

**A Preliminary Analysis of the Impact of Trade Liberalisation on Manufacturing**  
**Or:**  
**“Will trade liberalisation generate export-led growth in South Africa?”**

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### **EXECUTIVE SUMMARY**

This study undertakes a preliminary analysis of changes in manufacturing in light of the ongoing trade liberalisation measures introduced in the 1990s. The case for trade liberalisation rests on firms responding to the increased incentive to export, leading to more efficient use of resources, with increased productivity, competition and investment.

After reviewing evidence of liberalisation in other developing countries which questions the basis of these expectations, a distinction is drawn between the need for reform of the structure of protection in South Africa, and the broad liberalisation being undertaken beyond the requirements of the GATT/WTO agreement. To understand the process of liberalisation along with other changes affecting manufacturing, the links between changes in trade, production and employment are traced at the sub-sector level. This does not reveal any notable increased specialisation in areas of comparative advantage. Instead, the 14 sub-sectors recording improvements in the net export measure of revealed comparative advantage from 1991 to 1996 all had a trade deficit, while the trade performance weakened of those sub-sectors with an apparent existing comparative advantage.

The study reveals a lack of any clear relationship between liberalisation, changes in trade performance, and changes in production and employment. It further suggests that a careful analysis of sub-sector specific factors is required to interpret the process of restructuring underway in South African manufacturing. Sub-sectors with improved export performance in recent years are dominated by those concentrated around minerals and chemicals, where productive capacity has evolved through exploitation of production linkages and strong support from Government. The study also found export performance appears instead to have improved most in those sub-sectors with relatively low tariffs such that little bias existed in favour of production for the domestic market over production for export due to tariffs.

On the basis of a net export measure which takes imports into account, many of the sub-sectors with apparent improvements in competitiveness have actually been associated with contraction. In five of the 14 sub-sectors with improved net export ratios, both employment and real output have contracted, employment has fallen in a further three, while in printing and publishing there has been an increase in employment but a fall in production. In contrast there is evidence of the continuing importance of the domestic market. In the six sub-sectors with net employment growth from 1990 to 1996, five have negative net export measures, four of which have worsened over the period. There are also signs in many sub-sectors of increased intra-industry trade which must be understood in the context of imperfect competition and product differentiation. In addition, manufacturing exports appear to be strongly differentiated by geographical region, with the majority of sub-sectors that recorded significantly improved export performance having southern African countries as the first or second largest markets.

These factors affecting restructuring in manufacturing sub-sectors are further illustrated by more detailed discussion of the changes in the two sub-sectors which have been most heavily affected by tariff reductions, clothing and motor vehicles.

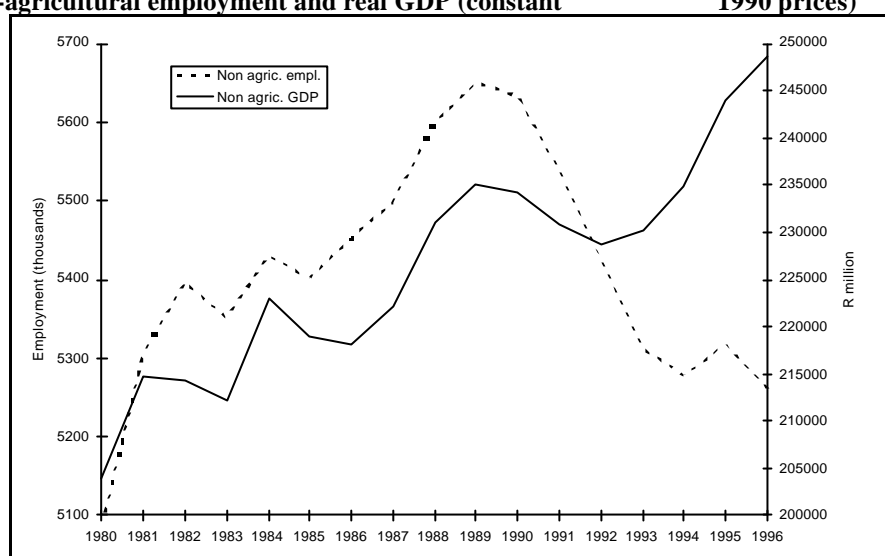
The analysis points to the need to re-examine selective protection within the scope of WTO limits, and for the co-ordination of trade and industry measures, taking into account demand as well as supply-side factors.

## 1. INTRODUCTION<sup>i</sup>

South Africa has embarked on a far reaching trade liberalisation programme agreed to under the General Agreement on Tariffs and Trade (GATT). In addition to tariffs being simplified and reduced for almost all of South Africa's imports, other trade related measures put in place to support South African industry have been or will be abolished. These measures include the General Export Incentive Scheme (GEIS) and the local content requirement which applied to the automobile industry. Measures of this nature contravene the World Trade Organisation (WTO) rules. The tariff liberalisation programme however goes much further than required by the GATT agreement, and has been justified in the Government's macroeconomic strategy as being critical for the generation of export-led growth, which also motivated trade policy reforms instituted by the previous Government in the early 1990s.<sup>ii</sup>

While recent economic performance suggests that South Africa has moved onto a higher growth path, in line with the projections of the Government's macroeconomic strategy, a clearer picture of economic trends emerges if agricultural production, which varies so much with rainfall, is excluded. On this measure the rate of growth declined significantly in 1996 to 1.9 per cent and appears to conform to the business cycle pattern, suggesting a lower rate of growth again in 1997. Moreover, positive growth rates since 1993 have not led to formal employment generation in the non-agricultural sectors, in a marked change from previous patterns (Figure 1). Non-agricultural formal employment has only grown in one of the last seven years, resulting in formal non-agricultural employment in 1996 being 7 per cent lower than in 1990.

**Figure 1: Non-agricultural employment and real GDP (constant 1990 prices)**



Source: South African Reserve Bank

Note: Non-agricultural employment is the annual average

This study will evaluate the trade liberalisation programme in light of the recent economic performance, and developments in the manufacturing sector in particular. After an introduction to the aggregate economic trends, Section 2. briefly outlines the theoretical debates around trade liberalisation before assessing international experience and attempting to identify lessons for South Africa. Section 3. outlines the trade liberalisation underway in South Africa in the context of the previous structure of protection and emphasises the continuities with the liberalisation measures introduced by the previous Government since 1990. Section 4. addresses the core question of the impact of these changes through a comparative analysis of trade flows, production and employment across manufacturing sub-sectors, taking into account the specific conditions of South African industry and industrial structure. This is further illustrated by a more detailed discussion of the two sub-sectors with the largest tariff reductions in Section 5, before conclusions and policy implications are drawn in Section 6.

While trade liberalisation is ongoing, a study such as this is particularly important at this juncture because South Africa has room for manoeuvre

in setting tariff levels within the maximum agreed under to GATT, as well as in determining other policies impacting on manufacturing. There is also considerable evidence from the experiences of other countries from which South Africa may learn.

## 1.1 Background

The outcomes of economic restructuring depend as much on the nature of growth as its overall rate. Growth in the last two years has been supported both by higher levels of investment and by increased exports, especially in manufacturing. Overall investment accounted for 17.2 per cent of Gross Domestic Expenditure, while non-gold merchandise exports rose to 18.2 per cent of GDP in 1996 from 16.7 per cent in 1995. However the trade deficit has widened meaning that the net contribution to aggregate demand has been negative and, although the level of investment has been increasing over the last three years, it remains low in comparison both with relatively high growth economies and with previous levels of investment in South Africa (Table 1).<sup>iii</sup>

**Table 1: Investment, exports and growth**

	Investment (% GDP) <sup>1</sup>	Avg. ann. gr. of GDP	Exports (% GDP)	Avg. ann. gr. of exports

	1980	1994	1980-90	1990-94	1980	1994	1980-90	1990-94
Kenya	29	21	4.2	0.9	28	39	4.3	0.4
Zambia	23	7	0.8	-0.1	41	34	-3.3	13.7
Thailand	29	40	7.6	8.2	24	39	14.4	14.6
Venezuela	26	13	1.1	3.2	29	30	2.8	5.0
Brazil	23	21	2.7	2.2	9	8	7.5	9.0
<b>South Africa</b>	<b>28</b>	<b>18</b>	<b>1.3</b>	<b>-0.1</b>	<b>36<sup>2</sup></b>	<b>24</b>	<b>1.9</b>	<b>2.3</b>
Malaysia	30	39	5.2	8.4	58	90	10.9	12.9
Chile	25	27	4.1	7.5	23	28	7.0	9.0
South Korea	32	38	9.4	6.6	34	36	12.0	10.6

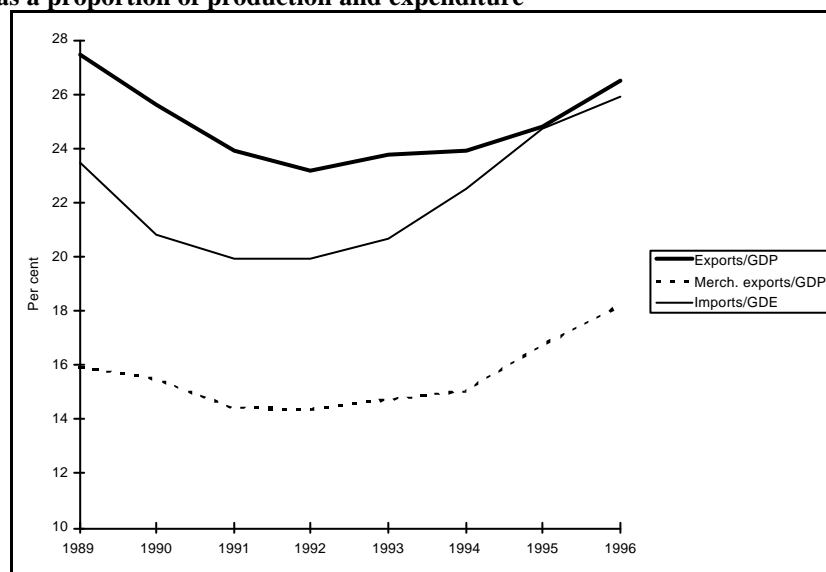
Source: World Bank, World Development Report 1996

Notes: <sup>1</sup> Investment is measured as Gross Domestic Investment and includes net changes in the level of inventories.

<sup>2</sup> In 1980 the gold price was exceptionally high, and by 1983 South Africa's exports were 26 per cent of GDP.

By international comparisons South Africa is a relatively open economy regardless of the level of protection, with exports accounting for 27 per cent of total production in 1996. However, despite increasing since 1992, this ratio remains lower than in 1989, before the recent trade liberalisation (Figure 2) and is only marginally above the level in 1983. A large proportion of exports are accounted for by gold and if these, along with services, are excluded to leave merchandise exports, we find a stronger rise in the ratio in recent years. This corresponds to the steady decline in significance of gold exports over the last decade, while the share of services has remained relatively stable.

