467636 and confidence of 95 per cent. The REER is also significant at the 90 per cent level which confirms that price is an important factor determining the level of exports. The London Metal Exchange maintains large stock that helps to stabilise the price. Electricity is one of the major components in the cost of producing electricity. Producers in high cost areas would therefore be marginal.

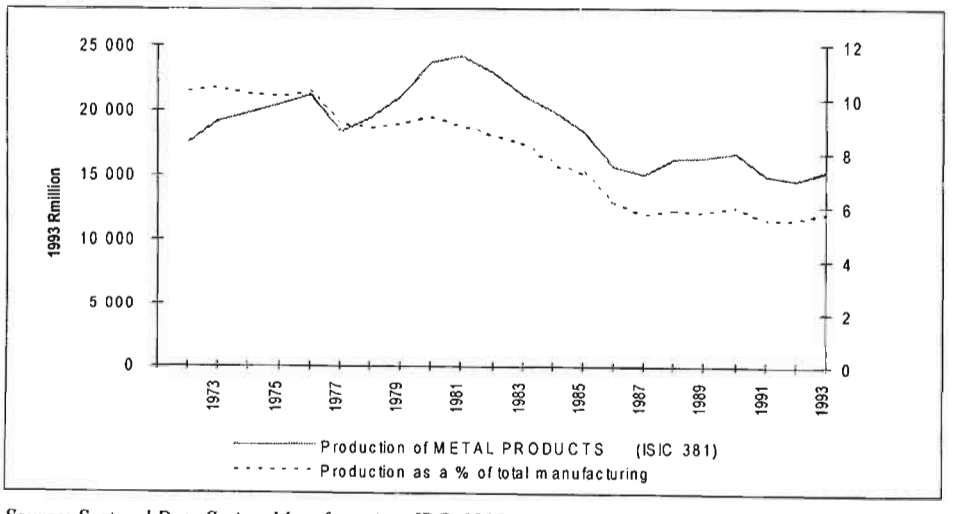
6.3.27 Metal products (SIC 381)

This Sector covers the manufacture of cutlery, hand tools and general hardware; furniture and fixtures of metal; structural metal products; shipping containers; metal cans; and other fabricated metal products.

6.3.27.1 Structure of metal products

This sector covers a number of important subsectors, nevertheless production in real terms has been declining in real terms.

Figure 6-104 Production of metal products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.27.2 International comparison

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
69	Metals manufactures, nes	130,5	10,8	3,9	0,2	6,7	0,47

6.3.27.3 Development assistance

Table 6-80 Nominal levels of protection

	Cutlery, hardware	Furniture of metal	Structural metal	Other metal products
Average nominal protection	20	25	15	15
Ad valorem (% of tariff headings))	88	100	61	75
Formula (% of tariff headings)	12	30	3	13
Import control (% of tariff headings)	2	5	16	8
Import surcharge (% of tariff headings)	94	100	100	93

Source: IDC, 1992.

Table 6-81 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Metal products	0,86	0,96	1,03	1,23
	Category B			
	1982	1983	1984	1985
Metal products	3,13	2,70	2,85	3,57

Source: Board of Trade and Industry, 1987.

Table 6-82 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Metal products	1,27	1,89	1,68	1,00	0,79	0,67	0,76	0,67	1,61

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

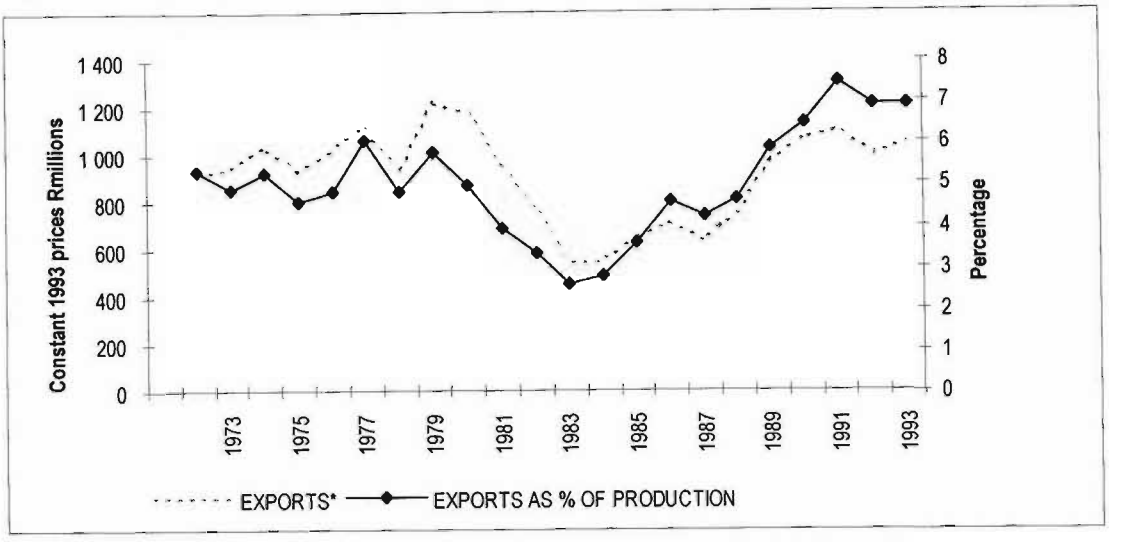
Table 6-83 GEIS and Phase VI export incentives paid in 1992

		Cutlery, hardware	Furniture of metal	Structural metal	Other metal products
GEIS exclusions	% of tariff headings	0	0	0	0
	% of export value	0	0	0	0
Primary products	% of tariff headings	0	0	0	0
	% of export value	0	0	0	0
Beneficiated primary product	% of tariff headings	0	0	0	1
	% of export value	0	0	0	0
Material intensive	% of tariff headings	4	0	6	51
	% of export value	1	0	44	38
Manufactured	% of tariff headings	92	100	94	40
	% of export value	79	100	56	19
Phase VI	% of tariff headings	4	0	0	8
	% of export value	20	0	0	43

Source: IDC, 1992.

6.3.27.4 Export

Figure 6-105 Export of metal products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-106 Export of cutlery, hand tools and general hardware

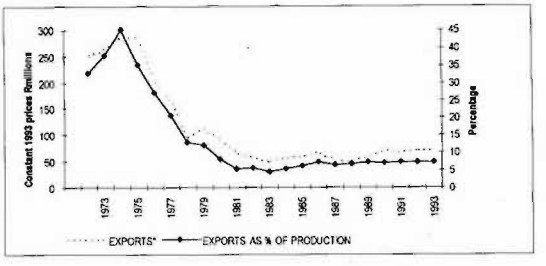
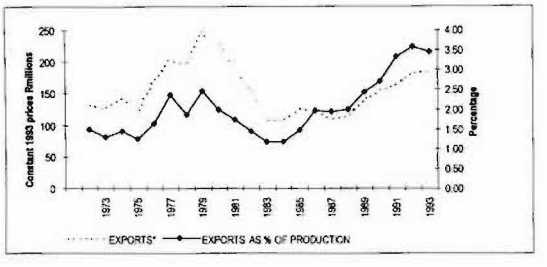


Figure 6-107 Export of structural metal products



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-108Export of furniture and fixture of metal

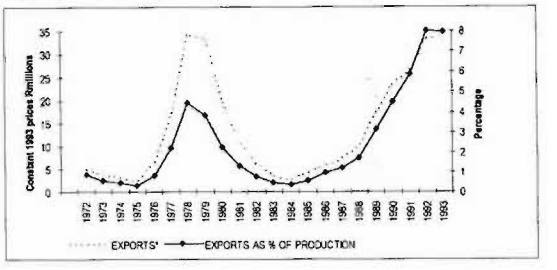
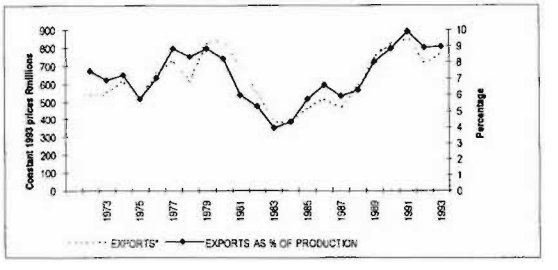


Figure 6-109 Export of other fabricated metal products



6.3.27.5 Results of regression for metal products

From the following equation, it is clear that GEIS did not have an impact on this sector as the T-statistic is not statistically significant and neither is the coefficient.

The R-squared and the F-statistic are sound and the equation is therefore statistically good. The Durbin-Watson statistic is inconclusive, at the 5 per cent level of

significance, in determining whether there is serial correlation. The Breusch-Godfrey test was then administered which indicated that there was no serial correlation.

X90MET = -6,1349007e+08 + 0,16599126*X90MET(-1) - 0,075523796*GEIS90MET + 1702348,9*REERMET - 12813962*UUDEMMET + 46690,057*OECDGDP90 - 82109406*SEAS1

LS // Dependent Variable is X90MET
Sample(adjusted): 1988:2 1994:2
Included observations: 25 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6,13E+08	3,51E+08	-1,745636	0,0979
X90MET(-1)	0,165991	0,153483	1,081495	0,2938
GEIS90MET	-0,075524	1,768332	-0,042709	0,9664
REERMET	1702349,	3219778,	0,528716	0,6035
UUDEMMET	-12813962	4385683,	-2,921771	0,0091
OECDGDP90	46690,06	20800,28	2,244685	0,0376
SEAS1	-82109406	16802539	-4,886726	0,0001

R-squared	0,723121	Mean dependent var	2,12E+08
Adjusted R-squared	0,630828	S.D. dependent var	47503313
S.E. of regression	28862784	Akaike info criterion	34,58762
Sum squared resid	1,50E+16	Schwarz criterion	34,92891
Log likelihood	-460,8188	F-statistic	7,835061
Durbin-Watson stat	1,702824	Prob(F-statistic)	0,000297

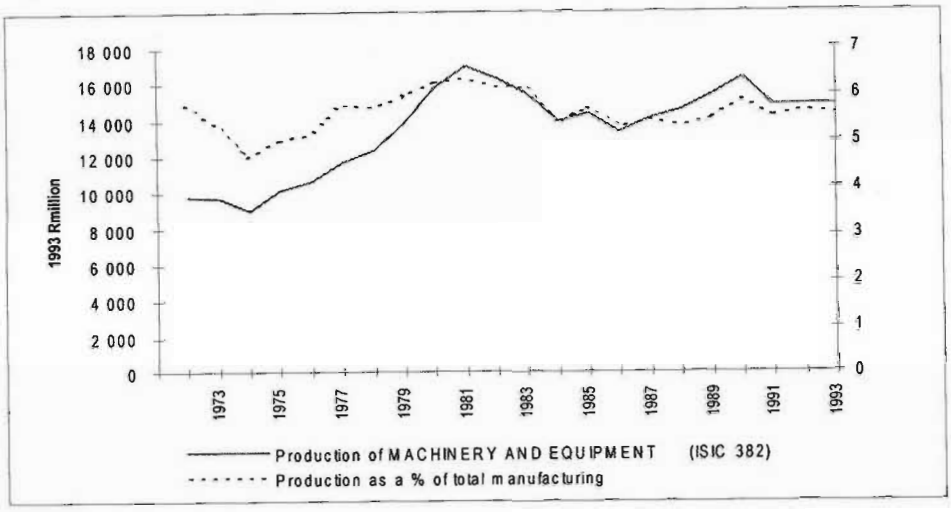
Both the OECD's GDP and the spare capacity due to lack of demand proved to be statistically significant factors influencing the level of exports, while GEIS and the REER had little if any influence. Many of the exporters in this sector sell into niche foreign markets and therefore will not be price elastic hence the low significance of GEIS and the REER. Lastly, the seasonal dummy has a significant coefficient.

6.3.28 Machinery (SIC 382)

This sector consists of a variety of non-electric machinery including engines and turbines; agricultural machinery and equipment; metal and woodworking machinery; special industrial machinery; office and accounting machinery; and other non-electric machinery.

6.3.28.1 Structure of machinery

Figure 6-110 Production of machinery and equipment



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.28.2 International comparison

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
71	Power generatng. machines	73,8	14,1	6,3	0,1	7,3	0,23
72	Special. indust. machinery	105,9	7,9	1,2	0,1	6,6	0,60
73	Metalworking machinery	13,7	-1,0	-2,4	0,0	1,4	0,38
74	General industl. mach.nes	179,3	25,0	4,1	0,1	20,1	0,49
75	Office machines, adp mach	38,1	14,2	9,3	0,0	4,5	0,06

Source: ITC (1996)

6.3.28.3 Development assistance

Table 6-84 Nominal levels of protection

	Engines and turbines	Agriculture machinery	Metal and wood working	Special industrial	Office and accounting	Other non-electrical
Average nominal protection	15	5	10	3	5	10
Ad valorem (% of tariff headings))	38	11	52	31	41	62
Formula (% of tariff headings)	0	2	3	3	1	12
Import control (% of tariff headings)	0	37	15	2	0	8
Import surcharge (% of tariff headings)	96	67	100	95	99	98

Source: IDC, 1992.