Figure 2: Trade as a proportion of production and expenditure



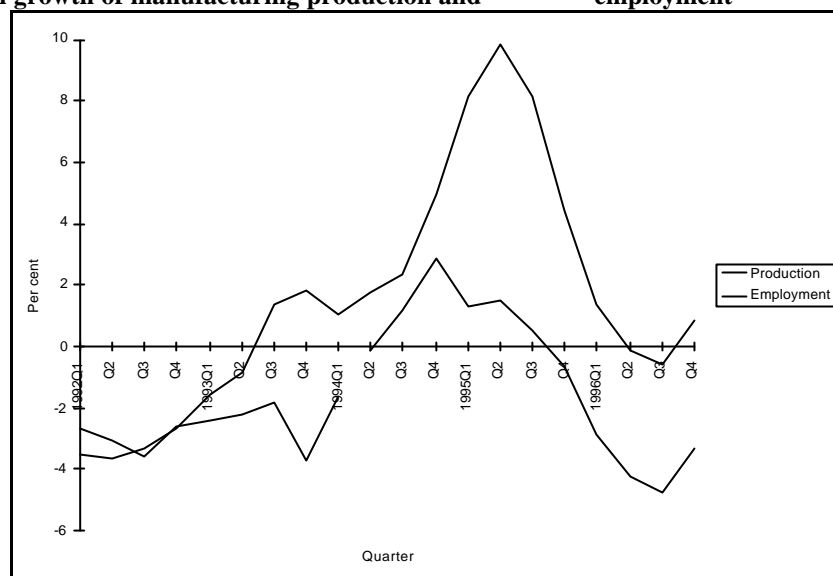
Source: South African Reserve Bank

Notes: <sup>1</sup> Exports and imports are of all goods and services; Merchandise exports exclude gold and services

<sup>2</sup> Data are drawn from aggregate demand statistics, and differ slightly from those recorded under balance of payments

The trends in trade flows, with both increasing imports and exports of non-gold merchandise, suggest there are significant differential production effects on sectors, with major implications for employment. There has been increased import penetration of the domestic market, while sectors producing for export have expanded overseas sales.

**Figure 3: Annual growth of manufacturing production and employment**



Source: South African Reserve Bank, 1997, CSS

Notes: <sup>1</sup> Growth rates are calculated as percentage change in seasonally adjusted data over the same quarter in the previous year.

<sup>2</sup> Includes data for the former TBVC from Q1 1996, and Reserve Bank estimates for 1993 to 1995, such that there is a break in series between Q1 and Q2 of 1994.

Manufacturing is the single largest sector in terms of output and employment (excluding public authorities), and accounted for 42 per cent of all private non-agricultural employment in 1996. The restructuring taking place across industry in South Africa has however resulted in fundamental changes in manufacturing employment, particularly in the last three years. Following the first democratic election in 1994, manufacturing production increased significantly, reaching an annual growth rate of 10 per cent in the second quarter of 1995 (Figure 3). In comparison, employment only grew slightly during the second half of 1994 and the first half of 1995, with net job creation falling far short of the job loss in the preceding slump. The low levels of growth in production in 1996, have coincided with further net reductions in manufacturing employment.

The average figures for employment also conceal very different patterns at the sub-sectoral level which are examined in detail in section 4. below in an assessment of the outcomes of the restructuring in manufacturing and the impact of trade policy reform and liberalisation.

## 2. TRADE LIBERALISATION IN THEORY AND PRACTICE

The ascendancy of trade liberalisation has been inversely related to theoretical support for its proposals. And, while there is various empirical evidence on the relationship between trade and growth (see, for example, Kitson and Michie, 1995b), the many statistical studies do not provide any substantive support for trade liberalisation as such. This is not to argue that in many countries the levels and nature of protection have not negatively impacted on economic performance. There has often been excessive and badly designed protection of domestic markets but this does not provide a case for liberalisation *per se*, rather for reform and restructuring. Many countries have instituted liberalisation programmes in the last 15 to 20 years, and there exists a growing literature reviewing their experiences on which we can draw.

A brief overview of the theory is provided first with a focus on recent developments, the 'new trade theories', before international experience of trade liberalisation is reviewed.

### 2.1 Economic theory and the case for trade liberalisation

The case for liberalisation rests on the general efficiency gains to be achieved from international exchange through unregulated markets. A good example of the formulation of this case has recently even been made by an organisation such as the International Labour Organisation (1996):

Adherence to these [new] rules [of liberalization and globalization] will place heavier burdens on domestic policy but the benefits in terms of higher growth will also be greater. There will be stronger pressure to maintain sound macroeconomics policies, to eschew market distortions, and to improve allocative efficiency. In many cases this will imply economic reforms such as trade and financial liberalisation, the removal of price controls and other forms of deregulation. These reforms will be beneficial for growth since they will create incentives for resources to be allocated to activities with higher productivity and more in line with a country's comparative advantage. This higher growth will in turn favour employment creation. In addition employment creation will also be enhanced by the removal of distortions such as the under pricing of capital and overvalued exchange rates which increase the capital intensity of production and hence reduce employment.

(Quoted in Singh, 1997: 11)

The main case for liberalisation is premised on a particular causality, namely that cutting protection and reducing tariff levels leads to a country producing and exporting according to its comparative advantage. Under this perspective, liberalisation improves allocative efficiency and eliminates deadweight losses, based essentially on a belief in free trade as first best on the assumption that markets are efficient. In other words, it is argued that liberalisation enhances the gains from trade as there is further specialisation in production and increased exports, enabling greater imports and consumption. In addition to the static allocative efficiency gains, dynamic gains are cited in support of an outward orientation, such as increased diffusion of knowledge and technology, increased competition, more production in sectors with high world income and price elasticity, and more investment with a higher turnover of capital stock. But, dynamic effects such as these will not necessarily be realised under free trade and may instead constitute a case for government intervention, as discussed in more detail below.

The static, first best, case for free trade rests on assumptions of perfect competition, constant or decreasing returns to scale, no externalities, homogenous products and the country being 'small'. There has, however, been a growing consensus in the trade theory literature that imperfect markets and imperfect competition are not only important realities to be considered, but are often determinants of trade flows.

A body of new trade theories attempts to incorporate these factors, with results that depend on the specific assumptions made.<sup>iv</sup> In general, however, they demonstrate that it is not justified to presume that free trade is optimal as an end point (Krugman, 1987). It is also far from certain in the presence of pervasive market failures and imperfect competition that industry will respond to the changed incentives under liberalisation in the way predicted by orthodox trade theory based on efficient markets (see, for example, Lall, 1995 for a summary of the arguments). New trade theories may also be more applicable to developing countries due to the small size of the domestic markets, greater concentration of industry and more widespread market failures in, for example, financial markets (Rodrik, 1992b).

As noted by Carlos Diaz-Alejandro some years before the new trade theory models were developed (1975: 97):

It is easy to see that different assumptions regarding the availability, effectiveness and real costs of different policy instruments can yield a disconcerting variety of heterodox conclusions. By now any bright graduate student, by choosing his assumptions regarding distortions and policy instruments carefully, can produce a consistent model yielding just about any policy recommendation he favoured at the start. To reach his conclusion, moreover, he need not introduce development targets additional to static efficiency. The conclusion, of course, applies a fortiori when other targets are brought in.

Notwithstanding this, the existence of market imperfections generally supports non-trade intervention targeted at the specific market, however this may be difficult to design and implement, and in a second best world trade intervention may also be justified.

As the case for free trade based on trade theory has been dismissed, economists supporting free trade have shifted to the terrain of political economy. It is argued that government failures outweigh market failures and that protection will be dominated by rent seeking considerations.<sup>v</sup> But, these arguments are of limited validity. The capacity of the state and the interests in which it will act is an empirical question, and these political economy considerations do not necessarily imply *laissez-faire*. Instead, measures to address the abilities of government institutions need to be identified (Fine, 1997).

If we distinguish trade liberalisation from trade reform (which may be required due to a damaging trade regime), then there is therefore no clear case for liberalisation. Moreover, the outcome of trade liberalisation is contingent on a range of factors, many of which depend directly or indirectly on government.

With economies of scale and imperfect competition, there are complex and uncertain results from liberalisation (Ocampo, 1993). Liberalisation may bring increased competition which reduces firms' market power over the domestic market and the associated welfare losses, as well as improving efficiency. Consumers therefore benefit from cheaper products, better service and increased choice. Trade liberalisation may also however lead to sectors contracting in which there are economies of scale, in a process of de-industrialisation and employment loss (Devarajan and Rodrik, 1989). In this context, protection may promote rather than inhibit the development of production and export capabilities in industries with increasing returns to scale and learning-by-doing effects (Krugman, 1984; Dasgupta and Stiglitz, 1988).

The implications of liberalisation are also uncertain in the presence of differentiated products and competition on a non-price basis. The existence of protection encourages production of a greater variety of goods for the domestic market at higher costs of production due to the relatively small scale achieved. Reduction in levels of protection means a rationalisation of the existing firms, with greater specialisation in production in order to attain economies, and increasing intra-industry trade through which consumers can purchase the full range of products.<sup>vi</sup> The net outcome of this process may be a contraction or expansion of domestic industry depending on its ability to adjust and the existence of related market failures, such as in credit allocation.

The existence of dynamic effects, such as in relation to investment in physical capital and human resources, also has important consequences for liberalisation (Dasgupta and Stiglitz, 1988). Learning-by-doing effects are one example of the changing returns, where learning is essentially a sunk cost. This implies that there are social wastes in having more than one production unit, but also that 'history matters' in determining where production is located, and the growth path of any economy. Externalities in technology and skills development, and corresponding market failures (especially in the credit market), strengthen these effects and the case for government intervention. These factors imply that the reduction of protection may discourage firms from entering those sectors with good future potential, particularly if these sectors require long term investments and hence losses must be born in the initial phases.

These considerations are closely related to theories of dynamic, as opposed to static, comparative advantage (Schydrowsky, 1984). Under this framework, the sectors in which a country has an advantage today are determined by industrial development in previous years. Similarly, future returns are influenced by investment and skill development taking place now. As long as there are production externalities, spillovers and linkages between firms and/or sub-sectors, the potential of the economy is not reflected in current market prices. This is particularly the case in sectors where there are sizeable economies of scale, rapid technological development and/or major structural changes occurring (as in South Africa). The existence of these factors mean that planning and co-ordination are required in order for the potential gains to be realised.

All of these factors mean that a firm or industry's success is determined by the interplay of a range of elements over time, while the structure of incentives and returns in one time period do not necessarily reflect the potential returns of an industry. Market failures exacerbate the extent to which present prices are a very inadequate indicator of future comparative advantage. Therefore, while the private sector does have an important role to play, the structure of incentives faced by business is itself an important policy instrument that Government can use in transforming the South African economy.

## **2.2 Evidence from developing countries**

There have been many studies of liberalisation and to some extent a consensus is emerging from which important lessons for South Africa may be drawn. This section first looks at World Bank related studies before reviewing other studies, several of which were stimulated by misgivings about the World Bank's analysis of the evidence. This serves to indicate which factors may be important in explaining South Africa's experience of trade liberalisation, but does not constitute a set of prescriptions. One of the conclusions drawn from most surveys of country experiences is that the specific conditions of countries have a major effect on the outcomes and hence there are no universal lessons.<sup>vii</sup> It is also important to note that different studies of trade liberalisation refer variously to outward orientation, openness, and liberalisation, although there are important distinctions between these stances, as well as in how they are measured and have been achieved in practice (see, for example, discussion in UNCTAD, 1997).



The main reasons for the growing trend towards liberalisation include experiences of poor economic performance in many developing countries and policy prescriptions made by the World Bank, including those based on their documentation of the successful trade and growth strategies in the east Asian rapidly industrialising countries (Dornbusch, 1992). The World Bank's 1987 World Development Report presented the results of analysis of data from 41 countries. Countries were grouped into strongly outward-oriented, moderately outward-oriented, moderately inward-oriented and strongly inward-oriented.<sup>viii</sup> The performance of these groups of countries was compared over two time periods, 1963-73 and 1973-85. It was concluded that outward orientation was correlated with strong economic performance, while inward-oriented countries had performed relatively poorly. A prescription for the liberalisation of foreign trade was then drawn from this.

Many flaws have been pointed out in this analysis. In particular, the strongly outward-oriented group contained only four countries for which a weighted average was calculated, effectively meaning that the group was dominated by South Korea (Evans, 1993). While South Korea's industrialisation has been debated at length, it is clear that there was considerable government intervention in trade flows, and outward orientation in no sense implied a liberalised trading regime (Amsden, 1989 and 1993).<sup>ix</sup> The government co-ordinated different policies including credit allocation to develop productive capacity in targeted sectors, with investment leading growth and exports (Rodrik, 1995; Singh, 1995). This lesson is reinforced by export success in countries such as Turkey, where expansion of non-formal exports from 1980 was due to export promotion measures which preceded import liberalisation (Agosin and Tussie, 1993). In addition, even the World Bank's own classification revealed that moderately inward-oriented countries performed better in many respects than the moderately outward-oriented.

On the basis of more recent World Bank related studies, it has been specifically argued that countries liberalising trade have performed better (Thomas and Nash, 1992). While the gains from reform have generally been found to be small, it is argued that they are larger if the impact on market structure is taken into account. This is not clear, however, as it is argued both that protection may lead to excessive entry of domestic firms (preventing attainment of economies of scale) and, at the other extreme, that it may induce oligopoly behaviour at the expense of domestic consumers. Reviewing previous work, Thomas and Nash(1992) also note that the costs of protection are increased by rent seeking behaviour and smuggling, and that links of trade with growth mean that liberalisation will bring improved productivity (through increased returns to scale, competition, and an accelerated shift to high productivity sectors), and more investment due to the higher return to capital.

From their own statistical analysis of 40 countries receiving trade policy related World Bank loans in 1980-87, Thomas and Nash (1992) conclude that less interventionist countries have been more successful on average in promoting exports and growth, and that therefore countries should switch from non-tariff barriers to tariffs, and reduce tariff rates to relatively low and uniform levels. This matches their view of trade policy reform as a move toward neutrality in production incentives (between exportable and importable goods, domestic and export markets, tradable and non-tradable goods) through liberalisation. These conclusions are, however, not strictly supported by their analysis of the data which instead finds a positive association between exports and GDP growth (minus exports). This is not necessarily support for liberalisation, and the result is less robust for low income countries.

In addition, they acknowledge that reform of quantitative restrictions and introduction of export promotion measures play a larger role than the level and dispersion of tariffs. Thomas and Nash (1992) also identify the maintenance of a stable real exchange rate at a level allowing exports to be competitive as a component of trade liberalisation, allowing them to attribute gains from exchange rate adjustment to trade liberalisation. While it is widely recognised that an overvalued exchange rate will retard exports and growth, paying close attention to this area of macroeconomic policy does not necessarily imply trade liberalisation (Helleiner, 1994). Thomas and Nash (1992) ultimately also attribute the weakness of their results to failures in the implementation of reform programmes, and institutional factors such as rigidities introduced by public sector policies, as well as growing protectionism in international markets for clothing and textiles, agricultural products and steel.

A range of different studies including cross section analysis, time series analysis and econometric modelling have found no substantive evidence for the effects of liberalisation and each of these different approaches is subject to major problems (Clarke and Kirkpatrick, 1992). Studies which compare countries' performance before and after trade policy reform found, after an initial dip, that manufacturing output growth was slightly higher after liberalisation (Michaely et al. 1991) or a statistically insignificant result was obtained for the dummy introduced for reform (World Bank, 1989, referred to in Clarke and Kirkpatrick, 1992: 61). But these studies also attribute all changes in performance over the period studied to the trade reform programme, while a wide range of case studies and econometric studies find that macroeconomic reforms and the international environment have a much more significant effect (Helleiner, 1994; Agosin, 1993; Clarke and Kirkpatrick, 1992).

As argued by Clarke and Kirkpatrick (1992) in their survey of different studies, with-and-without studies comparing reforming to non-reforming countries assume the two groups of countries face the same external environment, and that reforming countries are randomly selected. Clearly these conditions do not hold, while reforms may only be nominally carried out as part of enforced

Structural Adjustment Programmes, or may include the reduction of anti-export bias by export promotion measures on top of import protection, rather than liberalisation. Econometric simulations are also very sensitive to the exact formulations used in the models. These approaches have been used particularly to establish the effect of liberalisation with imperfect competition. There are typically gains from rationalisation of domestic industry, and welfare gains where there was inefficient and oligopolistic domestic industry (Devarajan and Rodrik, 1988).

There is also no clear evidence of a link between productivity and import liberalisation. The strongest relationship is between productivity and output, with a subsidiary relationship with exports (Helleiner, 1994; Pack, 1992). This however does not support liberalisation, as the export growth may be founded on intervention and government support for investment and infrastructure.

As Clarke and Kirkpatrick conclude, there is therefore no conclusive empirical evidence for improved economic performance as a result of trade reform. Instead there is strong support for adopting a case-by-case approach, bringing different theories and experiences from other countries to bear in a careful analysis of a particular country's experience.

A review of case studies in the volume edited by Helleiner (1994) has relevance for South Africa. In brief, poorly performing countries typically have overvalued and unstable real exchange rates, moreover, some countries used the exchange rate as an anti-inflationary tool with negative consequences for exports and for long run macroeconomic stability. There is also no example of countries which have achieved rapid industrialisation through liberalisation, while the experience of South Korea and Taiwan provides evidence that effective government intervention on a selective basis can be a major contributor to industrial development (Amsden, 1989; Wade, 1990).

The growth of output in most countries studied in the volume was found to be due to growth in domestic demand rather than import substitution or exports.<sup>x</sup> Most countries also followed a similar pattern, of growth in intermediate products, consumer durables and capital goods in the 1970s and 1980s. Moreover, the contribution of export expansion was concentrated in particular sectors of manufacturing including garments, electronics and automobiles. In this respect, the reduction of anti-export bias was generally achieved through export incentives building on import substitution policies, rather than by import liberalisation. The counter example to this is Chile, which instituted widespread liberalisation but where export expansion has been based more on agricultural than manufactured products (Agosin and Tussie, 1993). Finally non-trade policies have typically played a very significant role in export success, especially interventions in the financial markets. In order to incorporate the effects of different policies it is therefore best to view trade policy as a subset of industrial policies.

### **2.3 Lessons for South Africa**

The literature reviewed above reveals there is no over-arching support for trade liberalisation from the empirical studies of other countries' experiences, and there is no strong theoretical case for free trade as a first best policy. Instead the picture is much more complex, with detailed analysis of the specific country and sector characteristics required, including industry scale and scope, linkages and production externalities. This implies that, in particular, consideration be given to areas of political economy and the role and capacity of the state, including the ability to discipline subsidy recipients to ensure that they comply with performance requirements (Chang, 1994). The state therefore has a key role to play in industrialisation, but the dangers from poorly designed interventions which favour sectional interest groups are also clear.

Successful export development has been achieved in most countries by building on past industrial and trade policies with export incentives and targeted interventions, including selective policies affecting the allocation of credit, the provision of infrastructure, research and development, and public procurement. Liberalisation has then succeeded export success, although even in South Korea there is still highly targeted protection for advanced technology industries in a process of 'catch-up', which have been identified as industries of the future (Amsden, 1993). This further emphasises the need to assess dynamic factors and influence the conditions required for future development, as well as to recognise early on if plans need to be amended.

Adjustment must therefore not be regarded as smooth or automatic in response to changes in relative prices, and the contraction of sectors as a result of liberalisation may also be damaging to longer run prospects. This has been confirmed by studies which find that the short run job losses are not outweighed by industries which recover and adapt (for example, Shafaeddin, 1995).

It is also clear that tariffs and trade policy must be placed in the wider context of policies affecting economic development. The policies that accompany tariff reform are therefore of critical importance, with a co-ordination of policies necessary to promote broad based growth. Aggregate demand management must be considered in the context of findings that productivity growth is strongly associated with output growth, such that short run macroeconomic management is important for long run development

performance. There are also particular dangers from inappropriate macroeconomic policies such as a volatile and overvalued exchange rate, and there is strong statistical support for the benefits of macroeconomic adjustment to correct this and ensure that domestic production of tradable goods is not penalised.

It is however also wrong to equate the correction of exchange rate overvaluation with a liberalisation of protection to low and uniform tariff levels. By raising the price of imported goods, high average tariffs will have balance of payments implications and will tend to increase the real exchange rate, but selective protection will have less effect especially if it is part of a coherent strategy for industrial growth including export promotion as an integral element. Despite having carefully targeted protection, South Korea maintained a stable and not overvalued real exchange rate (Amsden, 1993). It should also be noted that the exchange rate may equally well be volatile and overvalued for periods due to macroeconomic policies, such as high interest rates to attract foreign capital, or attempts to use the exchange rate as an anti-inflationary device.

All this implies that the trade reform programme should be rooted in an analysis of the specific South African economic conditions, and should be designed as part of a wider policy framework for economic development. It is also notable that sectors which successfully expanded exports in many of the case studies included garments, motor vehicles and electronics (Helleiner, 1994).

### **3. TRADE POLICY AND TRADE LIBERALISATION IN SOUTH AFRICA**

From the literature on the international experience it is clear that a distinction should be drawn between trade reform and trade liberalisation. Excessive and badly structured protection in many developing countries has hampered growth. Recognition of this does not however constitute a case for across-the-board liberalisation, and a careful examination of the empirical evidence provides no support for this.

#### **3.1 Review of previous protection**

In analysing the reform of protection in South Africa it is necessary to first briefly assess the past impact of protection on the economy. Often evidence of the negative impact of past protection in South Africa is used to support broad positions for liberalisation (see, for example, IDC, 1996), although it may equally well support a reform, rather than a reduction, in intervention. The interpretation of South African industrialisation and trade protection is also highly contested (see Fallon and Pereira da Silva, 1994; Fine and Rustomjee, 1996; Joffe *et al.*, 1995; MERG, 1993).

The high levels of protection have been blamed for poor industrial performance in South Africa, as part of a failed attempt to industrialise through import substitution (IS) (Fallon and Pereira da Silva, 1994; Joffe *et al.* 1995). This is to confuse the issue as it would suggest high average levels of tariffs and an industrialisation pattern that moves from non-durable to durable consumer goods, then to intermediate and capital goods. But, average tariffs in South Africa have not been high by international levels, and industrialisation first developed in a core of industries around minerals and mineral processing before consumer goods production developed, in the opposite pattern from that predicted by the IS model (Fine and Rustomjee, 1996). Moreover the structure of protection was not designed with particular industrial policy goals in mind, but arose in reaction to lobbying by firms of the Board of Trade and Industries (BTI).

Despite the South African Government viewing protection as necessary to support infant industries on a temporary basis since at least the Second World War (Fine and Rustomjee, 1996), trade policy was never made part of a co-ordinated industrial strategy, based on exploiting potential linkages between industries. Instead, the BTI, which had responsibility for policy design and implementation on behalf of the Department of Trade and Industry, narrowly equated industrial policy with trade policy. The setting of protection was at its discretion, applied by adjudicating on requests for protection from firms, rather than in a proactive manner. Moreover, there was no reference to effective levels of protection, and no attention was paid to the impact of protection for one industry on other industries downstream. Proactive industrial development was pursued instead by the IDC through financing of large scale mega projects in close collaboration with private sector conglomerates. As discussed in more detail below, the IDC subsequently switched its own emphasis to trade liberalisation and took over the mantle of trade and industrial policy, and the BTI was effectively emasculated and renamed the Board of Tariffs and Trade in 1992. (See Fine and Rustomjee, 1996, for an in depth discussion of the institutional issues.)

The need to reform South Africa's structure of protection had been recognised by the previous Government, and measures liberalising trade had been introduced as early as the 1970s. (A good summary of trade policy reforms since 1970 is given in Bell (1997), from which this brief outline is largely drawn.) The emphasis of the Reynders report of 1972 was on diversification away

from dependence on gold exports through export promotion measures rather than import liberalisation although, under pressure from GATT and the IMF, quantitative restrictions were reduced in the period 1972-76. Quantitative restrictions were further reduced in the mid 1980s, with the proportion of imports subject to them falling from 77 per cent in 1983 to 23 per cent in 1985, and a shift from a positive list (specifying those items which could be imported without approval) to a negative list (those items that could not be imported without approval). Despite the debt crisis of 1985, quantitative restrictions continued to be reduced and by September 1992 applied to less than 15 per cent of tariff items. From September 1985, largely for balance of payments purposes, the Government did however impose a series of import surcharges, with differentiated rates for different categories introduced in 1988. These ranged from 10 per cent on intermediate products to 60 per cent on luxury goods.