Nominal protection in this sector was low. Engines and turbines attracted the highest nominal protection at 15 per cent, which was lower than the industry average of 20 per cent. The other sub sectors attracted considerably less.

Table 6-85 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Machinery and equip	1,07	1,99	1,80	1,00	0,81	0,54	0,60	0,54	1,33

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

The effective protection coefficient on domestic sales is only 1,07. GEIS was significant in reducing the anti-export bias. The coefficient dropped to such a level that the sector enjoys a pro-export bias. However, the same result could be achieved had the industry been able to access raw material at world prices.

Table 6-86 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Machinery (excl. elec.)	0,70	0,42	0,49	0,34
	Category B			
	1982	1983	1984	1985
Machinery (excl. elec.)	1,91	1,66	2,24	2,12

Source: Board of Trade and Industry, 1987.

All the subsectors except for engines and turbines and other non-electrical machinery enjoyed a maximum benefit under GEIS. Therefore Engines and turbines, and other non-electrical enjoyed either category 4 or Phase VI assistance and hence enjoyed at least 18 per cent benefit on the fob export value.

Table 6-87 GEIS and Phase VI export incentives paid in 1992

		Engines and turbines	Agricultural machinery	Metal and wood working	Special industrial	Office and accounting	Other non-electrical
GEIS exclusions	% of tariff headings	0	0	0	0	0	0
	% of export value	0	0	0	0	0	0
Primary products	% of tariff headings	0	0	0	0	0	0
	% of export value	0	0	0	0	0	0
Beneficiated primary product	% of tariff headings	0	0	0	0	0	0
	% of export value	0	0	0	0	0	0
Material intensive	% of tariff headings	0	0	0	0	0	2
	% of export value	0	0	0	0	0	0
Manufactured	% of tariff headings	90	100	100	100	100	90
	% of export value	10	100	100	100	100	83
Phase VI	% of tariff headings	32	0	0	0	0	8
	% of export value	68	0	0	0	0	17

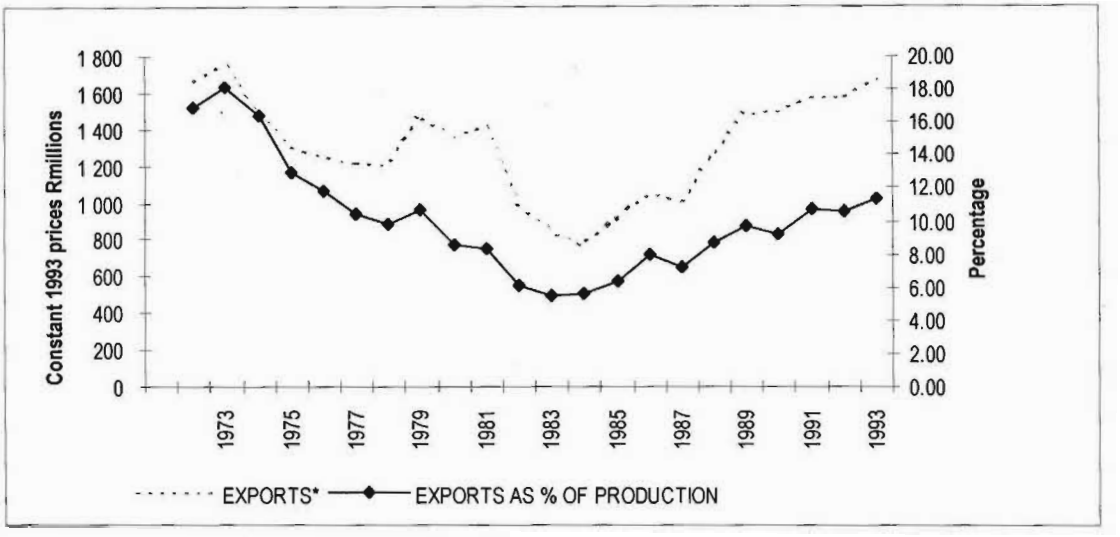
Source: IDC, 1992.

6.3.28.4 Export

This sector developed largely as a result of South Africa's agriculture and mining. Many products were made in South Africa under licence and had restrictions placed on their export by the licensing company. The main destinations of this sector's

exports are Southern Africa, Germany, USA, and the UK. South America is beginning to import more mining equipment.

Figure 6-111 Exports of machinery and equipment



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-112 Engines and turbines

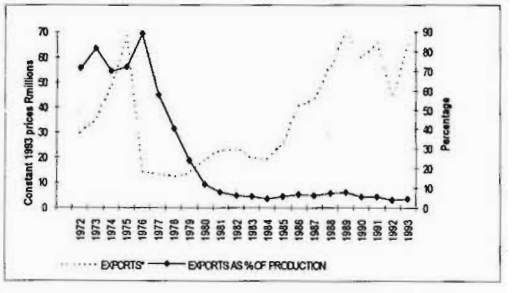


Figure 6-113 Agricultural machinery and equipment

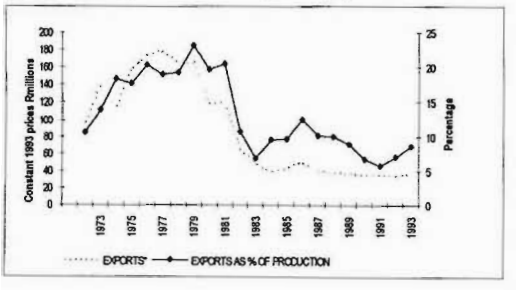


Figure 6-114 Exports of metal and woodworking machinery

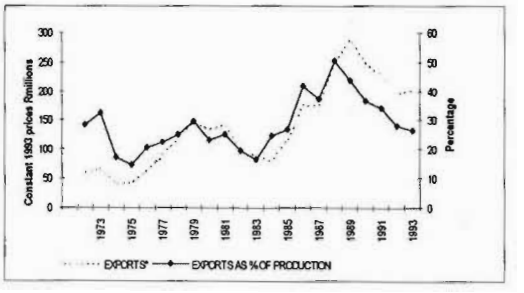


Figure 6-115 Exports of special industrial machinery

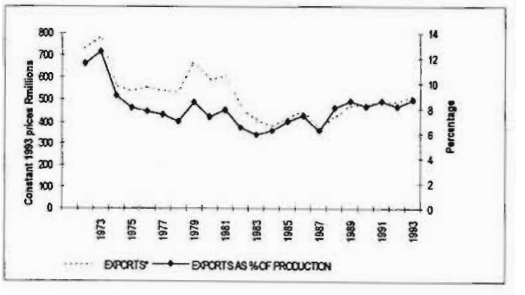
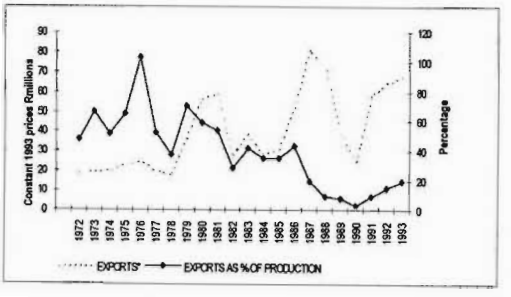
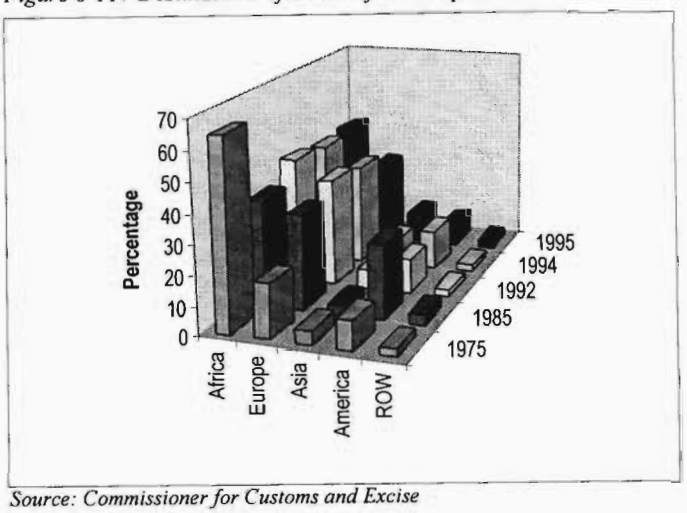


Figure 6-116 Exports of office and accounting machinery



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-117 Destinations of South African exports



Source: Commissioner for Customs and Excise

6.3.28.5 Results of regression for machinery and equipment

In order to determine the effect GEIS has had on the export of the machinery and equipment sector, the following export function was estimated:

LX90MACH = -2,6820052 - 0,0087520336*LGEIS90MACH + 0,032047563*LUUDEMMACH - 0,047487492*LREERMACH + 3,1177069*LOECDGDP90 - 0,93075625*LSALEAD - 0,11349657*SEAS1 + 0,053092798*SEAS4

with:

X90MACH	=	The real value of machinery and equipment exports (R million 1990=100)
GEIS90 MACH	=	Real GEIS payments (1990=100)
REER MACH	=	The REER for the machinery and equipment sector
UUDEM MACH	=	The percentage unutilised capacity of machinery and equipment due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

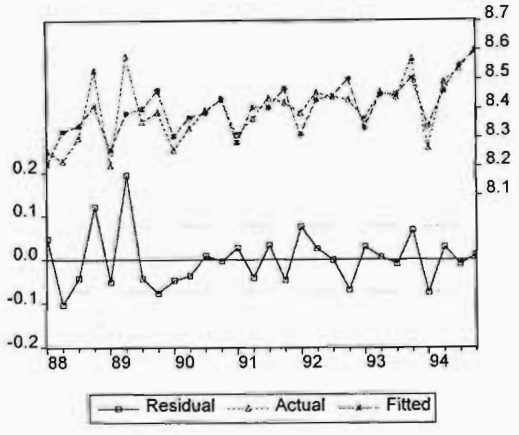
The regression results are set out below. Figure 6-118 below shows the actual and fitted real export figures for machinery relative to the right hand scale, while the residual is given on the left hand scale. As the R-squared is only 0,6549 and the adjusted R-squared 0,534123, the function gives a fair representation of machinery exports. The F-statistic is 5,422176 and therefore at the 99 per cent confidence level we can conclude that at least one of the variables is not zero. The Durbin-Watson statistic is 2,667419 and as the dependent variable is not lagged, it can be assumed that there is no serial correlation.

LS // Dependent Variable is LX90MACH
Included observations: 28

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-2,682005	9,662522	-0,277568	0,7842
LGEIS90MACH	-0,008752	0,009499	-0,921388	0,3678
LUUDEMMACH	0,032048	0,196450	0,163134	0,8721
LREERMACH	-0,047487	0,057369	-0,827748	0,4176
LOECDGDP90	3,117707	1,825260	1,708089	0,1031
LSALEAD	-0,930756	1,912476	-0,486676	0,6318
SEAS1	-0,113497	0,035258	-3,218996	0,0043
SEAS4	0,053093	0,034780	1,526513	0,1425

R-squared	0,654906	Mean dependent var	8,398516
Adjusted R-squared	0,534123	S.D. dependent var	0,108678
S.E. of regression	0,074178	Akaike info criterion	-4,967615
Sum squared resid	0,110048	Schwartz criterion	-4,586985
Log likelihood	37,81633	F-statistic	5,422176
Durbin-Watson stat	2,667419	Prob(F-statistic)	0,001330

Figure 6-118Actual and fitted real export figures for machinery



Besides the seasonal dummy variable, none of the other variables was statistically significant above the 95 per cent level. At the 90 per cent level, the OECD's GDP is significant. As the log variable is high, it can be concluded that the OECD's GDP was consequential.

6.3.29 Electrical machinery (SIC383)

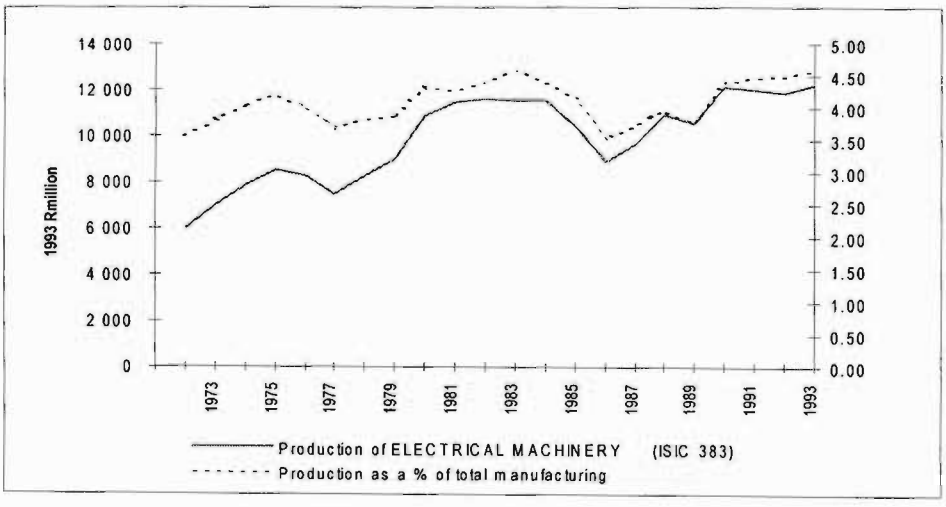
This sector covers electrical industrial machinery; radio, television and communication equipment; electric appliances and housewares; switches; globes; tubes; lamps; wiring devices and conduits; and electrical insulators.