From the end of the 1980s there were significant reductions in protection and substantial expansion of export promotion measures. Measures named 'structural adjustment programmes' were introduced for motor vehicles, clothing and textiles, including a system of duty free imports for exporters which implied a substantial reduction in actual duties in some product categories such as low quality, standardised clothing (Altman, 1994). In April 1990 the General Export Incentive Scheme (GEIS) was introduced with a more wide ranging system of export subsidies.

As trade reforms did not include tariff reductions until the 1990s, it has been argued that trade liberalisation is relatively new to South Africa. But, while there was no programme of tariff reductions as such (and applications for tariff increases continued to be considered), there were continuing moves to liberalise quantitative restrictions and to attempt to stimulate exports. In addition, the reduction of import surcharges starting in 1990 and 1991 implied significant liberalisation, especially in view of the differential rates being charged (Table 2).

**Table 2: Import surcharges per product category (% rates)**

Product category	1988	1990	1991	1994	1995
Luxury goods	60	40	40	40	abolished 1/10/95
Capital goods	15	10	5	abolished 23/6/94	-
White goods	20	15	15	15	abolished 1/10/95
Intermediate goods	10	7.5	5	abolished 23/6/94	-

*Source: As in Bell (1997:73), from IDC (1995)*

Excluding the surcharges, the IDC calculated the average existing rate of duty on manufactured goods at 15 per cent in 1994, before the implementation of the GATT negotiated tariff schedule (Table 3). A World Bank Study had found the average rate to be 30 per cent (Belli *et al.* 1993:12). While it has been estimated that about 5 percentage points of the difference with the IDC is due to a different method of estimating the level of formula duties (Bell, 1997), much of the difference is accounted for by import surcharges.

The implementation of the tariff reduction schedule from 1994 under the ANC led government, and their abolition of import surcharges, therefore represented a continuity of the broad trend to liberalisation. It is also mistaken to see the tariff liberalisation as being undertaken only to meet GATT requirements. The tariff reductions proposed go far below the GATT binding levels (Table 3) and are being undertaken on their own merits (Rustomjee, 1996).<sup>xi</sup> Furthermore, despite negotiating longer phase down periods for clothing, textiles and motor vehicles the Government has decided not to make use of the full period agreed and to reduce tariffs below the maximum. For example, while a 12 year phase down period was negotiated for clothing, to a maximum tariff of 45 per cent, the Government is now implementing an 8 year schedule to an average rate of 40 per cent.

Although the average level of protection in the early 1990s was not high by international comparisons, the structure of protection was extremely differentiated, with a high variance in nominal rates and a mix of formula and *ad valorem* duties. While tariff rates broadly rose from intermediate and capital to consumer goods, the averages hide large variation between individual categories. The study by Belli *et al.* (1993) found South Africa to have the greatest number, and the widest range, of tariff rates of their sample of 32 developing countries. While a large proportion of items have zero rates, there were many with high rates, including the highest tariff rate of all countries, of 1389 per cent, on one product item.<sup>xii</sup> The tariff structure was also largely unplanned, reflecting the interests of industry and their ability to lobby effectively, in addition to the surcharges introduced for balance of payments purposes. The variation in rates also made tariffs very difficult to collect, as a change in the weight of a fabric or in the mix between cotton and polyester may mean a different tariff being levied.

Aside from smuggling and false declarations, the collection levels are also much lower than would be suggested by the tariffs set, due to rebates, duty drawbacks and bilateral agreements. This means that the effective level of protection has been lowered by the introduction of schemes allowing duty free importation such as within the structural adjustment programme of the clothing industry (see section 5.1 below).

Under this complex and unstructured protection, South African industry remained highly dependent on imported capital and intermediate products, and on exports of primary resources and beneficiated mineral products for foreign exchange earnings (see section 4.). While this approach appeared inconsistent with the stated industrial development goals of the Government, it was broadly in the interests of the large scale, mineral based conglomerates whose investments were highly co-ordinated with Government development in a number of areas such as transport infrastructure, power generation and subsidised finance through the IDC (Fine and Rustomjee, 1996).

### 3.2 The tariff liberalisation - outline and underlying rationale

The reform of trade policy includes a mixture of rationalisation and liberalisation, as well as a restructured programme of supply-side measures and subsidies to replace GEIS and the sectoral programmes. As it stands the impact of the tariff reduction schedule agreed to by South Africa in accordance with GATT/WTO has serious implications for industry with, as would be expected, the steepest reductions in those sectors previously most heavily protected (Table 3). Moreover, the largest average reductions have occurred in the first year, 1995. The extent of liberalisation is also under-stated by using imports as weights in calculating average levels as, under this method, categories with very high tariffs which deter imports will have a low or even zero weight. Reductions in these high tariff rates will therefore also not be reflected in the average rates calculated.

**Table 3: Changing levels of protection, selected sub-sectors (percent)**

	1994	1995	1996	1997	1998	1999	2000	2001	2002	GATT binding
Clothing	74	72	67	62	57	51	46	41	36	41
Motor vehicles	51	42	40	37	35	33	31	29	27	40
All Industry	15	11	10	9	9	8	8	7	7	16

Source: IDC

Notes: <sup>1</sup> Average rate of import duty calculated using 1995 imports as weights, and may differ from other estimates.

<sup>2</sup> The tariff levels include estimates of formula duties but exclude import surcharges

The schedule of tariff reductions was agreed in the National Economic Forum (NEF) before the ANC Government took power, but the programme was based on a consensus of which the ANC was part and it is possible to identify the objectives and principles which underlie the programme. The development of the proposed tariff reduction schedule also coincided with an increasing role for the IDC and the impact of the reform has been assessed using an IDC model. The aims and principles of the tariff rationalisation programme, as approved by the NEF have been summarised by the IDC in a report, 'The Tariff Rationalisation Process' presented to parliament's Portfolio Committee on Trade and Industry, 30 September 1996.

The IDC's presentation places the tariff reform as part of shifting the emphasis from inward to outward (or export) oriented industrialisation, in line with the perceived examples of the east Asian rapidly industrialising economies, the WTO imperatives, and 'globalisation'. The aims are stated as :

- To transform the existing system based mainly on requirements of import replacement to one supportive of continued upgrading of competitiveness, facilitating:
  - better export growth;
  - stronger resilience against import competition; and
  - a better deal to the consumer.
- More stable tariff to promote certainty and a more stable business environment.
- Simplified, uniform and transparent tariff.
- Reduction in anti-export bias.
- Rationalisation must be pragmatically implemented.

(IDC, 1996. Emphasis in the original)

The submission to the Portfolio Committee by Dr. Zavareh Rustomjee, the Director General of the Department of Trade and Industry, puts similar weight on the beneficial effect of openness to international markets and the need to be competitive, but also outlines the economic rationale on which the programme is based, at least under the new Government. This is broadly reflective of the approach taken by the ISP (Joffe *et al.*, 1995). Tariff reductions are viewed as a necessary part of a broad restructuring of industry which, with some exceptions, is not internationally competitive. The underlying aim is to change the orientation of industry towards a form of competition based on investment in new technologies, human resource development and therefore an improved competitiveness consistent with rising wage levels and rising productivity. It is anticipated that jobs will be lost in low-wage, low-skill industries to other countries in the region, and that there will be downsizing and retrenchments during the adjustment, with the extent depending on the speed with which companies adopt new methods of work organisation and co-operative structures required to expand exports.

It is further emphasised by Rustomjee (*Business Day*, 14 February, 1997) that the tariff reform is required for South Africa's industrial development, and is not being pursued merely because of the GATT agreement. New investments in the motor vehicle and textile industries (two of the hardest hit industries) are cited as evidence for the positive effects of tariff reforms in forcing industry to be competitive. The tariff reform is also credited with helping to bring inflation down to single digit levels, and so positively affecting the cost of living for the poor and unemployed. The package of supply-side measures outlined in 1995 are seen as the basis for industrial development. These are discussed in detail in Section 6. below, along with the wider policy implications of trade reform.

### 3.3 Some issues related to different meanings of 'competitiveness'

It is common for reference to be made to the 'competitiveness' of the South African economy or South African industry, often alongside reference to the imperatives of globalisation, without specifying what is meant by this term. At a national level competitiveness has little meaning as it seems to view world trade in conflictual terms. Instead trade more closely resembles barter, and exports are important for growth as they enable increased imports and relax the balance of payments constraint.<sup>xiii</sup> In this vein, Rodrik (1995) has demonstrated that increased imports and investment actually preceded, and were required for, export growth in South Korea. In clarifying the conceptions of competitiveness and export-led growth as quite distinct from liberalisation, several factors must be considered in the specific case of South Africa.

First, key realities of the structure of the South African economy must be recognised. As long as South Africa has advantages in mining and agriculture then it will be a net importer of manufactured products (assuming no persistent large deficits on the services and capital accounts). This implies that a natural resource endowment can have a negative effect on industrialisation prospects, in what has commonly been termed the 'Dutch Disease' effect.<sup>xiv</sup> However, this should not be interpreted as a counsel of despair for industrialisation strategies. While South Africa will remain a net importer of manufactured products, a given manufacturing trade balance can be consistent with any growth rate and growth in exports should not be confused with the net trade balance. Careful macroeconomic management is also required, especially of the exchange rate and foreign exchange reserves, to counter the effect of natural resource exports on manufacturing.<sup>xv</sup>

Second, preoccupation with exports tends to lead to misidentification of the central challenges. Competitiveness in a given manufacturing sub-sector is derived from improved production capabilities and, while there is broad consensus that the level and nature of investment is central to growth, the relationship of trade to investment is unclear and evidence on whether trade liberalisation itself stimulates investment is highly contested (Clarke and Kirkpatrick, 1992). Similarly, as referred to above, international studies have found industrial productivity to be closely correlated with output, rather than trade (Pack, 1992; Helleiner, 1994) and similar results have recently been found for South African manufacturing (Wittenberg, 1997). These results suggest that dynamic considerations related to growth, and issues such as externalities and linkages between sectors, are very important in the development of relative capabilities over time. If South Africa is to develop production of intermediate goods, and machinery in particular, then consideration must be paid to these factors.<sup>xvi</sup>

Third, selective and sector specific Government interventions are required to improve the competitiveness of manufacturing. In contrast, the tariff rationalisation programme reflects a move towards a uniform tariff. The ISP adopts a similar approach to selectivity, limiting it to being 'functional' in nature and 'market friendly', the term used by the World Bank study of east Asian industrialisation (Joffe *et al.*, 1995; World Bank, 1993). This essentially means either ignoring the significance of widespread market failures and placing faith in the market for the determination of present and potential comparative advantages, or arguing that the Government does not have the capacity to design and implement interventions. It is notable that critiques of the World

Bank study have established that Government intervention was not ‘market friendly’ in countries such as South Korea, but that Governments strategically and selectively manipulated incentives (Lall, 1994). A major challenge is therefore to restructure Government institutions in order that they may design and implement the active industrial policy required for development.

Fourth, there is confusion around the role and effect of the exchange rate. It is variously stated in the IDC and DTI documents that the depreciation of the exchange rate in 1996 was to be expected, that the depreciation mitigated the effect of tariff reductions on industry, that tariff reductions are a factor explaining lower inflation, that the depreciation could be inflationary if it feeds through to wages, and that it provides an opportunity for acceleration of the liberalisation schedule. This confusion is worrying as, on the basis of the international evidence presented above, the exchange rate has proved more important than tariff reform in explaining countries’ economic performance.