6.3.29.1 Structure of the electrical machinery sector

The electrical machinery industry grew to provide the domestic market, especially the mining sector. For low technology, items there are a number of small firms involved. However, the world electrical machinery industry is dominated by a small number of large producers. Three South African electrical engineering groups dominate the electrical distribution market: Powertech (owned by Altech and part of Anglo American Corp.), GEC (part of Barlow Rand through Reunert), and Siemens. (Goode, 1995) In the appliances subsector there are only a few major dominant players. This is probably because consumers prefer products with well-known brand names. (Baumann, 1995)

Although it is an important sector in the South African industry, supplying components needed for downstream manufacture comprises only 4,5 per cent of total South African manufacture.

Figure 6-119 Production of electrical equipment



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.29.2 International comparison

This sector did not have a revealed comparative advantage in 1994. South Africa has not performed well in this sector relative to other countries, both developing and developed countries. Between 1960 and 1987, the rate of growth of South African exports was below both developing and developed countries. The trend of exports from developing countries was five times than that achieved by South Africa. (Goode, 1995)

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
76	Telecomm. sound equip etc	28,0	34,5	8,6	0,0	23,8	0,02
77	Elec mch appar, parts, nes	97,3	19,2	11,6	0,0	6,8	0,05

Source: ITC, 1996.

The volume of exports since 1990 to 1994 has grown faster than the world trend. The sector therefore has a positive competitiveness indicator.

6.3.29.3 Development assistance

The IDC calculated the average nominal protection as at 15 May 1992. The average for the manufacturing industry was 20 per cent. The nominal average protection rate was therefore on par or lower than the industry average.

Table 6-88 Nominal levels of protection

	Industrial machinery	Radio, TV, communication	Appliances	Other electrical apparatus
Average nominal protection	15	20	20	15
Ad valorem (% of tariff headings))	84	74	93	86
Formula (% of tariff headings)	10	20	7	18
Import control (% of tariff headings)	13	15	2	19
Import surcharge (% of tariff headings)	100	96	98	99

Source: IDC, 1992.

Belli *et al* (1993) indicate that the anti-export bias has been neutralised by GEIS and would not be a factor if inputs were available at world prices.

Table 6-89 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Electrical machinery	1,22	1,67	1,52	1,00	0,85	0,73	0,80	0,73	1,43

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: IDC (1990)

The Board of Trade and Industry (RSA, 1987) found that exports of electrical machinery received a nominal assistance of 14 per cent. The effective rate of assistance was 28 per cent.

Since 1990, this sector has enjoyed mostly category 4 assistance. A few products were excluded and other enjoyed Phase VI benefits.

Table 6-90 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A (R million)			
	1982	1983	1984	1985
Electric machinery	0,54	0,54	0,37	0,47
	Category B (R million)			
	1982	1983	1984	1985
Electric machinery	1,03	0,97	0,72	0,76

Source: Board of Trade and Industry, 1987.

Table 6-91 GEIS and Phase VI export incentives paid in 1992

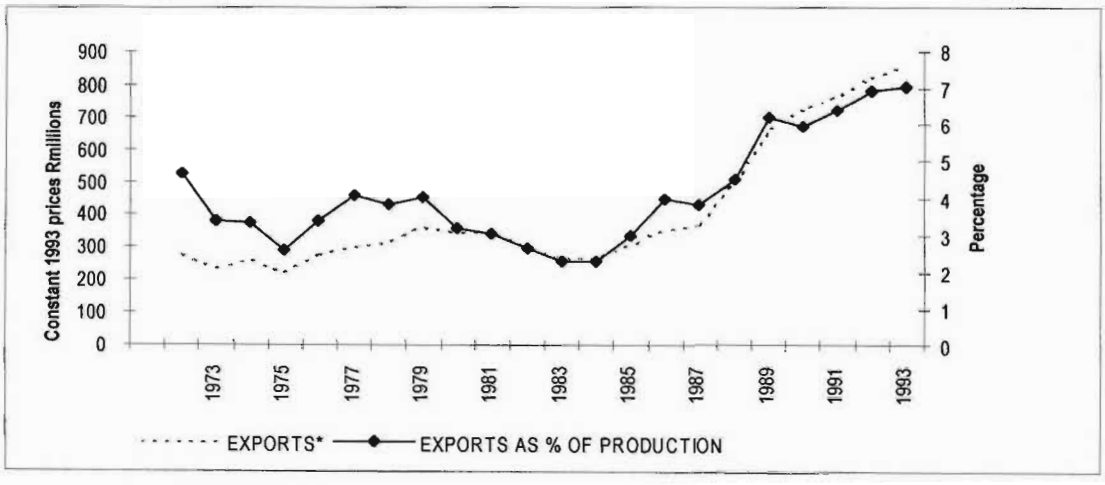
		Industrial machinery	Radio, TV Communication	Appliances	Other apparatus
GEIS exclusions	% of tariff headings	0	9	0	0
	% of export value	0	26	0	0
Primary products	% of tariff headings	0	0	0	0
	% of export value	0	0	0	0
Beneficiated primary product	% of tariff headings	0	0	0	0
	% of export value	0	0	0	0
Material intensive	% of tariff headings	0	0	0	2
	% of export value	0	0	0	1
Manufactured	% of tariff headings	91	88	100	88
	% of export value	68	72	100	92
Phase VI	% of tariff headings	9	3	0	10
	% of export value	32	2	0	7

Source: IDC, 1992.

6.3.29.4 Export

In broad terms, this sector's exports have suffered long-term decline since the mid-1970s. However exports recovered in 1985 and have improved consistently since then. The sector has become more export oriented and exported almost eight per cent of its production in 1993.

Figure 6-120 Export of electrical machinery



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Figure 6-121 Exports of electrical machinery

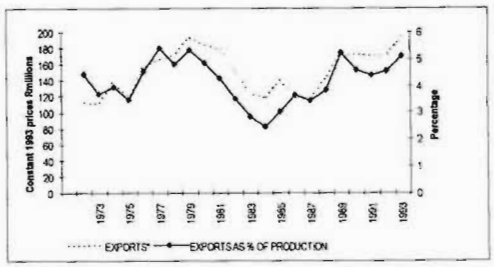
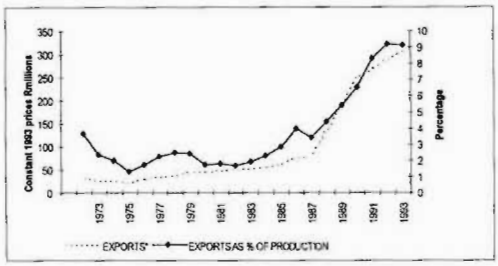


Figure 6-122 Exports of radio, television, and communications equipment



Source: Sectoral Data Series: Manufacturing, IDC, 1995

Figure 6-123 Exports of electrical appliances and housewares

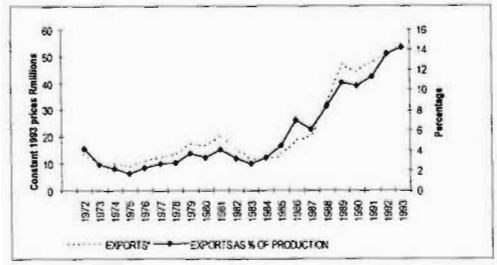
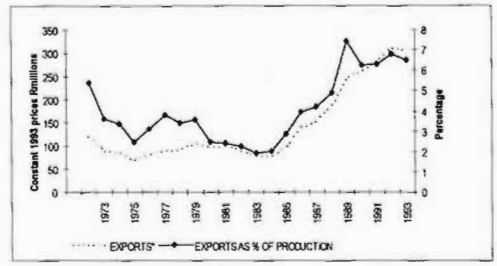


Figure 6-124 Exports of other electrical apparatus



Exports of electrical machinery were high in the early 1970s. This was probably due the Cobora Bassa hydroelectric project in Mozambique that required apparatus and supplies. Since 1985, the exports of all the subsectors increased both in real values and as a percentage of production, indicating the industry has become more outward oriented.

6.3.29.5 Results of regression for electrical machinery

In order to determine the effect GEIS has had on the export of the electrical machinery sector, the following export function was estimated:

X90EMACH = -6,1048593e+08 + 18,841698*GEIS90EMACH + 579427,5*UUDEMEMACH + 337374,43*REEREMACH + 38572,683*OECDGDP90 + 78929113*DUMMYAB +[AR(1)=-0,46287724]

with:

X90EMACH	=	The real value of electrical machinery exports (R million 1990=100)
GEIS90 EMACH	=	Real GEIS payments (1990=100)
REER EMACH	=	The REER for the electrical machinery sector
UUDEM EMACH	=	The percentage unutilised capacity of electrical machinery due to lack of demand
OECDGDP90	=	The weighted index of the GDP index of the OECD countries

The regression results are set out below.

Figure 6-125 below shows the actual and fitted real export figures for electrical machinery relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of electrical machinery exports. Both the R-squared and F-statistic are in acceptable ranges. Serial correlation was corrected using First Order Autoregression techniques.

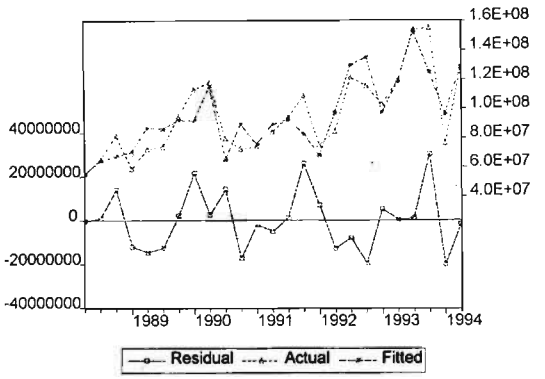
LS // Dependent Variable is X90EMACH
Sample: 1988:2 1994:2
Included observations: 25 after adjusting endpoints. Convergence achieved after seven iterations

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-6,10E+08	1,44E+08	-4,244060	0,0005
GEIS90EMACH	18,84170	3,361002	5,605976	0,0000
REEREMACH	337374,4	1139978,	0,295948	0,7707
UUDEMEMACH	579427,5	1068007,	0,542531	0,5941
OECDGDP90	38572,68	9722,615	3,967316	0,0009
DUMMYAB	78929113	14429063	5,470148	0,0000
AR(1)	-0,462877	0,222816	-2,077393	0,0524

R-squared	0,756663	Mean dependent var	94918544
Adjusted R-squared	0,675551	S.D. dependent var	27427219
S.E. of regression	15622654	Akaike info criterion	33,35996
Sum squared resid	4,39E+15	Schwartz criterion	33,70125
Log likelihood	-445,4730	F-statistic	9,328605
Durbin-Watson stat	2,070116	Prob(F-statistic)	0,000100

Inverted AR Roots -.46

Figure 6-125 Residuals, actual and fitted real values for the export of electrical machinery and equipment



Both the old Categories A and B incentive scheme and GEIS are statistically significant and have had a positive influence on the sector's export performance. The OECD's GDP is also statistically significant. This is one of the few sectors in which GEIS has had an influence. The T-statistics are strong and indicate that the coefficients are true at the 99 per cent confidence level. Since the Category A and Category B too were significant, it can be concluded that support measures have not had a sustainable influence on the export development and the hypothesis that infants will always be infants is true. New measures must therefore be used to maintain the level of exports achieved using GEIS, and at the same time making the giving the sector a sustainable competitive edge.

Scerri (1985:115) pointed out that in 1983 this sector spends more than any of the any other sectors on research and development (R&D). South African exporters have therefore developed niche products that have proved to be successful in the international market place. Although much of the R&D took place in government laboratories, the Support Programme for the Electronics Industry (SPEI) also has played a role. Exporters such as ImproTech,

winners of the 1995 Presidents Award for Export Achievement, benefited from the scheme. Other manufacturers have also achieved export successes but preferred to remain less visible because of the sensitivity of the products and markets in which they operate. It would be difficult to evaluate the success of the SPEI; firstly because for industrial reasons the beneficiaries of the scheme and the degree of assistance until recently was kept secret, and secondly due to the nature of the research, the amounts spent would have to be amortised over a period, which would require knowledge of the research and the marketing potential.

6.3.30 Motor vehicles, parts and accessories (SIC 384)

This sector covers the manufacture and assembling of motor vehicles, caravans, trailers, as well as the manufacture of motor vehicle parts and accessories.

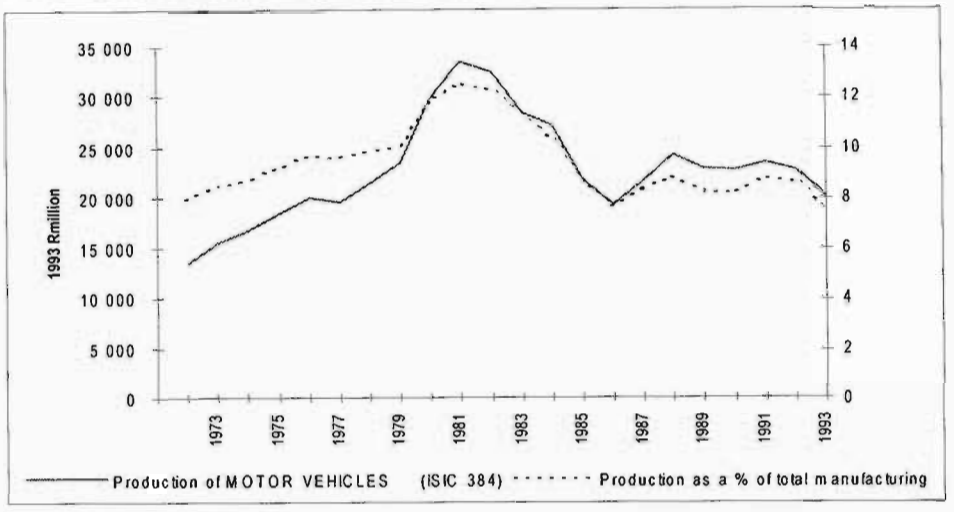
As with most of the development of South African industry, it is important to analysis the impact of protection. There have been a series of local content programmes that have been adopted. High duties were placed on completely built units. This combined with a rapidly growing local market encouraged foreign manufacturers to set up assembly plants. Ford and General Motors set up production in Port Elizabeth in the 1920s. Growth was rapid and in 1958 107 000 units were assembled in South Africa. The local content was only 20 per cent.

The first local content programme was introduced in 1961. Manufacturers were required to source peripheral items such as tyres, batteries, and trims locally. Local content rose rapidly and by 1971 52 per cent by mass could be considered having been produced locally. Rapid growth was accompanied by a proliferation of assemblers and the development of low volume high mass components.

Phase III of the local content was still based on the mass concept and the aim of this phase was to increase the mass to 66 per cent by 1977. Phase IV was a consolidation period with no additional requirements. Phase V required that the local content of light commercial vehicle increase from 50 per cent in 1980 to 66 per cent in 1982. The motivating factor of these phases was, in common with all import substitution policies, the development of industry and to save foreign exchange. Phase V had two main deficiencies: "...a tendency to produce low cost, low technology components which are unremunerative to export and produced in uneconomic volumes so locking the industry into a low volume, high cost production structure; and a very high import bill as source companies tended to load the price of components they supplied to local producers. As they were supplying largely high technology

components which the local industry did not produce, this tended to raise prices as there was no incentive to produce low mass, high cost components locally" (BTI, 1992)

Figure 6-126 Production of motor vehicle and components



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

Phase VI was introduced to promote investment, job creation and growth, improve productivity, minimise price increases and maintain a high level of competition. (BTI, 1989)[22] This move represented both the first move away from a mass based development system to one based on value and included export promotional elements.

Exports under Phase VI received a subsidy in the form of a rebate of the Excise Duty of 50 per cent. All exports were channelled through the Original Equipment Manufacturers (OEM). Component manufacturers had to negotiate the percentage of the incentive with one of the OEMs. The subsidy paid to the motor industry was therefore higher than that paid to other manufacturers under GEIS. The motor industry therefore operated in a neutral environment with a slight bias toward exports.

Table 6-92 Proliferation under various phases of the local content programmes

Phase	Number of assemblers	Number of models
Phase I (1960)	8	24
Phase II (1970)	16	43
Phase III (1976)	13	39
Phase V (1987)	7	20
Phase VI (1993)	7	34

Source: Black 1994 (Boxall (1989))

[22] BTI 1989 : Board of Trade and Industry 1989. Investigation into a Structural Adjustment Programme for the Industries Manufacturing Motor Vehicles and Automotive components: Phase VI of the Local Content Programme, Report No 2767. Pretoria Government Printer.

In summary, therefore, the South African motor industry has suffered from a number of factors. The fact that there was a number of new goal posts set in the various Phases did not contribute to long-term stability. Due to the excessive protection, there has been little incentive to keep up to date with modern global trends. Protection was not selective. It therefore resulted in the proliferation of models, none of which was able to achieve economies of scale, which in turn resulted in a high cost structure.

6.3.30.1 International comparison

SITC	Product	Imports from SACU 1994 US$ m	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
78	Road vehicles	198,4	29,3	4,4	0,1	23,8	0,20
79	Other. transport equipment	38,4	9,3	2,3	0,1	6,9	0,43

Source: ITC, 1996.

Because of licensing agreements imposed on the industry by European, US, and Japanese parents, the market share is low. This, together with other inefficiencies, such as scale of production, has resulted in a low revealed comparative advantage. However due to Phase VI South Africa's exports have grown at a rapid rate - almost 30 per cent compared to the world trend from 1990 to 1994.

6.3.30.2 Development assistance

Table 6-93 Nominal levels of protection

Average nominal protection	40
Ad valorem (% of tariff headings))	87
Formula (% of tariff headings)	12
Import control (% of tariff headings)	0
Import surcharge (% of tariff headings)	97

Source: IDC, 1992.

The nominal protection afforded the motor industry was far higher than the average for the total manufacturing industry at 15 May 1992. This has resulted in an anti-export bias that even with GEIS assistance still exists.

Table 6-94 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Motor vehicle	1,46	1,23	-0,77	1,00	-1,00	1,19	-1,91	1,19	-1,46

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.
Source: IDC (1990)

Ninety per cent of this sector qualifies for assistance under Phase VI.

Table 6-95 GEIS and Phase VI export incentives paid in 1992

GEIS exclusions	% of tariff headings	0
	% of export value	0
Primary products	% of tariff headings	0
	% of export value	0
Beneficiated primary product	% of tariff headings	0
	% of export value	0
Material intensive	% of tariff headings	1
	% of export value	0
Manufactured	% of tariff headings	41
	% of export value	10
Phase VI	% of tariff headings	58
	% of export value	90

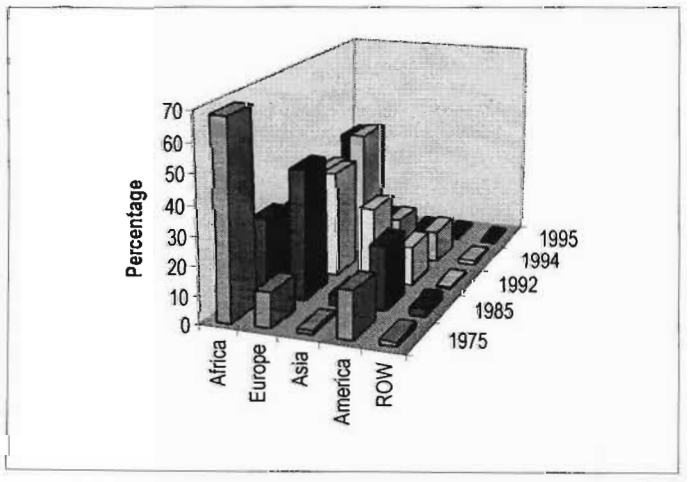
Source: IDC, 1992.

6.3.30.3 Export

In the 1970s the industry exported to Africa, as this would seem to be a natural market. This was in many cases the only market permitted by the parents. As can be seen in Figure 6-127 below the proportion of exports to this region declined in the 1980s. This was due partly to political reasons, in that African countries did not want to be seen to be doing business with South Africa, and economic reasons.

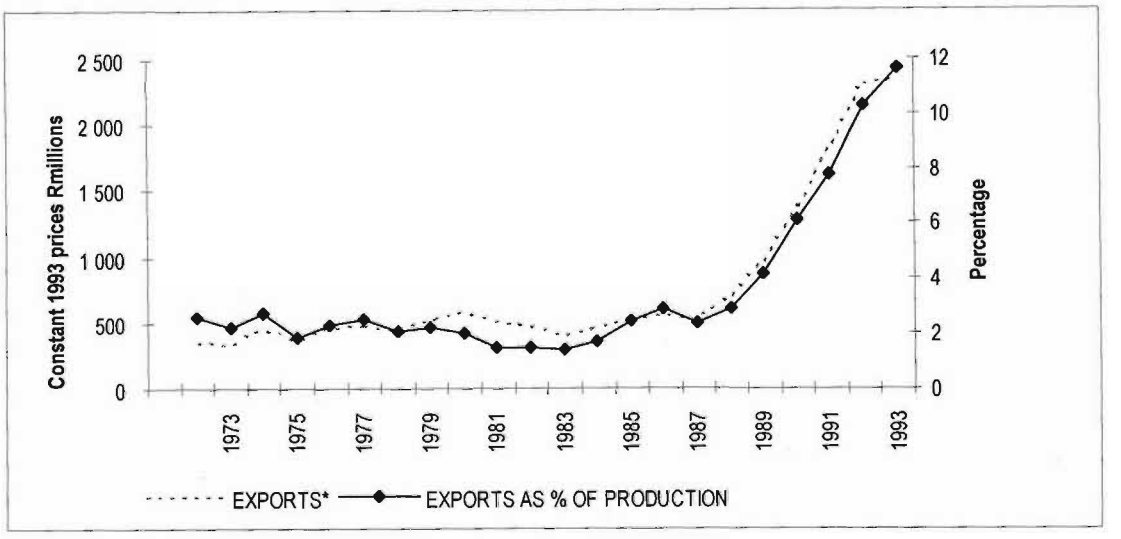
With the introduction of Phase VI, it became important to export and parent companies started looking at buying more components from South Africa. Consequently, the share of the industries exports to Europe increased.

Figure 6-127 Destination of South African exports



Source: Commissioner for Customs and Excise

Figure 6-128 Exports of motor vehicles and motor vehicle parts



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.30.4 Results of regression for motor vehicles

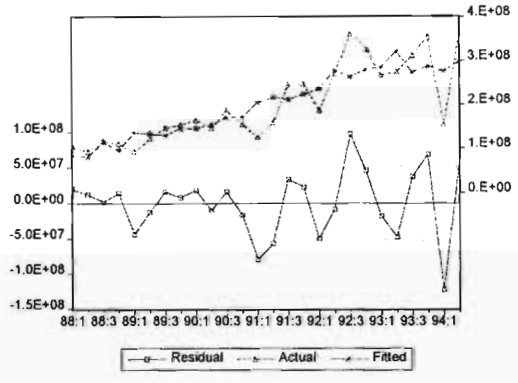
The following regression was estimated. However since most of the industry qualified for Phase VI assistance, the GEIS variable is meaningless. Quarterly Phase VI data is not available and therefore it was not possible to estimate a regression with Phase VI as a variable. However, both spare capacity and the OECD's GDP are significant at 95 per cent and 99 per cent levels respectively. The assistance levels provided to motor vehicle manufacturers were higher than even Category 4 GEIS payments. Even if it is assumed that Phase VI contributed to the level of exports, it did not contribute to a sustainable level of exports which could be maintained without GEIS. The sector's spare capacity and South Africa's trading partner's income levels are important components of the level of exports. Strategies should therefore be devised to enhance the manufacturing capacity and create spare capacity and an industry that will be able to compete internationally without other support measures.

LS // Dependent Variable is X90VEH
Sample: 1988:1 1994:2
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-1,39E+09	3,26E+08	-4,279404	0,0003
GEIS90VEH	-0,140928	1,664484	-0,084668	0,9333
REERVEH	1046426,	2195354,	0,476655	0,6385
UUDEMVEH	8623595,	4120182,	2,093013	0,0487
OECDGDP90	87593,46	27130,97	3,228542	0,0040

R-squared	0,712469	Mean dependent var	2,00E+08
Adjusted R-squared	0,657701	S.D. dependent var	87988559
S.E. of regression	51478864	Akaike info criterion	35,68441
Sum squared resid	5,57E+16	Schwartz criterion	35,92635
Log likelihood-	495,7897	F-statistic	13,00890
Durbin-Watson stat	2,174522	Prob(F-statistic)	0,000018

Figure 6-129 Residuals, actual and fitted real values for the export of motor vehicles



Exports in the motor vehicle industry would seem to depend on the amount of spare capacity available and the demand of the OECD countries. Typically, South African manufacturers would produce a wide range of varied components at relatively low volumes especially fairly labour-intensive industries. Thus, while unable to compete with OECD manufacturers in the manufacture of high volume components, South African manufacturers can compete in the niche markets.