It is important to distinguish reference to the overall price level from changes in relative prices. The reduction in tariffs reduces the price of imports relative to domestically produced products. While this reduces prices of some goods in the consumer price index basket, this does not reduce inflation as such (which measures the ongoing rate of increase in prices).<sup>xvii</sup> In addition, the reduction in tariffs will probably be associated with a depreciation in the exchange rate, raising the price of tradables relative to non-traded goods. The net effect on the price level is therefore a combination of these effects, and indeed one of the points of reform is to raise the incentive to produce exportable goods, whose relative price has risen due to the exchange rate effect.<sup>xviii</sup> The tariff reduction may be viewed as having an anti-inflationary effect in South Africa during 1995, as the strength of the Rand was maintained by capital inflows (with it becoming increasingly overvalued in real terms, to the detriment of domestic producers). But, this exchange rate could not be maintained as the current account went into deficit, and the subsequent sharp downward adjustment in the Rand’s value led to inflation rising back towards 10 per cent.

A further important clarification is that the effects of the changes in relative prices (the combined outcome of changes between prices of imports and domestically produced goods, and tradables versus non-tradables) are not uniform across sectors. In sectors which were relatively unprotected, tariffs have been reduced by a relatively small amount. These include intermediate and capital goods such as machinery which, according to the IDC, had an average tariff of zero in any case. This means that domestic purchasers have not gained access to cheaper (world-priced) inputs as they were at world prices in any case, while the Rand price of these products has increased because of the exchange rate effect. This reflects the desire to stimulate production, both import competing and for export. The stated aim of liberalisation as allowing access to cheaper inputs therefore depends on real wages falling through depreciation, although it may be much easier to lower labour costs by raising productivity.

#### **4. CROSS SECTORAL ANALYSIS OF MANUFACTURING TRADE, PRODUCTION AND EMPLOYMENT**

After a brief overview of the composition of trade flows, this section undertakes a cross-sectoral analysis of the performance of manufacturing sub-sectors in relation to trade, production and employment. It starts by analysing the export success of certain sub-sectors in recent years, then analyses a measure of net trade performance before assessing changes in employment and production at the sub-sectoral level. In this way it attempts to draw insights into the processes underlying the aggregate outcomes in manufacturing, and to evaluate the relationship between changing patterns of trade and changes in production and employment in a test of the ‘export-led’ growth model in the context of trade liberalisation. An understanding of these processes and relationships may also point to implications for industrial policy in the context of the ongoing liberalisation programme.

##### *A note on data reliability*

There are a number of issues of data reliability which are particular to Southern Africa. For the purposes of the following analysis, perhaps the most important is the unreliability of data on trade flows. The tariff rates decided upon by South Africa are applied to the South African Customs Union (SACU) as a whole and the tariffs are levied at the point of entry into SACU rather than on entry to the member countries.<sup>xix</sup> This is one reason why the accuracy of data on South African (as opposed to SACU) trade flows has been strongly questioned by organisations including the IDC. Other factors such as the ‘re-routing’ of South African exports via other SACU member to avoid sanctions also give reason to doubt the South African trade data (Wood, 1995). It was therefore decided to use trade data for SACU as a whole, provided by the IDC. This is also consistent with an examination of trade liberalisation, as the tariff measures apply at the SACU borders and not to trade between SACU members.<sup>xx</sup> However, it is problematic for analysing the relationship of trade flows to production and employment for which data are for South Africa only.<sup>xxi</sup> While South Africa does account for the great majority of SACU economic activity, especially in manufacturing, the

possible effects of trade liberalisation on production and employment in these countries, which are not picked up here, should be born in mind.

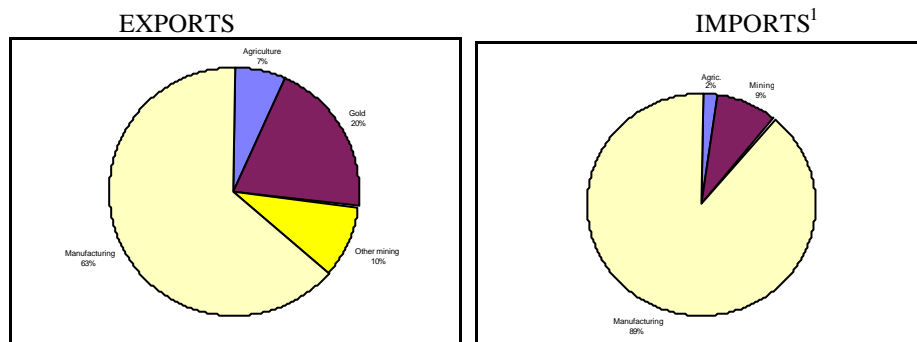
A further consideration particular to South Africa is the incorporation of employment data for the former 'homelands' as from January 1996. This is indicated as a break in series where appropriate, while annual rates of increase have been calculated for 1996 by using the increase from January to December 1996.

There have also been reports of high levels of smuggling and misclassification of products in order to qualify for lower import duties, and the trade data will also be affected by transfer pricing of goods which are traded intra-firm. No attempt has been made to correct for these factors due to the difficulties in doing so effectively. It should also be born in mind however that, as much of the following analysis is of changes over the period in question, these data problems will only seriously affect the analysis where their significance has changed greatly over time.

#### 4.1 Overview

The breakdown of SACU merchandise imports and exports reveals the relative importance of primary products in comparison with manufacturing (Figure 4). In 1996 manufacturing exports were R75 billion, just 63 per cent of total merchandise exports, while gold accounted for 20 per cent and other mining for a further 10 per cent. In contrast, imports of manufactured products were R104 billion, accounting for 89 per cent of merchandise imports. At this level of aggregation, the existing trade flows therefore suggest that SACU has a relative disadvantage in manufacturing.

**Figure 4: SACU Merchandise trade, 1996**



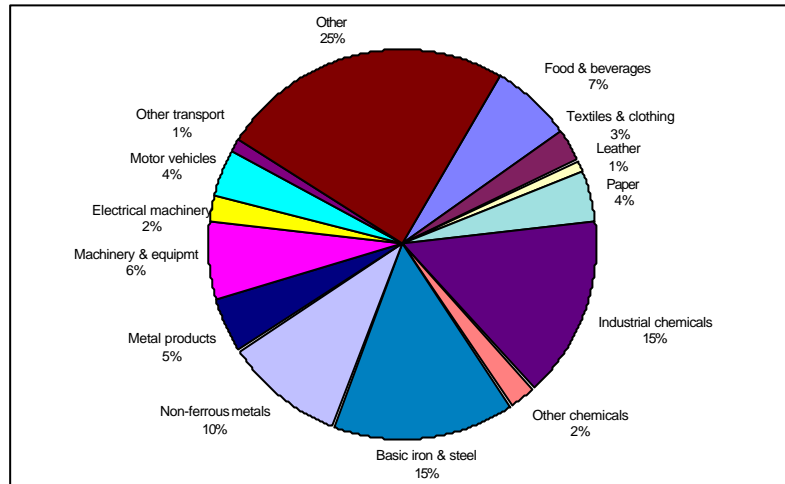
Source: IDC

Note: <sup>1</sup> Mining imports are almost entirely oil

Furthermore, a more detailed analysis of sub-sectors within manufacturing reveals that mineral processing and closely related industries account for a large proportion of the total (Figure 5). Fine and Rustomjee have termed these sub-sectors the 'minerals-energy complex' (MEC), which collectively accounted for 44 per cent of manufactured exports in 1996.<sup>xxiii</sup> While this definition may appear too wide to be useful, they demonstrate that sub-sector linkages, corporate structure, as well as specific Government interventions, all mean that the development of these sub-sectors can only be understood as part of a wider pattern of industrialisation. The state has been directly (through ownership) or indirectly involved in the development of the three leading MEC sectors of basic iron and steel (dominated by Iscor), industrial chemicals (centred around Sasol's petrochemicals complex), and non-ferrous metals (developed through large IDC loans). Moreover these interventions have been coordinated with Escom's power supply and the development of transport infrastructure.<sup>xxiii</sup>

**Figure 5: SACU manufacturing exports, share of major sectors**

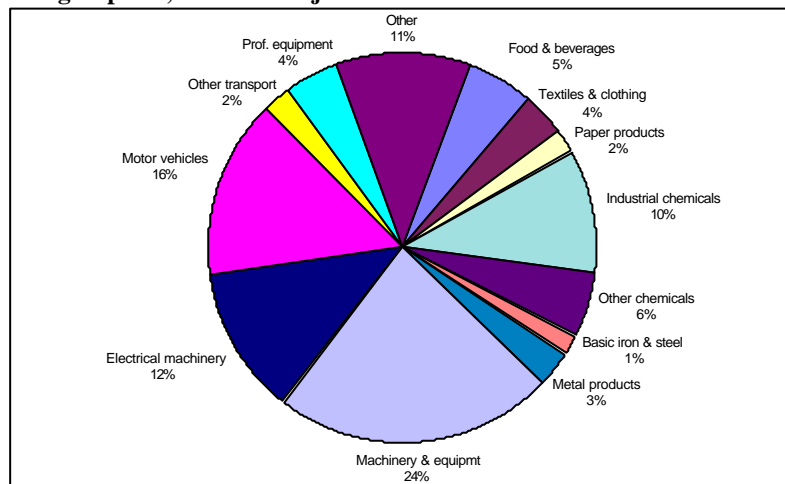




Source: IDC

Taking these factors into account, non-MEC manufacturing is only slightly more than one third of all SACU merchandise exports, while even this includes 'other manufacturing' which is almost entirely diamonds and amounted to 19 per cent of total manufacturing exports in 1996. Furthermore, other sub-sectors of manufacturing which are closely related to primary products, such as pulp and paper, leather, and food and beverages also have significant shares in manufacturing exports. In addition, the MEC sectors tend to be dominated by large corporations and trade takes place in concentrated markets.

**Figure 6: SACU manufacturing imports, share of major sectors**



Source: IDC

In contrast, SACU countries are heavy importers of mechanical and electrical machinery and motor vehicles (Figure 6). Given inflexibilities and lags in responses to changing relative prices, the dependency on imports of intermediate and capital goods implies that periods of growth tend to lead to sharp increases in imports placing pressure on the balance of payments, as has been experienced in South Africa. Theories of dynamic comparative advantage also suggest that development of production in these sub-sectors is particularly important in order to attain benefits associated with positive externalities from technological development, economies of scale and scope, and learning effects over time. Increasing manufacturing productive capacity, particularly in intermediate goods whether for export or for the domestic market, is therefore central to raising long-run economic growth in South Africa.

#### 4.2 Comparative trends in manufacturing trade, production and employment

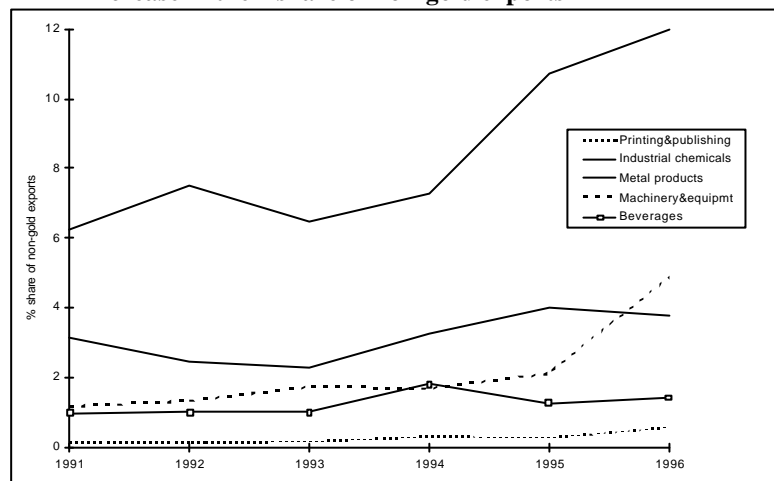
No clear pattern emerges from an analysis of the data on manufacturing performance since 1991. Instead a complex set of considerations, including structural and sub-sector specific factors must be evaluated in order to interpret the trends. Exports have indeed increased, but in many sub-sectors increases have been associated with falling demand, and contraction rather than growth.