6.3.30.5 Factors hindering exports

Built up vehicles are highly protected as can be seen from Table 6-94 above. Prices of vehicles are much higher than in other countries.

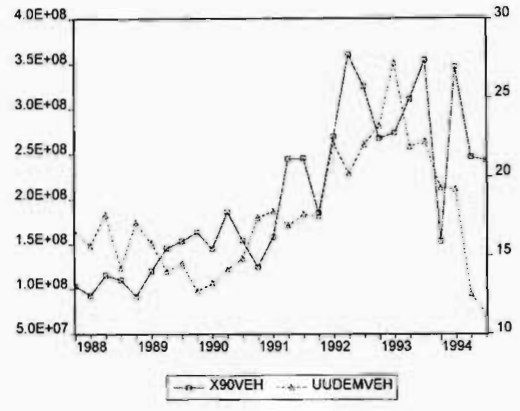
Economies of scale

South Africa manufactures a wide range of vehicles that cannot be sustained in such a small market. The US manufactures almost 200 000 per model. Even Brazil manufactures 25 000 vehicles to model, while South Africa averages 6 000 vehicles per model. This raise costs in the motor assembly plants and affects the component manufacturers.

Low capacity utilisation

Figure 6-130 Spare capacity due to lack of demand. Many assemblers have spare capacity, which if utilised would contribute a greater share to the firm's fixed costs and therefore lead to greater profits and lower unit costs.

Figure 6-130 Spare capacity due to lack of demand



Licensing agreements

"Virtually all South African component firms are dependent on foreign licensers and many of these agreements regulate exports" (Black, 1994). Although there is not much that can be done to remove this restriction, it does seem as though South Africa is being seen as the natural supplier for African markets. And as competitive niches appear, foreign parents are buying more for their own plants. Mercedes Benz have even begun to investigate having their owner's manuals printed in South Africa.

Raw materials

South African manufacturers suffer from excessive protection. The prices below indicate the extent to which South Africa suffers when using locally made raw material inputs. Black (1994) estimated that the cost difference in the price of aluminium resulted in a 3,7 per cent increase in the car's price.

Table 6-96 Comparative raw material prices. South Africa price compared to international price (R/ton)

	South African price	Import price	Premium
Sheet metal	2800	1980	41,4%
Aluminium	5300	3491	58,4%
Rubber	4750	3030	56,8%

Source: Black (1994)

Although manufacturers can use Rebates and Drawbacks and import raw materials for exports, the administrative procedures and the fact that such a small proportion of exports are destined for exports militate against this option.

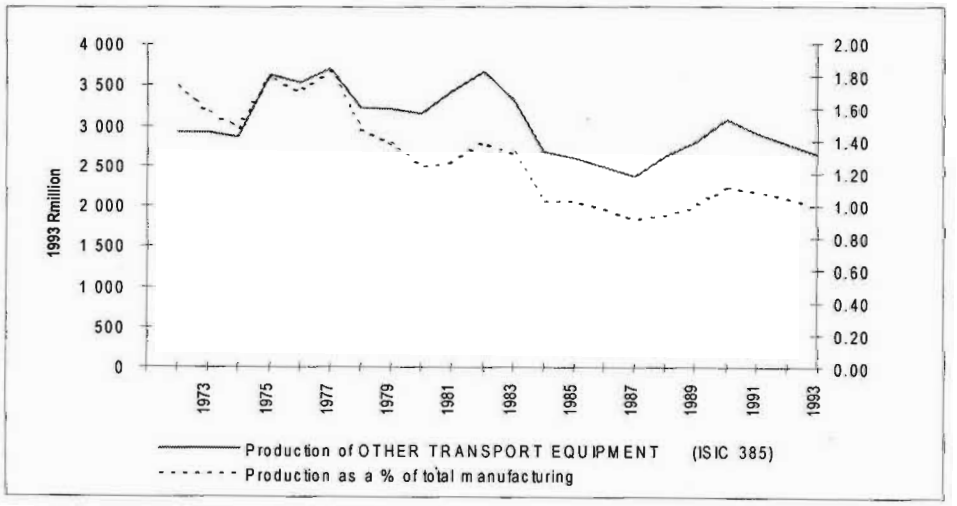
There are various other production problems such as low productivity, quality etc. These problems are not only present in South Africa and can be sorted out by management.

6.3.31 Transport equipment (SIC 385)

This sector consists of the building, repair and alteration of locomotives, coaches and other railway coaches, wagons or cars and the manufacture of ships, barges, aeroplanes, gliders, scooters, bicycles, as well as other transport equipment.

6.3.31.1 Structure of industry

Figure 6-131 Production of transport equipment



Source: Sectoral Data Series: Manufacturing, IDC, 1995.

6.3.31.2 International comparison

SITC	Product	Imports from SACU 1994 US$	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	CI %	RCA
78	Road vehicles	198,4	29,3	4,4	0,1	23,8	0,20
79	Other. transport equipment	38,4	9,3	2,3	0,1	6,9	0,43

6.3.31.3 Development assistance

Table 6-97 Nominal levels of protection

	Railroad equipment	Other transport
Average nominal protection	5	20
Ad valorem (% of tariff headings)	74	74
Formula (% of tariff headings)	1	5
Import control (% of tariff headings)	29	11
Import surcharge (% of tariff headings)	99	79

Source: IDC, 1992.

Compared with the South African manufacturing sector, railroad equipment received minimal nominal protection, while the "other transport" subsector received the same as the South African manufacturing sector. Consequently, the effective protection coefficient on domestic sales is low. GEIS effectively reduces the anti-export bias and in fact a pro-export bias is created. However, a more efficient method of achieving this would be to allow manufacturers to buy inputs at international prices.

Table 6-98 Protection and anti-export bias

	EPC	Effective protection on exports				Anti-export bias			
	domestic	with GEIS		without GEIS		with GEIS		without GEIS	
Sector	sales	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)	(lw)	(ld)
Other transport	1,02	2,20	2,05	1,00	0,85	0,47	0,50	0,47	1,21

Note: lw indicates that value was calculated assuming that inputs are purchased at world prices. ld indicates that values added was calculated at assuming that inputs are purchased at domestic prices.

Source: Belli (1993) and IDC (1990)

Table 6-99 Total Category A and Category B assistance: 1982 to 1985

Sector	Category A			
	1982	1983	1984	1985
Transport equipment	6,47	7,65	6,75	4,90
	Category B			
	1982	1983	1984	1985
Transport equipment	1,54	1,09	1,03	1,40

Source: Board of Trade and Industry, 1987.

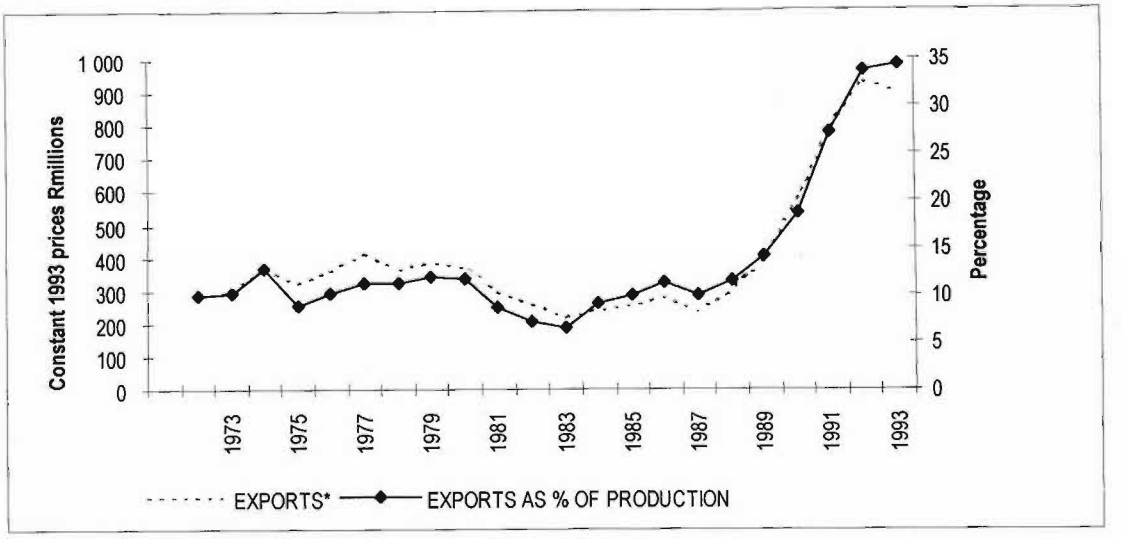
Table 6-100 GEIS and Phase VI export incentives paid in 1992

		Railroad equipment	Other transport
GEIS exclusions	% of tariff headings	0	0
	% of export value	0	0
Primary products	% of tariff headings	0	0
	% of export value	0	0
Beneficiated primary product	% of tariff headings	0	0
	% of export value	0	0
Material intensive	% of tariff headings	0	0
	% of export value	0	0
Manufactured	% of tariff headings	100	100
	% of export value	100	100
Phase VI	% of tariff headings	0	0
	% of export value	0	0

Source: IDC, 1992.

6.3.31.4 Export

Figure 6-132 Export of transport equipment



6.3.31.5 Results of regression for the transport sector

In order to determine the effect GEIS has had on the export of the transport sector, the following export function was estimated:

LXMANTRANS = -88,771117 - 0,17405937*LGEISXTRANS + 1,1733301*LCAPUTTRANS + 0,13730208*LREERTRANS + 20,918604*LOECDGDP90 + [AR(1)=-0,010328708,AR(4)=-0,65324511]

with:

LX90TRANS	=	The log of the real value of transport equipment exports (R million 1990=100)
LGEIS90 TRANS	=	The log of the real GEIS payments (1990=100)
LREER TRANS	=	The log of the REER for the transport sector
LUUDEM TRANS	=	The log of the percentage unutilised capacity of transport sector due to lack of demand
LOECDGDP90	=	The log of the weighted index of the GDP index of the OECD countries

The regression results are set out below. Figure 6-133 below shows the actual and fitted real export figures for the transport sector relative to the right hand scale, while the residual is given on the left hand scale. The function gives a good representation of transport exports.

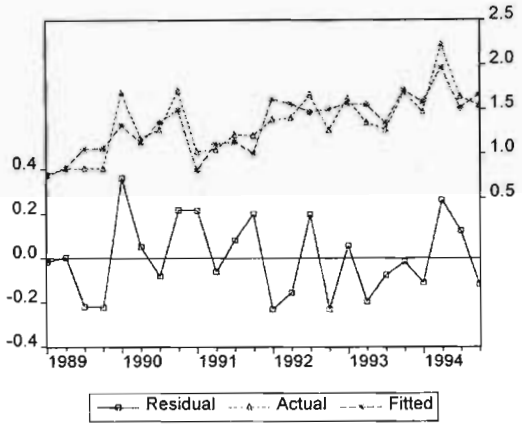
LS // Dependent Variable is LXMANTRANS
Sample: 1989:1 1994:4
Included observations: 24 after adjusting endpoints Convergence achieved after 5 iterations

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-88,77112	13,68451	-6,486980	0,0000
LGEISXTRANS	-0,174059	0,096206	-1,809240	0,0881
LCAPUTTRANS	1,173330	0,902689	1,299816	0,2110
LREERTRANS	0,137302	0,093399	1,470056	0,1598
LOECDGDP90	20,91860	2,954083	7,081251	0,0000
AR(1)	-0,010329	0,232041	-0,044512	0,9650
AR(4)	-0,653245	0,216971	-3,010755	0,0079

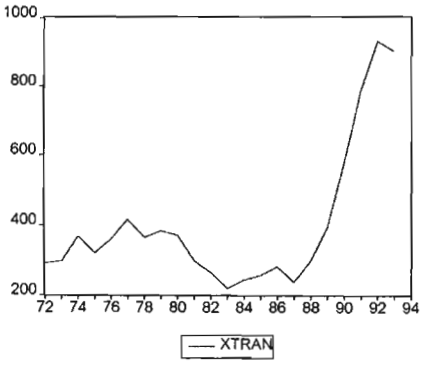
R-squared	0,751805	Mean dependent var	1,335954
Adjusted R-squared	0,664207	S.D. dependent var	0,352128
S.E. of regression	0,204050	Akaike info criterion	-2,940289
Sum squared resid	0,707818	Schwartz criterion	-2,596690
Log likelihood	8,228949	F-statistic	8,582415
Durbin-Watson stat	2,248124	Prob(F-statistic)	0,000217

Inverted AR Roots .63 -.64i .63+.64i -.64+.64i -.64 -.64i

Figure 6-133 Residuals, actual and fitted real values for the export of the transport sector



In this sector only the OECD's GDP proved to be statistically significant at the 95 per cent level. Of concern is the fact that GEIS proved to be statistically significant at the 90 per cent level - with a negative coefficient. One hundred per cent of this sector's exports qualify for GEIS. It is therefore strange that the coefficient was negative.



As can seen from the above graph, the sector's exports started to grow in 1987, which implies that the marketing effort started in the mid-1980s, before GEIS was even a concept. Iscor provided certain rebates to enable exports to buy raw materials at lower prices, although not quite world prices. A large proportion of the content would be ferrous metal. Further, as can be seen from Table 6-98 Protection and anti-export bias, the industry enjoys a pro-export bias if inputs are available at world prices. Since the industry also was able to claim GEIS as it never made use of Customs and Excises rebates and drawbacks, the pro-export bias was greater.

7. Summary of findings and conclusion

7.1 Economic conditions

Economic and political conditions facing South Africa at the end of 1996 are considerably different to those in 1988/89 when GEIS was designed, or in 1990 when it was implemented. Sanctions have now been removed, a democratic, internationally recognised government is in power, and African and other markets have opened to South African exporters. Although inflation is lower, it remains higher than that of its major trading partners and therefore the South African Rand still has lost value. The REER is, however, conducive to further exports.

7.2 Summary of findings

Of the 23 relationships estimated, the R-squared was more than 0,70 for 13 and over 0,65 for eight. The F-statistic in all cases rejects the hypothesis that the partial slope coefficients are simultaneously equal to zero at the 95 per cent confidence level. The industries with low R-squared are the iron and paper industries. Both these industries are dependent on international trading conditions and therefore other factors such as international supply conditions would influence the international demand for South African products. Additionally, the iron and paper industries are capital intensive. Once the decision to invest has been made, production is of such a nature that firms are natural exporters and therefore long-term profit rather than short-term considerations are important. Nevertheless, the results would suggest that for the majority of the industrial activities GEIS, REER, capacity utilisation or capacity due to lack of demand, and the OECD's GDP, when taken together, are important determinants of the level of South African exports.

Table 7-1 Summary of findings

Sector	Lagged depend Variable	GEIS	REER	Capacity utilisation	OECD's GDP
Food		-0,862	522967	-22784103	21492
		(-1,720)	(0,239)	(-4,296)	(1,078)
Beverages		-0,734	555662	-1465451	37780
		(-0,4418)	(0,8482)	(1,0888)	(5,3675)
Tobacco	0,7034	44,0202	60350	54108	-679,89
	(4,9084)	(1,864)	(1,0676)	(0,7716)	(-0,852)
Textiles		-0,2913	1872831	-3891188	-100915
		(-0,1288)	(1,1889)	(-2,1799)	(-7,8113)
Clothing		3,4504	307505	5597888	2958,9
		(1,3947)	(0,3865)	(2,6650)	(0,7867)
Footwear		2,8657	-138389	170258	5109,6
		(2,0325)	(-1,698)	2,6124	(2,6096)
Wood products		-0,5469	-1266676	123426	10514,8
		-05449	-3,0693	0,1413	1,7037
Furniture		0,0102	-0,0541	0,2394	0,6098
		1,5568	-2,2042	3,0837	04972
Paper and paper products		-0,0069	-0,0875	-0,1982	0,7016
		-1,0904	-3,5590	-2,3559	0,5649
Printing		-0,0678	-0,0368	-0,0098	0,0006

Sector	Lagged depend Variable	GEIS	REER	Capacity utilisation	OECD's GDP
		-2,7147	-3,0383	-0,3351	2,6208
Leather products		0,2091	-0,5849	0,1015	0,00798
		(1,5237)	(-2,3337)	0,3132	(3,0433)
Rubber products		0,8293	681684	-1530286	5859
		0,3380	1,6423	-2,3778	1,7519
Chemicals		4,0588	-11042775	-11094968	539330
		(0,5591)	-1,3834	-1,1507	4,4111
Plastic		-0,4106	230296	137869	6088
		-0,2187	0,8316	(0,6305)	2,4623
Pottery		-0,1878	149313	91398	742,8
		-0,5536	3,5894	1,9319	2,342
Non metal		5,4634	-295547,8	919370	13990
		0,8349	-1,0403	1,8605	3,4633
Iron		0,7825	3210281	13422702	126146
		1,2228	0,5882	1,7061	2,4433
Non ferrous		-45,728	1642611	13303968	-152878
		-1,3249	2,2432	1,7028	-0,9912
Metal products		-0,0755	-1702349	-92813962	46690
		-0,0427	-0,5287	-2,9217	2,2447
Machinery (excl. electrical)		-0,0087	-0,0474	0,032	3,1177
		-0,9213	-0,8277	0,1631	1,7081
Electrical machinery		18,8417	337374	579427	38572
		5,6059	0,2959	0,5425	3,9673
Transport equipment		-0,1740	0,1373	1,173	20,9186
		-1,8092	1,4701	1,2998	7,0812
Motor vehicles		-0,1409	104642	8623595	87593
		-0,0847	0,4767	2,093	3,2285

At the same time, the individual T-tests (conducted at both the 95 and 99 per cent levels) on the GEIS variable show that very few of the coefficients are statistically different from zero. This indicates that, with the exception of the tobacco, footwear and electrical machinery industries, GEIS made no significant difference to the level of South African exports. There is no common element in these industries. They use substantially different channels of distribution and there are no common trends regarding the destination of the products. The manufacturing techniques are different, the raw materials employed are not the same, and the industries are not located in the same area of South Africa. Although hindsight is "20/20" and it is easier to analyse the impact of GEIS down the line, it is nevertheless clear that GEIS did not achieve greater exports. The effects of GEIS were not evenly distributed, just as the effects of import substitution affected different sectors in varying ways. The only industries in which GEIS appears to be significant are tobacco, footwear, and electric machinery. Leather products, clothing, and furniture were significant at the 90 level. In the other sectors, the volume of exports did not benefit from GEIS. It either contributed to companies' profits (see paper) or perhaps saved the company from going bankrupt. However, overall, GEIS had little impact on the level of exports. In many cases, the level of capacity utilisation was so low, that manufacturers were forced to export.

An interesting conclusion can be drawn from the capacity utilisation variable. The coefficient is non-zero in eight sectors. Four of these are positive and four negative. Food, textiles, paper, and metal products display a negative sign. It would be expected that the sign would be

positive, i.e. when there is spare capacity the sector exports. In these cases, however, there is spare capacity when the sector does not export. The paper and paper products industry has matured to such an extent that it no longer simply exports as vent for surplus. Spare capacity is in fact generated when international trading conditions deteriorate.

The REER is statistically significant in the wood, furniture, paper, leather, pottery, and non-ferrous metal products industries. Since the REER can be considered a proxy for price, it can be concluded that these industries are sensitive to movement in prices. This is certainly true in the case of non-ferrous metal, where both the REER and the price of aluminium are statistically significant. It would therefore appear as though most industries in South Africa sell on criteria other than price. This is encouraging, as it seems as though other competitive factors are playing a role and the South African manufacturers have responded accordingly. Factors such as service, design, modification of the product, creative use of the various channels of distribution and other niche marketing techniques have become more important than price.

Consistently, the OECD's GDP has proved to be an important factor in determining the level of South Africa's exports. This is not only the case with primary products, as one would expect but also with manufactured products. The model determined that generally the OECD's GDP was the most common factor influencing South African exports. Sixteen of the sectors had statistically significant coefficients. However, one, the textile industry, had the incorrect sign. This was discussed fully above. It would therefore appear that although certain sectors are exporting more to African countries, the economic conditions in the OECD remain an important determinant of South Africa's export performance.

Although it is not possible to determine how many of the companies depended on GEIS for their survival without an in depth analysis of the exporters financial statements. Interviews with individual exporters seem to indicate that they will battle and that many industries face extinction with the phasing out of GEIS. In the paper industry, GEIS "comprised as much as 50 per cent of the profit rate of some companies in the industry." (Bethlehem, 1994:83). With the exception of trading houses, it is doubtful however whether any sector is totally dependent on GEIS for its survival. Regrettably, GEIS was never designed to make companies create sustainable export markets.

7.3 Conclusion

It can be concluded, that South African exporters will not withdraw from foreign markets en masse with the withdrawal of GEIS. Nevertheless, the fact that exports rather than export growth was rewarded would be fair criticism. Had the assistance been aimed at developing new markets rather than rewarding exports (which in any event would have taken place and was therefore short-sighted), new sustainable markets would have been developed.

One of the drawbacks of any government scheme involving "handouts" is that there is invariably rent seeking. Inevitably, firms allocate resources, either directly or through agents such as organised business, to lobby for greater subsidies. In April 1995, the Department of Trade and Industry announced certain requirements, such as research and development and human resource development, which were designed to ensure the long-term competitiveness of South African exports. A spokesperson for the PSEAC commented: "It was amazing that the department could even contemplate such a scheme." In addition, went on to say: "The department is demanding we pay yet another tax for the luxury of being exporters." (Business Day, 27 April 1995). Kenny and Reekie (1996) stated recently that "Taxes, subsidies, industrial policy, lavish welfare handouts - all blunt the incentives of those who would otherwise seek out profitable trading opportunities" and "The developing countries of the world are those in which profit-seeking dominates rent seeking." GEIS did not benefit the South African economy as a whole and companies that would have exported in any event were assisted without becoming competitive profit-seeking firms.

Together with the rent seeking activities, GEIS and other subsidies spurred corruption and fraud. The Department of Trade and Industry has uncovered a number of fraudulent GEIS claims, but many still go undiscovered. Incentives "have effectively been milked by the kind of sharp operators that thrive in the muddy waters of weak authoritarism and transition." (Hirsch, 1993:154)

GEIS was an expensive scheme. Regrettably, it took some time before the costs were calculated and eventually fiscal pressure on government and WTO obligations resulted in GEIS benefits being reduced and eventually withdrawn.

7.4 Other instruments to promote trade and neutralise the anti-export bias

As Belli (1993) showed, reducing the anti-export bias by allowing firms to purchase inputs at world prices would have had more impact than providing GEIS. South African industry has

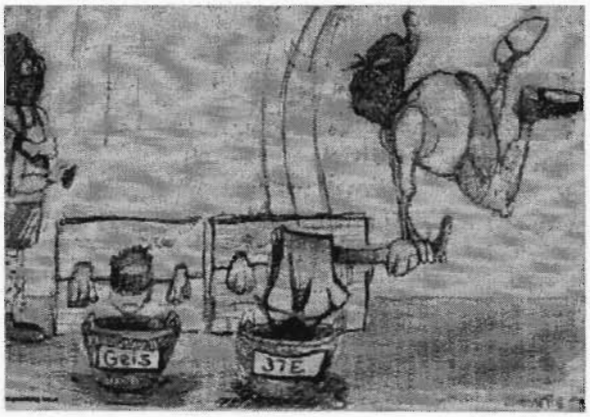
always had access to mechanisms to import inputs at world prices using either section 470,02 or 521,00 of the Tariff Schedule. The procedures were complicated and results were never certain. Industrialists therefore opted for GEIS, which they could rely on. Although, in line with WTO commitments, South Africa will reduce tariffs, which will result in a lower anti-export bias, efforts should be made to further reduce it by improving the system of Customs rebates and drawbacks and perhaps even introducing a "Free Trade Zone".

As multi-national companies (MNC) and other foreign investors tend to be more outward looking and therefore have a higher propensity to export, regrettably the level of direct foreign investment has remained low. Efforts should therefore be made to attract these companies to South Africa. At present, there are many macro-economic impediments, such as high corporate tax rates. However, should these be removed it will benefit both local and foreign investors.

A suitable, stable exchange rate policy, where the anti-export bias is removed and the effective exchange rate for exporters is equal to the REER for importers, will allow exporters a chance to use their competitive or comparative advantages in order to penetrate foreign markets.

South Africa's trade policy over the past 30 years has not been successful. The policy of import substitution and protectionism resulted in an anti-export bias, which neither Categories A and B nor GEIS could successfully neutralise. Policy-making has not been well coordinated with the Department of Trade and Industry moving at a tangent to the Board of Trade and Industry. Decisions were made and reversed; enquiries were regularly held, which all contributed to confusion and contributed to the lack of new investment. Although there were extenuating circumstances in South Africa (such as apartheid and the resulting sanctions campaign), exporters were hampered more by domestic policies than foreign policies. South Africa's infants of the 1920s are still infants and will remain infants until firms are allowed to compete with the playing fields level. GEIS has not resulted in an industry that can compete internationally without assistance.