Overall manufacturing growth has been unimpressive with aggregate employment levels falling. Far reaching linkages and the history of state intervention in mineral and chemical related sub-sectors also remain important explanatory factors. This section starts by reviewing manufacturing export performance before calculating a relative measure of net trade (taking imports into account). The linkages between trade performance, production and employment are then analysed in more detail at a subsectoral level to attempt to comprehend changes in the structure of manufacturing industry over the period.

### Export performance

As already noted, overall manufacturing exports have been growing in significance, with the growth due largely to a few main sub-sectors (Figure 7). The single most important area of growth has been in industrial chemicals, followed by the machinery and equipment sub-sector, which grew especially strongly in 1996, appearing to provide support for the export-led growth position through liberalisation. A slightly different pattern emerges if the proportional increase in the shares of sectors is assessed. Printing and publishing exports grew by the largest proportion, from 0.1 per cent of total non-gold exports in 1991 to 0.6 per cent in 1996, followed by the machinery and equipment sub-sector which quadrupled its share. Other sectors whose share in total exports increased by more than half include tobacco products, footwear, leather products, rubber products and plastic products. Various reasons for the performance of these sectors are explored below.

**Figure 7: SACU manufacturing exports, best five performing sectors measured by the absolute increase in their share of non-gold exports**



Source: IDC

The export performance of machinery and equipment appears encouraging, while four of the sub-sectors which have performed well in both relative and absolute terms fall within the MEC (industrial chemicals, metal products, rubber products and plastic products). This might appear to provide further superficial support for the predictions of orthodox trade theory that gains will be derived from specialisation in areas of comparative advantage. But, overall there has not been the increasing specialisation between sub-sectors within manufacturing which would be expected by this type of analysis. Using a measure of sub-sectoral export concentration, manufacturing exports appear instead to have diversified slightly at this level of aggregation. The Herfindahl index for manufactured exports decreased slightly from 0.12 in 1991 to 0.11 in 1996.<sup>xxiv</sup>

How much of the increase in exports can be attributed to the liberalisation? The sub-sectors whose shares increased are all those in which levels of protection were already relatively low, and so the original structure of protection was biased against production in these areas (in a general equilibrium type framework). But, this framework suggests that liberalisation will lead to resources moving into production for the domestic market in these sub-sectors, rather than for export, while the framework also assumes close to full employment and that firms freely respond to incentives. In addition, if anti-export bias is narrowly defined as the increased incentive to produce for the domestic over the international market, then it would be expected that incentive effects from correction of the bias (and increased exports) would be greatest in those sub-sectors with the highest original tariffs. This is the opposite to what has been observed. In addition, it is also the case that several of the sectors with increased export shares are those in which there has been significant ongoing state involvement and investment, such as industrial chemicals (Fine and Rustomjee, 1996; Fine, 1997). There are therefore a variety of explanations which underlie the changes, as will be discussed below.

Recourse to factors which go beyond the simple price incentive effects of tariffs to explain the data opens up the need for detailed sub-sector specific analysis and is therefore not consistent with the simple case for liberalisation. In this respect, consideration also needs to be taken of economies of scale and linkages. As might be expected in the presence of economies of scale, product differentiation and imperfectly competitive markets, there are indications in several sub-sectors of increased intra-industry trade, with implications for the nature of production and employment effects arising from adjustment and specialisation within (rather than between) sub-sectors. For example, in the machinery and equipment sub-sector the growth in SACU exports has occurred alongside the sustained high level of imports, while South African production has increased only slightly and employment has fallen suggesting a significant reorientation within the sector (Figure 7 and Table 4). This implies that there has been a shift to production in segments with a higher labour productivity (probably due to utilisation of higher skill labour, increasing capital intensity or a combination of both) and/or the realisation of economies of scale through specialisation, but to the detriment of overall employment.

As noted above, the increased exports of metal products and industrial chemicals, as well as in the rubber and plastics sub-sectors, reflect the industries at the core of South African manufacturing. Using the MEC model to interpret recent trends does not imply that whole sub-sectors are part of the same 'complex', but that linkages between firms and plants are important for their development. The MEC model is therefore consistent with there also being significant imports in these sub-sectors, reflecting relatively balanced trade in industrial chemicals and metal products, and an overall deficit in plastics and rubber. This suggests product differentiation and that the basis for trade is sub-sectoral factors relating to linkages, specifically with the Sasol complex in South Africa (Fine and Rustomjee, 1996) rather than Heckscher-Ohlin type factor endowments. For example, in the industrial chemicals sub-sector, the main product group of exports is petroleum oils, other than crude, followed by pesticides and fertilisers, while aluminium oxides and hydroxides are the main imports (IDC, 1996b). However, in other sub-sectors such as rubber, the same product group accounts for both the main exports and imports (new rubber tyres) suggesting a high degree of differentiation by brand name and quality, as well as oligopoly trading conditions.

**Table 4: Summary data for manufacturing sub-sectors<sup>1</sup>**



	% of manu- f output, 1996	% of manu- f exports, 1996	Avg. ann. output gr. 1990/1 996	Avg. ann. empl. gr. <sup>2</sup> 1990/ 1996	Output:labour ratio, 1996 <sup>3</sup> (R'000's/empl.)	RCA 1996	Change in RCA 1996-91	Avg. tariff reduction 1994- 96 <sup>4</sup>
Processed food	9.7	5.0	-0.3	-2.2	35	-0.15	-0.29	3
Beverages	3.2	1.8	-1.0	-3.5	64	0.27	0.27	4
Tobacco products	0.2	0.2	-3.1	-5.6	54	0.49	0.80	0.3
Textiles	3.7	2.2	-0.3	-7.2	29	-0.32	-0.03	1
Clothing	3.0	0.6	0.3	(3) 1.3	12	-0.08	-0.08	23
Leather products	0.5	1.0	(6) 1.2	-4.9	38	0.11	0.34	2
Footwear	0.7	0.1	-5.5	-3.5	17	-0.79	0.07	1
Wood&wood products	1.9	0.4	0.5	(5) 1.0	20	-0.43	-0.09	10
Furniture	1.3	0.7	0.9	(6) 0.7	17	0.54	-0.11	2
Paper products	5.3	4.3	0.1	-0.3	72	0.22	-0.05	1
Printing&publish- ing	3.6	0.7	-0.2	(4) 1.4	43	-0.24	0.55	1
Industrial chemicals	6.7	15.2	(5) 1.3			0.02	0.35	5
Other chemicals	5.9	2.0	(4) 1.5	-1.7 <sup>6</sup>	124 <sup>6</sup>	-0.60	0.09	6
Petroleum&Coal products	9.6		(2) 6.0					
Rubber products	1.3	0.7	-1.8	-0.6	45	-0.42	0.17	11
Plastic products	3.0	0.6	(3) 2.4	(2) 1.7	40	-0.51	0.16	7
Pottery	0.1	0.1	-4.4			-0.75	-0.08	2
Glass&glass products	1.1	0.3	-1.5	-0.8	68	-0.43	-0.16	3
Non-metallic min. prods. <sup>7</sup>	3.6	0.7	-0.8	-2.8	35	-0.27	0.06	3
Basic iron & steel	6.7	15.4	-1.4	-5.3	70	0.77	-0.02	3
Non-ferrous metals	4.5	10.1	(1) 9.9	-6.0	201	0.74	-0.05	0.3
Metal products	6.9	4.8	-0.1	-2.5	34	0.04	0.18	4
Machinery & equipment	5.1	6.2	0.7	-3.4	42	-0.68	0.23	5.5
Electrical machinery	4.9	2.4	-1.4	(1) 4.5	29	-0.76	-0.19	6
Motor vehicles	5.8	3.7	0.4	-1.6	44	-0.71	-0.01	32
Transport equipment	0.7	1.2	-7.2	-7.8	36	-0.43	0.35	2
Prof. equipment	0.4	0.8	(7) 1.1	-1.3	31	-0.78	0.08	7
Other manufacturing <sup>8</sup>	0.6	18.9	-3.0	-3.4	15	0.66	-0.08	3
TOTAL	100.0	100.0	0.7	-1.6	44	-0.17	0.04	9

Source: Calculated from CSS, IDC data

Notes: <sup>1</sup> Production and employment data are for South Africa; trade data are for SACU.

<sup>2</sup> The break in series due to the inclusion of TBVC data from January 1996, means that the average annual employment growth was calculated from a composite of employment growth from mid 1990 to mid 1995, and the growth in employment from January to December 1996.

<sup>3</sup> Output:labour calculated from 1996 production (in constant 1990 prices) and June 1996 employment.

<sup>4</sup> Percentage points reduction in average tariff levels from 1994 to 1996, IDC (1996b). Average tariffs are import weighted, which implies understatement of protection levels, as prohibitive tariffs (no imports) will not be included in the average.

<sup>5</sup> Ranking given in parentheses.

<sup>6</sup> Reclassification of employment data for chemicals makes it impossible to have series for each sub-sector, and data for employment and output:labour ratio are for all chemicals.

<sup>7</sup> Includes pottery for employment and output:labour ratio

<sup>8</sup> This includes diamonds which amount to 87 per cent of exports in this sector and include diamond exports from Botswana.

Differentiation of exports by the country of destination as well as by product category also appears to be an important factor underlying the successful export performance of many sub-sectors. In the majority of the sub-sectors recording significant increases in exports, southern African countries are the first or second largest buyers (IDC, 1996b). Most notably, in the first half of 1996, approximately 50 per cent of printing and publishing exports went to Malawi, Zimbabwe and Zambia, while tobacco product exports were almost entirely to Mozambique and Angola, and over 20 per cent of machinery exports were to Zimbabwe, with Zambia in third place accounting for almost 8 per cent. In industrial chemicals Spain is the largest destination followed by Zimbabwe, with Mozambique fifth.

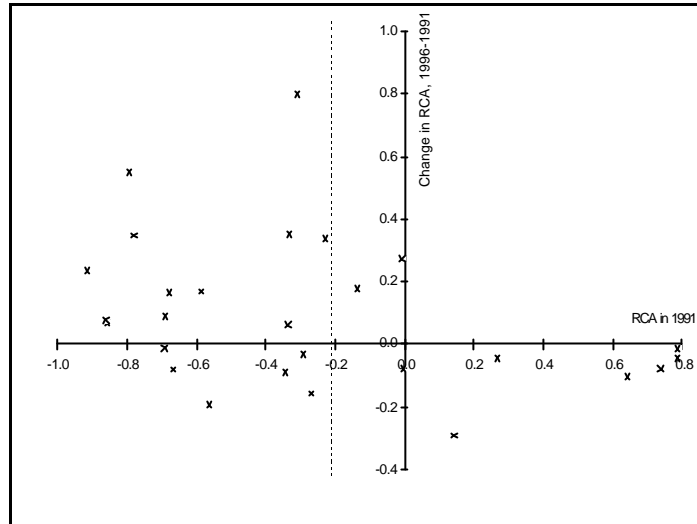
### *Revealed comparative advantage*

Calculation of a net export measure takes imports into account and reveals shifts in the relative balance of trade between manufacturing sectors. This is sometimes termed an indicator of 'revealed comparative advantage' (RCA) on the assumption that a country has a comparative advantage in products where exports exceed imports, and vice versa.<sup>xxv</sup> It is however a purely descriptive measure, with at one extreme a value of 1 indicating exports, but no imports, and at the other extreme a value of -1 indicating only imports, and 0 indicating balanced trade. For SACU, this ratio is most favourable (highest) for basic iron and steel (at 0.77 in 1996) and poorest (most strongly negative) for footwear (at -0.79) (Table 4). That a majority of observations have a negative RCA reflects the overall deficit in manufacturing trade (as indicated, total manufacturing had a net export ratio of -0.17), as well as that South Africa's strengths in trade in manufactured products are in larger sectors such as those related to mineral processing.