Goodbye GEIS



Source: Engineering News

8. Appendix A: Revealed Comparative Advantages

	Product	Imports from SACU 1994 US$ m	SACU trend 90-94 % p.a.	World trend 90-94 % p.a.	Market share %	Comp et. %	RCA	No. Of exporte	1st	2nd	3rd
	Food And Agricultural	2 398,6	3,0	3,9	0,7	-0,9	1,17	215	USA	FRA	NLD
	Mineral And Fuels	5 965,6	-3,2	-3,0	1,4	-0,2	1,56	192	SAU	RUS	CAN
	Manufactures	5 378,2	7,8	5,2	0,2	2,5	0,48	224	USA	JPN	DEU
00	Live Animals	12,3	42,8	-0,9	0,2	44,1	0,27	117	FRA	CAN	NLD
01	Meat, Meat Preparations	118,1	6,4	2,3	0,3	4,0	0,76	108	USA	NLD	DNK
02	Dairy Products,Bird Eggs	19,2	21,5	3,8	0,1	17,0	0,61	109	DEU	FRA	NLD
03	Fish,Crustaceans,Mollusc	368,4	23,0	4,9	0,8	17,2	1,72	190	THA	USA	NOR
04	Cereals,Cereal Preprtns.	363,9	-0,8	5,0	0,9	-5,5	2,72	120	USA	FRA	CAN
05	Vegetables And Fruit	1 091,5	1,2	1,9	1,8	-0,6	2,61	175	USA	ESP	NLD
06	Sugar,Sugr.Preptns,Honey	184,7	-15,7	1,1	1,5	-16,6	2,21	117	FRA	AUS	DEU
07	Coffee,Tea,Cocoa,Spices	30,0	0,0	4,8	0,1	-4,6	0,16	164	BRA	COL	DEU
08	Animal Feed Stuff	15,5	-31,9	4,8	0,1	-35,1	0,07	128	USA	BRA	ARG
09	Misc.Edible Products Etc	8,9	12,6	12,2	0,1	0,4	0,32	108	USA	IRL	FRA
11	Beverages	88,1	36,4	3,1	0,4	32,4	1,55	123	FRA	GBR	ITA
12	Tobacco,	50,5	5,8	5,5	0,3	0,3	0,80	113	USA	NLD	DEU
21	Hides, Skins, ,Raw	75,0	-4,3	-1,0	1,2	-3,3	9,85	139	USA	FRA	DEU
22	Oil Seed,Oleaginus Fruit	28,8	5,2	3,2	0,2	2,0	0,21	122	USA	CAN	BRA
23	Crude Rubber	2,6	10,8	2,6	0,0	8,0	0,04	93	THA	MYS	IDN
24	Cork And Wood	207,5	26,8	6,2	0,5	19,4	0,69	136	CAN	USA	MYS
25	Pulp And Waste Paper	280,7	0,6	-3,4	1,6	4,1	2,95	106	CAN	USA	SWE
26	Textile Fibres	252,7	-13,6	0,1	1,1	-13,7	2,36	150	USA	AUS	DEU
27	Crude Fertilizer,Mineral	481,7	-1,6	-1,2	3,4	-0,4	7,43	135	USA	DEU	CAN
28	Metalliferous Ore,Scrap	1 390,6	-1,0	-2,8	3,3	1,9	4,34	173	AUS	USA	BRA
29	Crude Animal,Veg.Materl.	57,9	2,3	0,5	0,4	1,8	1,23	164	NLD	USA	CHN
32	Coal, Coke, Briquettes	1 681,4	-0,3	-2,2	8,5	1,9	91,4	65	AUS	USA	CAN
33	Petroleum,Petrol.Product	199,6	22,7	-4,1	0,1	28,0	0,07	140	SAU	NOR	ARE
34	Gas,Natural,Manufactured	5,4	13,9	-0,7	0,0	14,7	0,03	77	RUS	CAN	IDN
41	Animal Oils And Fats	0,2	-8,2	7,0	0,0	-14,2	0,04	66	USA	DEU	CAN
42	Fixed Veg. Fats And Oils	18,0	-6,4	9,2	0,1	-14,3	0,08	111	MYS	IDN	ARG
43	Animal,Veg.Fats,Oils,Nes	0,4	14,4	8,3	0,0	5,6	0,01	69	MYS	DEU	NLD
51	Organic Chemicals	212,2	20,3	4,4	0,2	15,2	0,63	142	USA	DEU	GBR
52	Inorganic Chemicals	359,9	-3,8	1,5	1,3	-5,2	4,10	126	USA	DEU	FRA
53	Dyes,Colouring Materials	58,4	16,3	5,0	0,2	10,7	1,17	106	DEU	USA	GBR
54	Medicinal,Pharm.Products	13,8	10,5	11,8	0,0	-1,1	0,24	116	DEU	USA	CHE
55	Essentl.Oils,Perfume,Etc	14,0	9,2	8,9	0,1	0,2	0,35	127	FRA	USA	DEU
56	Fertilizer,Except Grp272	39,4	17,1	-1,3	0,3	18,6	0,96	112	USA	CAN	RUS
57	Plastics In Primary Form	69,0	10,9	2,3	0,1	8,4	0,28	120	DEU	USA	NLD
58	Plastic,Non-Primary Form	13,0	14,2	3,7	0,0	10,1	0,21	101	DEU	USA	JPN
59	Chemical Materials Nes	66,6	12,0	4,4	0,2	7,3	0,97	125	USA	DEU	FRA
61	Leather, Leather Goods	159,5	13,2	4,2	1,1	8,7	1,07	129	ITA	KOR	TWN
62	Rubber Manufactures, Nes	30,1	27,4	5,3	0,1	21,0	0,24	105	JPN	DEU	USA
63	Cork, Wood Manufactures	57,2	6,6	7,7	0,2	-1,0	0,37	140	IDN	CAN	USA
64	Paper,Paperboard,Etc.	226,7	-0,8	1,0	0,3	-1,7	1,64	136	DEU	CAN	USA
65	Textile Yarn,Fabric,Etc.	135,9	4,0	2,2	0,1	1,8	0,23	170	CHN	TWN	DEU
66	Non-Metal.Mineral Manfct	635,9	-5,5	2,4	0,8	-7,7	3,22	157	BEL	GBR	ITA
67	Iron And Steel	1 720,1	7,9	2,3	1,5	5,5	2,83	145	JPN	DEU	FRA
68	Non-Ferrous Metals	2 207,0	-8,0	-1,0	3,0	-7,1	5,89	137	RUS	DEU	CAN
69	Metals Manufactures,Nes	130,5	10,8	3,9	0,2	6,7	0,47	161	DEU	USA	JPN
71	Power Generatng. Machines	73,8	14,1	6,3	0,1	7,3	0,23	154	USA	JPN	DEU
72	Special.Indust.Machinery	105,9	7,9	1,2	0,1	6,6	0,60	157	DEU	JPN	USA
73	Metalworking Machinery	13,7	-1,0	-2,4	0,0	1,4	0,38	99	JPN	DEU	USA
74	General Industl.Mach.Nes	179,3	25,0	4,1	0,1	20,1	0,49	170	DEU	USA	JPN
75	Office Machines,Adp Mach	38,1	14,2	9,3	0,0	4,5	0,06	136	USA	JPN	SGP
76	Telecomm.Sound Equip	28,0	34,5	8,6	0,0	23,8	0,02	169	JPN	USA	CHN
77	Elec Mch Appar,Parts,Nes	97,3	19,2	11,6	0,0	6,8	0,05	179	JPN	USA	DEU

78	Road Vehicles	198,4	29,3	4,4	0,1	23,8	0,20	162	JPN	DEU	CAN
79	Othr.Transport Equipment	38,4	9,3	2,3	0,1	6,9	0,43	150	USA	FRA	DEU
81	Prefab Buildgs,Fttng Etc	5,7	5,1	5,6	0,0	-0,5	0,13	106	CHN	DEU	ITA
82	Furniture,Bedding,Etc.	233,3	31,3	3,9	0,7	26,3	1,40	125	ITA	DEU	USA
83	Travel Goods,Handbgs Etc	7,4	34,3	6,9	0,1	25,7	0,16	103	CHN	ITA	FRA
84	Clothing And Accessories	218,9	11,5	6,0	0,1	5,2	0,28	181	CHN	ITA	HKG
85	Footwear	16,7	52,7	5,3	0,0	45,0	0,07	116	CHN	ITA	IDN
87	Scientific Equipment Nes	33,2	20,5	5,2	0,1	14,6	0,23	155	USA	DEU	JPN
88	Photo.Apparat.Nes;Clocks	7,7	19,9	4,3	0,0	15,0	0,07	120	JPN	CHE	USA
89	Misc Manufctrd Goods	140,1	22,6	4,8	0,1	16,9	0,32	191	CHN	USA	DEU
91	Mail Not Classed By Kind	4,6	3,3	-22,1	0,8	32,7	5,85	82	FRA	USA	CHE
93	Spec.Transact.Not Classd	463,4	24,6	8,1	0,6	15,3	1,88	191	USA	DEU	CAN
96	Coin Nongold Noncurrent	3,9	95,1	-11,1	2,8	119,5	4,08	41	AUS	GBR	USA
97	Gold,Nonmontry Excl Ores	2 835,4	2,1	1,5	13,4	0,6	77,6	110	CHE	ZAF	AUS

Source: ITC, 1996.

9. Appendix B: Export Subsidies provided by Governments from the US Government's National Trade Data Base: NTDB

Australia

Australia maintains several programmes intended to enhance Australian exports. These include: Export market development grants (EMDG) scheme: This programme aims to encourage Australian exporters to seek out and develop overseas markets for goods, services, industrial property rights, and technology that is substantially of Australian origin. EMDG grants are provided to reimburse Australian residents who have incurred eligible expenditures while developing overseas markets for Australian products or services. Grant recipients are reimbursed for up to 50 percent of their eligible expenditures above A$15,000, but no recipient may receive more than A$200,000 in reimbursements in anyone grant year. In addition, claimants with export earnings exceeding A$25 million, or who have received eight previous grants, are not eligible.

Commodity boards: Several national and state commodity boards control the marketing and export of Australian agricultural products. Activities for these marketing authorities are financed in large part by the producers, but the boards often enjoy export monopoly status conferred by the federal or state government.

While some of the boards' domestic activities have been deregulated, the export of wheat and rice remains under the exclusive control of commodity boards. Currently, the Australian wheat board strictly regulates wheat marketing abroad, but consideration is being givern to the possibility of liberalizing this activity beginning in the latter half of 1996. The export of barley from certain states likewise remains strictly regulated.

Dairy exports are made both by the private sector and an arm of the state's dairy corporation. Australia terminated its export support payment scheme for dairy products on June 30, 1995, but instituted a new internal support programme on July 1, 1995. The United States is closely monitoring this new programme for compliance with Australia's Uruguay Round commitments.

International trade enhancement scheme (ITES): Support available under the ITES programme is primarily directed toward the establishment of foreign markets or the expansion of sales for specified goods and services in specified markets. Under the scheme, participants

may receive financial support up to a total of A$5 million, in the form of concessional loans to fund export promotion activities and market research or the direct provision of Australian Trade Commission (AUSTRADE) services relating to product development, export management, establishment of an overseas market presence, market research, and other AUSTRADE-approved activities.

Automotive export facilitation scheme: Under the terms of an export facilitation scheme, manufacturers of automotive vehicles and components receive subsidies based on the level of exports of specified automotive products. The subsidies are in the form of duty rebate "credits" which recipients can, in turn, use to offset their duty liability on imports of specified automotive products. In general, the level of subsidies is determined based on the sales value of the eligible exports, but the calculation is also done in a way which rewards domestic value-added. The greater the value of any qualifying exported product, the greater the import credit granted. Significantly, however, there is no requirement that the imported products be consumed in the production of exported products, as there normally is in a duty drawback system. Indeed, imports of finished vehicles for consumption on the Australian market are fully eligible for duty rebates under this scheme.

The subsidy benefits are freely transferable and may be sold among participants in the programme. Current information indicates that the scheme will remain in force until at least December 31, 2000. Although benefits are progressively reduced each year between 1991 and 2000, the level of the duty rebate would still be significant in the year 2000, when Australia's duty on imported vehicles and components will be at 15 percent.

Brazil

The Brazilian Government offers a variety of tax and tariff incentives to encourage export production and the use of Brazilian inputs in exported products. Several of these programmes have been found to be countervailable under US countervailing duty law in the context of specific countervailing duty cases. Incentives include tax and tariff exemptions for equipment and materials imported for the production of goods for export, excise and sales tax exemptions on exported products, and excise tax rebates on materials used in the manufacture of exported products. Exporters enjoy exemption from withholding tax for remittances overseas for loan payments and marketing as well as from the financial operations tax for deposit receipts on

export products. Exporters are also eligible for a rebate on social contribution taxes paid on locally-acquired production inputs.

An export credit programme, known as PROEX, was established in 1991. PROEX is intended to equalize domestic and international interest rates for export financing. Revisions to PROEX were announced in late 1995. The revisions expanded the size of the programme and authorized coverage of additional export sectors. The initial budget for PROEX in 1996 was set at US$ 344 million. Since most large Brazilian exporters borrow abroad against future receipts at international rates much lower than prevailing Brazilian rates, the expansion of the programme is not expected to be of great significance.

China

The Chinese Government claims that direct financial subsidies for all exports, including for agricultural goods, ended as of January 1, 1991. Nevertheless, Beijing still uses a mixture of subsidies to promote exports, including low-priced energy, and raw materials. State enterprises and state trading companies, many of which are significant if not exclusive exporters, have received bank loans on preferential terms or have not been penalized for late payments or outright failure to repay loans.