By assessing changes in the RCA measure over time it is possible to discern sub-sectors in which there has been a strengthening of the trade performance of SACU countries even although a sizeable trade deficit may persist. There is also no implicit bias to exports in this, as the measure may improve as a result of reduced imports due to increased import substituting production for the domestic market. Thus, while it is clear that the SACU countries have large trade surpluses in product categories such as basic iron and steel, and non-ferrous metals, the trade performance of other sectors has been improving if we compare the net export measure in 1996 to that in earlier years. Careful analysis of the net trade performance reinforces the observations made above, that increased trade does not appear to have stimulated growth (sometimes it appears only to have ameliorated decline), and that sub-sector specific factors are important for understanding recent manufacturing performance. The disaggregated analysis also emphasises the dangers of separating trade performance from other economic outcomes.

It can be immediately observed from a cross sector comparison that there is no significant relationship between the level of net exports and the change in the ratio over the period (Figure 8).<sup>xxvi</sup> This implies that the trade performance of those sub-sectors in which SACU countries had an existing comparative advantage did not benefit from the reform of protection (and thereby exhibit a further strengthening of the RCA measure).<sup>xxvii</sup>

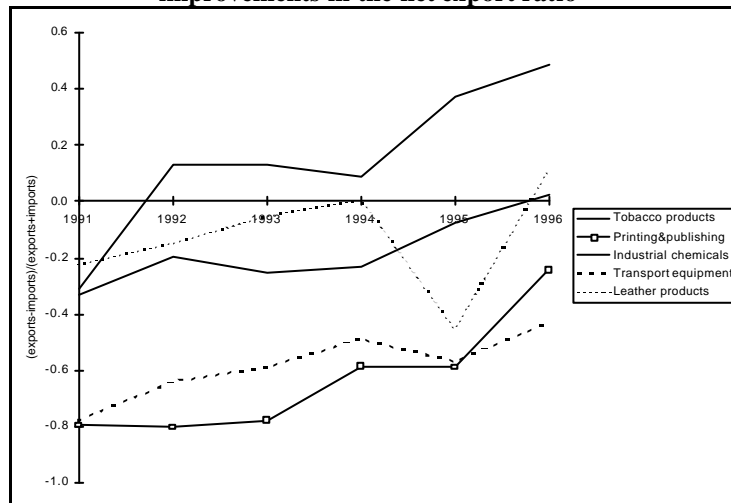
**Figure 8: Net export ratio and changes from 1991 to 1996**



Source: Calculated from IDC data  
 Note: Dashed line indicates the RCA for total manufacturing in 1991.

The RCA of several sub-sectors did improve considerably over the period (Figure 9). These include the industrial chemicals sub-sector in which (as noted above) exports increased considerably, and printing and publishing where, although exports remained less than imports in 1996, they increased at a much greater rate, implying improved competitiveness and greater external demand for domestic production. In addition, the share of imports in total manufacturing has fallen in the latter sector implying an increased ability of domestic producers to meet domestic demand. The increased trade in printing and publishing also reflects increased differentiation of these products, by both product type and destination. As noted above, the largest markets for SACU exports are Malawi, Zimbabwe and Zambia with the largest increase in exports from 1995 to 1996 being in the product category of registers, account books, note books and order books, while imports come predominantly from the US and UK.

**Figure 9: SACU manufacturing trade performance: best five performing sectors, as measured by improvements in the net export ratio**



Source: Calculated from IDC data

But, most of the sub-sectors in which net exports have been improving have experienced decreasing production (Table 4). For example, the apparent improvement in printing and publishing trade performance took place in the context of lower output in South Africa in 1996 than in 1991. Another example is the transport equipment sub-sector. Its improved trade performance at first glance might suggest an increased ability on the part of domestic producers to compete with imports, which fell from 5.4 per cent of total manufactured imports in 1991 to 2.2 per cent in 1996. However, production in South Africa has fallen by more than a third over the period, and the overall performance of the sector instead appears to reflect much lower demand due to falling investment in transport (largely by Transnet<sup>xxviii</sup>), and an inability of industry to adjust to the increased incentives to export. In other words the exact opposite of the export-led growth model.

It may be argued that the success of the leather products sub-sector constitutes export-led growth in an area of manufacturing commonly believed to be labour intensive and representing beneficiation of primary products. However the success largely reflects one specialised product item, leather seat covers (for cars), and has coincided with a decline in employment in the sub-sector as a whole. The strength of sectors closely related to agriculture (tobacco, beverages) might further suggest the importance of linkages with primary products.<sup>xxix</sup> But while the explanation of increased downstream processing may hold for beverages, which are dominated by wine exports, the improved trade in tobacco products has a different basis. Exports increased dramatically from almost zero in 1990 to R146 million in 1996, but over the whole period production and employment were contracting. It therefore appears as if exports, and in particular the exploitation of new regional markets in Angola and Mozambique has allowed the maintenance of domestic production capacity to an extent, in the face of increased imports.

Sectors also performing well in terms of improvements in the RCA measure include (after beverages) machinery and equipment, metal products, rubber products and plastics. All of which (except metal products) continued to have a revealed disadvantage in 1996, with improvements in their RCA on the basis of increased exports to offset persistent high levels of imports. This implies increased intra-industry trade, which may be explained by new trade theories based on differentiated products and economies of scale.

The experience of the metal products sub-sector suggests an alternative process at work. The improvement in trade performance was based both on a dramatic rise in exports and a fall in the relative share imports, in what appears to be a case of a comparative advantage based on increased beneficiation (an explanation advanced by the IDC, 1996a). But production was lower in 1996 than in 1990, suggesting that either in some product categories exports are a residual, and strengthen in times of contracting domestic demand, or that there has been a rationalisation of products resulting in a net decline in output.

The experience of South Africa is consistent with research into the success of the east Asian NICs (discussed in Section 2.), which found that trade performance was based on differential patterns of integration with the world economy as part of a coherent industrialisation strategy, not the operation of the liberalised market mechanism. Sub-sector specific factors were very important in explaining export success, which was also based on investment in industrial capacity (see for example Singh, 1995).

In addition, given the widely reported lack of coherence and inconsistencies in South Africa's structure of protection, it must also be asked why performance has not been much better, if only because of rationalisation and simplification.

### ***Production and employment***

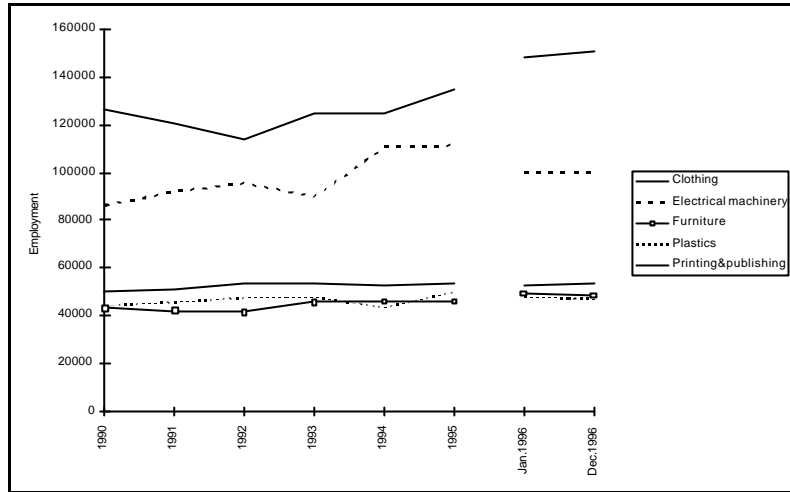
The reform of trade protection has coincided with major restructuring in manufacturing production and employment in South Africa, as illustrated at the outset of this paper. In particular, employment has continued to decline despite a recovery in production from 1993. Comparison of the trends in employment and production reveals that those sectors with large increases in production are not the same as those in which there has been net job creation (Table 4). The five manufacturing sub-sectors with the largest (proportional and absolute) increases in production (at constant 1990 prices) are all heavy industry associated with mineral processing. The fastest growing sub-sector (non-ferrous metals) recorded increases in production of 25.6 per cent in 1995 and 43.1 per cent in 1996, largely as a result of the Alusaf project coming on stream. These sub-sectors, together with basic iron and steel, and other non-metallic minerals, have accounted for an increasing share of manufacturing production, reaching 40 per cent in 1996. But, only one of these sub-sectors (plastics) has experienced net employment creation over the period, and there have been major job losses in several sub-sectors.<sup>xxx</sup>

In contrast to these industries, production in several manufacturing sub-sectors remains significantly below the 1990 levels, despite the upturn in economic activity in 1993, with the largest contractions in transport equipment, footwear, pottery, tobacco products and rubber products. Sub-sectors in which output has contracted also include electrical machinery which recorded the largest average rise in employment and, in general, the six sub-sectors in which there has been net employment creation have had low or negative output growth (with the exception of plastics). This suggests differential effects within these sub-sectors leading to increasing labour intensity of production, such as experienced in printing and publishing with a move towards more standardised products, exported to the region.

This is reflected in analysis of sub-sector employment patterns, with some sub-sectors experiencing significant increases in employment.<sup>xxxi</sup> Of these, the largest absolute increases since 1990 have been in clothing and electrical machinery, although even in these sectors, there have been major reductions in employment in some years (Figure 10).

**Figure 10: Manufacturing: five best performing sectors by absolute employment growth, 1990-1996**





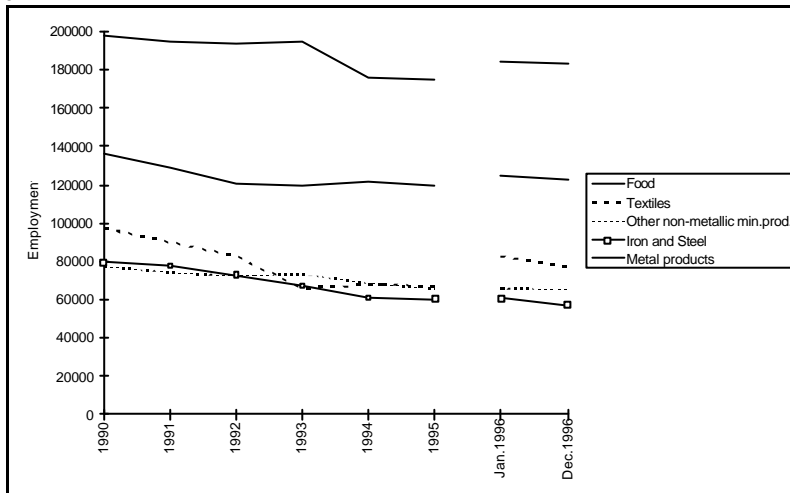
Source: CSS

Note: <sup>1</sup> All data are as at end June, except 1996

<sup>2</sup> Break in series is due to TBVC employment being included in 1996

The overall lack of employment creation across manufacturing is emphasised by the almost negligible changes in employment in the three sectors with the next best employment records and, in contrast, there have been major job losses in some sectors over the same period, especially in food and textiles (Figure 11). The increase in the employment level from 1995 to January 1996 for these sectors further indicates that they accounted for significant employment in the former TBVC regions.