State trading companies cross-subsidize certain exports in order to generate foreign exchange. Prices in the Chinese domestic market for some of these products are so high, however, that Chinese enterprises lose their incentive to export. To encourage exports, state trading companies subsidize the difference between the low world price and the higher domestic price. While the enterprises do not receive any additional profits per product sold, the practice does encourage them to export. This artificial incentive to export disrupts normal trade flows. Local content and export performance requirements (or expectations) also are frequently features of China's industrial policies. Such policies constitute subsidies to the extent that, as part of the industrial policy package, receipt of financial and other benefits is tied to a performance requirement.

Other export incentives that may be regarded as subsidies include tax incentives for exporters, with additional preferences for firms operating in China's special economic zones and coastal cities. In 1995, China announced reductions in the rate of rebates paid on value-added tax on

goods that are exported, and further reductions are to take place in 1996. Preferential policies available to firms in the special economic zones and coastal cities may be revised in 1996. China continues to provide financial subsidies for development programmes for products that are eventually exported. Soda ash has been one example.

Columbia

As a result of "apertura" and commitments made by the GOC to the US Government in the context of acceding to the GATT Subsidies Code, Colombia agreed to phase out any export subsidies inconsistent with the previous Subsidies Code. This process will continue under the new WTO Agreement on Subsidies and Countervailing Measures. Colombia's Tax Rebate Certificate Programme (CERT) contains a subsidy component; the GOC has committed to eliminating the subsidy and creating an equitable drawback system, but has not yet done so. The GOC also has notified the WTO of its "Special Machinery Import-Export System" and "Free Zones" as constituting export subsidies.

The GOC still provides export subsidies to flower exports to third countries. The negative impact of these subsidies on US flower exports to the same markets is estimated at below $10 million.

Dominican Republic

The Dominican Republic does not have aggressive export-promotion schemes other than the exemptions given to firms in the free trade zones. A tax rebate scheme designed to encourage exports is considered a failure and is usually avoided by exporters. The government agency charged with export promotion (CEDOPEX) is considered ineffective by most business people.

El Salvador

El Salvador offers a six percent rebate to exporters of non-traditional goods based on the f.o.b. value of the export, but exporters have found it very difficult to collect. Free zone operations are not eligible for the rebate but enjoy a ten-year exemption from income tax as well as duty-free import privileges.

EU Agricultural Product Subsidies

The EU grants export subsidies (restitutions) on a wide range of agricultural products

including wheat, wheat flour, beef, dairy products, poultry, and certain fruits, as well as some manufactured products such as pasta. Payments are nominally based upon the difference between the EU price and the world price, usually calculated as the difference between the EU internal price and the lowest offered price by competing exporters.

The Uruguay Round agreement will require the EU to reduce export subsidies over six years by 21 percent in volume and 36 percent in value from a 1986-90 base period. Under the agreement, the EU will have cut export subsidies by about $5-7 billion from recent levels.

Canned Fruit

The US cling peach industry complained in late 1994 that the European Union had failed to observe and enforce a commitment made in the 1985 US-EU Canned Fruit Agreement (CFA) to not subsidize EU processing operations for peaches in syrup. The US industry claimed implementation of the EU's minimum grower price and fruit withdrawal programmes was undermining the no-processing subsidies commitment made by the EU in the CFA, and that the sale of subsidized Greek canned peaches in the US and a number of foreign markets, including Japan, Mexico, and Canada, was harming the US industry. The United States is now working to address industry concerns.

Gulf

Saudi Arabia has recently reduced wheat production subsidies. The Grain Silos and Flour Mills Organization

(GSFMO) controls wheat production by assigning production quotas to each of the country's grain farmers. Farmers can only receive government support prices within preassigned quotas. GSFMO production quotas for the current year were reduced to 1.3 million metric tons, compared to two million metric tons in 1995. The reduction in quotas coincides with a June 1995 decision by the Saudi Government to reduce production support prices for wheat from $533/Mt to $400/Mt, still double world prices.

The Oman Development Bank offers interest subsidies for the relatively few non-petroleum sector exporters obtaining commercial bank letters of credit and offers some lower than market "insurance" against delay in payment of receivables.

Hungary

Hungary maintained agricultural export subsidies in excess of its WTO commitments during 1995 and is budgeted to exceed its commitments again in 1996. Hungary has sought agreement to have its WTO commitments modified. Most recently, Hungary proposed a revised schedule which would substantially increase its ability to subsidize exports above current expenditure levels. G-8 countries (New Zealand, Australia, Argentina, Japan, European Union, Canada, Thailand and the United States), as well as Uruguay, have been conducting informal consultations on the Hungarian export subsidies issue under the sponsorship of the Chairman of the WTO Committee on Agriculture since the fall of 1995. Despite encouragement from its trading partners to adjust policies, Hungary has insisted on modifying its obligations. Extensive bilateral and multilateral consultations have failed to resolve the problem.

India

Export earnings are exempt from income and trade taxes, and exporters may enjoy a variety of tariff incentives and promotional import licensing schemes, some of which carry export quotas. Export promotion measures include duty exemptions or concessional tariffs on raw material and capital inputs, and access to special import licenses for restricted inputs. Commercial banks also provide export financing on concessional items.

Kenya

In 1992, the Government enacted a duty/VAT remission facility which allows exporters to purchase imported inputs tax-free. There is no general system of preferential financing, but sectoral government development agencies in areas such as tourism and tea are supposed to provide funds at below market rates to promote investment and exports by Kenyans.

Since late 1995, the National Cereals and Produce Board (NCPB) has sold 403,000 metric tons of subsidized corn to Southern Africa. The combined production and export subsidy amounts to approximately $75 per ton.

Nigeria

In 1976, the Government established the Nigerian Export Promotion Council (NEPC) to encourage development of non-oil exports from Nigeria. The Council administers various

incentive programmes including a duty drawback programme, the Export Development Fund, tax relief and capital assets depreciation allowances, and a foreign currency retention programme. The duty drawback or manufacturing in-bond programme is designed to allow the duty free importation of raw materials to produce goods for export, contingent on the issuance of a bank guaranteed bond. The performance bond is discharged upon evidence of exportation and repatriation of foreign exchange. Though meant to promote industry and exportation, these schemes have been burdened by inefficient administration, confusion, and corruption, causing great difficulty and in some cases losses to those manufacturers and exporters who opted to use them.

The NEPC also administers the Export Expansion Programme, a fund which provides grants to exporters of manufactured and semi- manufactured products. Grants are awarded on the basis of the value of goods exported, and the only requirement for participation is that the export proceeds be repatriated to Nigeria. Though the grant amounts are small, ranging from two to five percent of total export value, they appear to be export subsidies as designated by the WTO and may be in violation of WTO rules.

NIS

In January 1996 the Government of Belarus announced a series of export stimulation measures. Under the new government plan, exporters will reportedly pay ten percent less tax when they operate a barter regime between enterprises. A Presidential decree sets different exchange rates for local exporters purchasing raw materials abroad and for importers of "non-essential" goods. In accordance with the law on foreign investment, firms with at least 30 percent foreign participation are exempted from the requirement. The revenue from the higher exchange rate will go into a special fund to support exporters.

Pakistan

Pakistan actively promotes the export of Pakistani goods with measures such as government financing and other tariff concessions on imported inputs, and income and sales tax concessions. Pakistan has established one export processing zone (EPZ) in Karachi and the addition of more zones is under consideration. EPZ benefits include tax holidays, indefinite carry forward of losses, exemption of imports from taxes and duties, and exemption from labor laws and various other regulatory regimes.

While Pakistan has not reported any export subsidies to the World Trade Organization, the Government-run Rice Export Corporation of Pakistan continues to sell rice to selected exporters for well below market prices.

Peru

Peru does not provide any direct payment upon export. Exporters can receive rebates of the tariffs and value-added taxes paid on their inputs. In June 1995 the Government approved a simplified drawback scheme which allows small exporters to claim a flat 5 percent rebate, subject to certain restrictions. Other policy measures to encourage exports are under discussion.

Phillipines

Phillipines Enterprises (including exporters) engaged in government-preferred activities may register with the Board of Investment (BOI) to qualify for incentives under the Philippine Omnibus Investment code. The incentives include income tax holidays, preferential duties for imported capital equipment, tax credits for domestically purchased machinery, and income tax deductions for incremental labor expense. A number of benefits apply specifically to BOI-registered export companies (such as tax credits for imports of raw material and exemption from taxes and duties on imported spare parts). Export firms in government-designated zones and industrial estates registered with the Philippine Economic Zone Authority (PEZA) enjoy basically the same incentives as BOI-registered companies.

Firms that export at least 50 percent of production may also register for incentives under the Export Development Act of 1994 (EDA). Firms registered with the BOI, PEZA or other government agencies which meet the 50 percent minimum export requirement may register under the EDA to avail themselves of any additional incentives under that law. Incentives under the EDA include: duty-free imports of capital equipment (up to 1997); for exporters of nontraditional products, partial tax credit for locally purchased raw materials, equipment and spare parts (up to 1997); tax credit for imported inputs and raw materials not readily available locally (up to 1999); and tax credit on incremental annual export revenue. The EDA also provides for the establishment of an Eximbank which will offer preferential and simplified credit schemes to exporters.

In December 1994, the Bangko Sentral launched an Export Development Fund (EDF) facility

(the forex counterpart of its peso rediscounting window).The EDF rates are based on the London Interbank Bid Rate (LIBID) and adjusted periodically. The Bangko Sentral imposes a ceiling on the spread at which financial institutions can re-lend the funds (currently one percent, after applicable taxes).

Poland

With its accession to the WTO, Poland has ratified the Uruguay Round Subsidies Agreement. Poland also plans to join the OECD code on shipbuilding but has requested a derogation allowing transitional restructuring. The package would not involve direct export subsidies due to budget constraints but may include indirect support to struggling shipyards in the form of deferred tax payments and utilities payments at concessionary rates.

Poland has eliminated past practices of tax incentives for exporters, but it still offers, on a negotiated basis, some tax holidays to foreign investors who plan to export. Poland also provides for drawback levies on raw material imports which are processed and reexported in finished products within 30 days. A new law restructuring the sugar refining industry essentially creates export subsidies for sugar financed out of high domestic prices.

Russia The Government has announced plans to introduce a system of support for exports in 1996. Discussion to date indicates that it will have very limited budgetary funding and be aimed at stimulating exports of manufactured goods. Russia has no explicit export subsidies on agricultural products, although from time to time subsidies for specific commodities may have the effect of spurring temporary increases in exports of those commodities.

Singapore

Singapore offers tax incentives to exporters and reimburses firms for certain costs incurred in trade promotion. The Government also offers significant incentives to attract foreign investment, almost all of which is in export-oriented industries.

SA

The primary subsidy regime of the South African Government is the General Export Incentive Scheme (GEIS) through which South African exporting companies receive direct, non-discriminatory cash subsidies based on the value of exports, the degree of beneficiation or processing, and the local content of the exported product. The GEIS was recently downsized

in early 1995 and is expected to be eliminated by the South African Government at the end of 1997. Under this most recent revision, subsidies for fully manufactured products were lowered from 25 percent to 14 percent of export value on April 1, 1995; to 12 percent on April 1, 1996; and to 10 percent on April 1, 1997. Subsidies for partially manufactured products dropped from 12.5 percent to three percent on April 1, 1995; to two percent on April 1, 1996; and eliminated on April 1, 1997. Subsidies on raw materials and beneficiated raw materials were eliminated on April 1, 1955. In addition, categorization of the various goods eligible for GEIS subsidies were re-defined such that many goods previously defined as "partially manufactured" were downgraded to "beneficiated," and so lost eligibility for subsidies.

Another export incentive of the South African government is the Export Marketing Assistance Scheme (EMA) which offers financial assistance for the development of new export markets through financing for trade missions and market research. Other subsidies include electricity and transport rebates for business located in designated development corridors. Provisions of the Income Tax Act also permit accelerated write-offs of certain building and machinery associated with beneficiation processes carried on for export and deductions for the use of an export agent outside South Africa.

Thailand

Thailand maintains several programmes that subsidize exports, including preferential financing for exporters. Thailand's export-import bank, established in September 1993, is responsible for some of these programmes, particularly the packing credit programme.

Turkey

Turkey has used several export subsidy programmes. Producer-exporters may deduct eight percent of industrial export revenue in excess of $250,000 from their corporate taxable income. Non-producer industrial goods exporters are entitled to a four percent deduction. Turkish exporters can also benefit from tariff and surcharge exemptions on imported inputs, surcharge exemptions on export financing transactions and export credit schemes provided by the export-import bank.

Venezuela Venezuela has reduced the number of export subsidies it provides, but retains a duty drawback system established in June 1994. Exporters of selected agricultural products receive an export bonus in the form of a credit against the exporters' tax liability.

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