**Figure 11: Manufacturing employment by sector: five worst performing sectors, by absolute employment growth, 1990-1996**



Source: CSS

Notes: <sup>1</sup> All data are as of June, except for 1996

<sup>2</sup> Break in series is due to TBVC employment being included in 1996

<sup>3</sup> Reclassification of the 'industrial chemicals' and 'other chemical products' sectors to 'coke oven products' and 'chemicals' in 1993 prevents the inclusion of the series, although the broad chemicals sector, including petroleum coal products, had 13000 fewer jobs in December 1996 than in 1990.

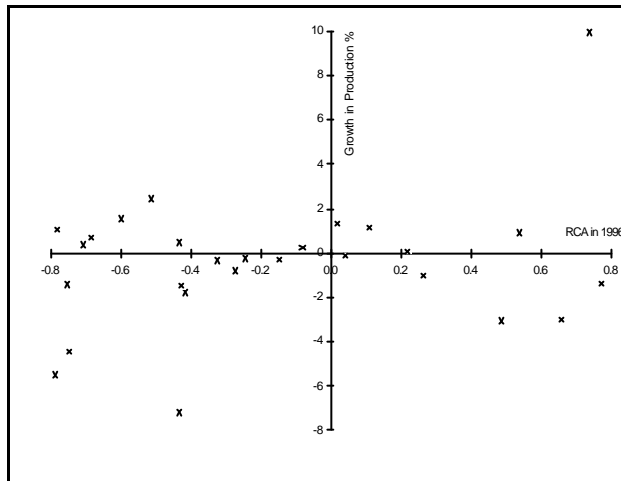
Employment creation in both clothing and electrical machinery has been associated with a decline in the net export ratio. Especially in electrical machinery, there appears to have been a restructuring of production, due to a mixture of domestic and international factors. Production fell sharply from 1990 to 1993, due largely to domestic demand factors (with no significant increase in imports), before rising in 1994 and 1995 (some for export), while in 1994 employment increased by over 23 per cent. Exports, production and employment all contracted sharply in 1996 compared with 1995, along with the deterioration in the net export ratio. Clothing is examined in more detail in section 5.2 below.

Footwear is another sector which, on the basis of other countries' experience, would be expected to be labour intensive and a source of employment creation. Production and employment in this sector has however been declining over the whole period, while (as noted above) it has the poorest RCA measure of all manufacturing.

**Summary**

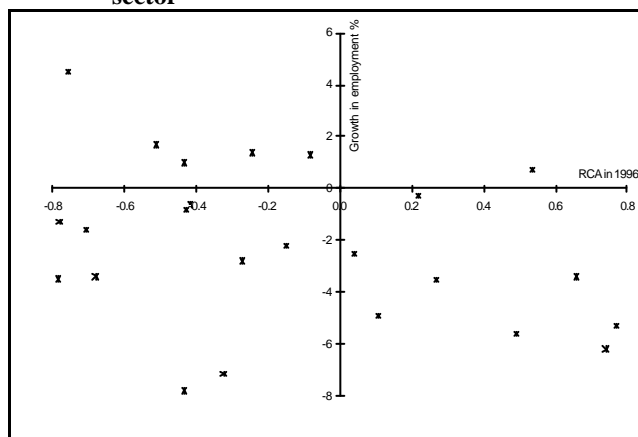
In contradiction to the export-led growth model, many of the sub-sectors experiencing improvements in the net export ratio, and where trade may be thought to be a stimulant for growth, have instead been associated with contraction. Both employment and real output have contracted in five of the sub-sectors with improved net export ratios (transport equipment, metal products, rubber products, beverages, tobacco products), employment has reduced in a further three (machinery and equipment, industrial chemicals, and leather products), while printing and publishing has experienced an increase in employment but a fall in production. Conversely in the majority of sub-sectors in which there has been growth in employment the net export measure has been negative and declining. The link between trade, and production and employment appears to be very complex and this evidence does not support the simplistic liberalisation and export-led growth type relationship. This ambiguous picture is further emphasised by the scatter plots in Figures 12 and 13 below. Sub-sector specific factors account for changes. In particular, the sectors for which exports form a major part of production (especially industrial chemicals, basic iron and steel, and non-ferrous metals) are those in which productive capacity has been developed through strong intervention by Government (such as in the provision of finance through the IDC).

**Figure 12: Net exports measure and average annual growth in production (1990-1996), by manufacturing sub-sector**



Source: Calculated from IDC data

**Figure 13: Net export measure and average annual growth in employment (1990-1996), by manufacturing sub-sector**



Source: Calculated from IDC, CSS data

Note: Does not include chemicals sub-sectors due to changes in employment classifications.

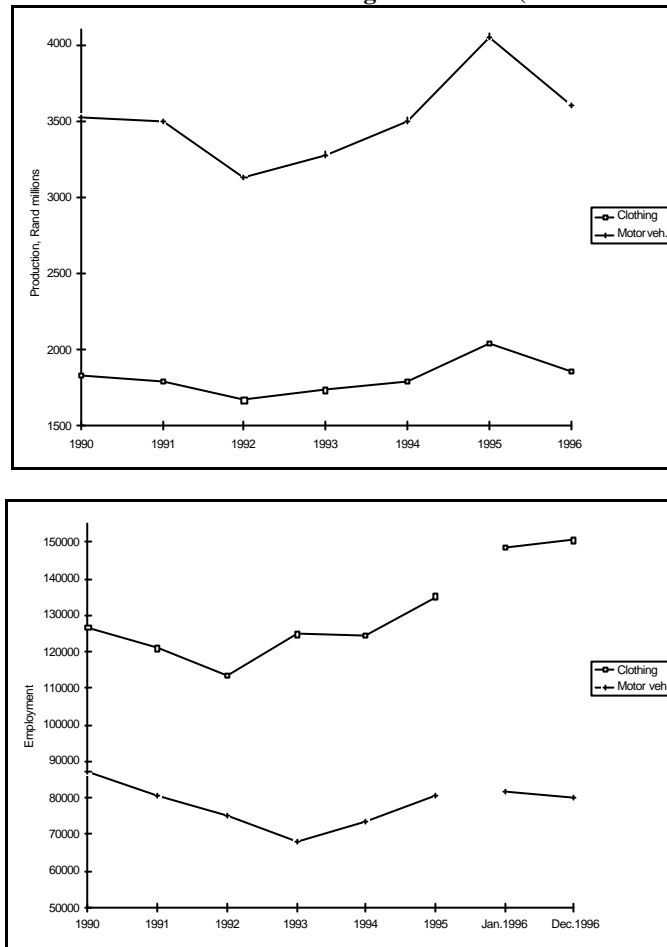
Two sub-sectors are discussed in more detail in an attempt to explore the impact of factors including tariff reductions, but also reform of Government support programmes, in more detail.

## **5. THE CLOTHING AND MOTOR VEHICLE SUB-SECTORS**

Given the apparent importance of differential effects within and between sub-sectors as part of restructuring, it was decided to examine the two sub-sectors experiencing the largest absolute tariff reductions in more detail. These sub-sectors are not at all meant to be representative of manufacturing, but instead illustrative of the processes of adjustment. In the overall restructuring underway in manufacturing, they are both potentially 'losers' from liberalisation having been previously relatively highly protected. In recognition of this, they are classified as sensitive industries at which measures such as the IDC's World Player Scheme have been targeted. But, while liberalisation implies greater exposure of domestic producers to imports, lower tariffs also reduce the bias to production for the domestic market over exports. The combination of these effects means that, under the orthodox interpretation of liberalisation, more trade would be expected, stimulating restructuring in these sub-sectors perhaps more than in any others.

In addition, the clothing and motor vehicle sub-sectors are very significant in the diversification of South Africa manufacturing away from the mineral related industrial core, as well as being sub-sectors in which other developing countries undergoing trade policy reform have successfully increased exports (as noted in section 2.2 above).

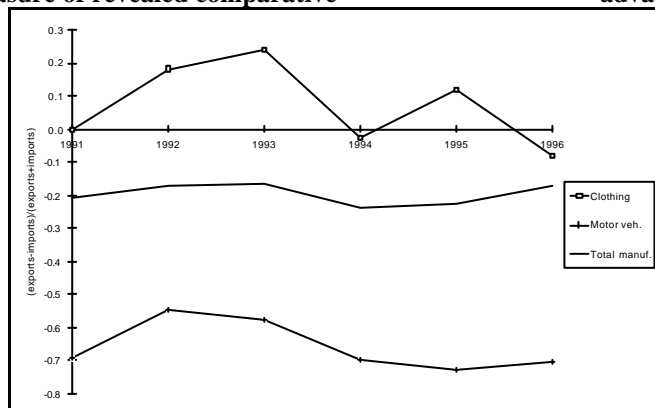
**Figure 14: Production and employment in selected manufacturing sub-sectors (constant 1990 prices)**



Source: IDC, CSS

Note: Employment data are as of June, TBVC data included from January 1996

**Figure 15: Net export measure of revealed comparative advantage**

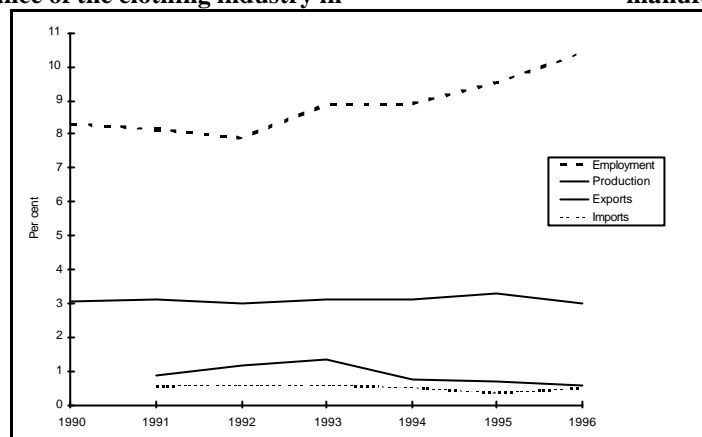


Source: Calculated from IDC data

**5.1 Clothing**

Clothing is the most labour intensive manufacturing sub-sector and accounts for a large and growing share of manufacturing employment (Figure 16). It is also subject to the largest reduction in average tariffs of any sub-sector, with a fall of 23 percentage points from 1994 to 1996 and a further reduction of 21 percentage points to occur by the year 2000 (IDC, 1996b). In addition, liberalisation includes the ending of the clothing structural adjustment programme (SAP) as well as other manufacturing programmes. Although there was a positive RCA in three of the last five years (Figure 15), exports account for a relatively small proportion of production and were equivalent to 11 per cent of clothing sales in 1996.<sup>xxxii</sup> Considering its labour intensity and share in manufacturing employment, the sub-sector is therefore important to employment generation in South Africa.

**Figure 16: The significance of the clothing industry in manufacturing (% share)**



Source: Calculated from IDC and CSS data

Note: Trade data are for SACU, production and employment data are for South Africa; 1996 employment data include TBVC.

Tariff rationalisation and reductions along with liberalisation of Government intervention have coincided with a worsening trade performance in line with longer term deterioration since the 1980s (when the RCA measure exceeded 0.5), as might be expected under liberalisation of a highly protected sub-sector. But liberalisation has been accompanied by lower levels of trade (illustrated by the declining share of clothing trade flows in the total) and the temporary improvement in the RCA measure in 1995 was due to a decline in imports, even in nominal Rand terms.<sup>xxxiii</sup> Orthodox trade theory also fails to explain why the nominal value of exports in 1996 remained below the 1993 level although the liberalisation of protection should reduce the anti-export bias to the domestic market, especially when exchange rate changes are taken into account. In addition, employment in clothing increased significantly over the three years from 1992 to 1995, and continued to rise during 1996, despite a reduction in production (Figure 14).

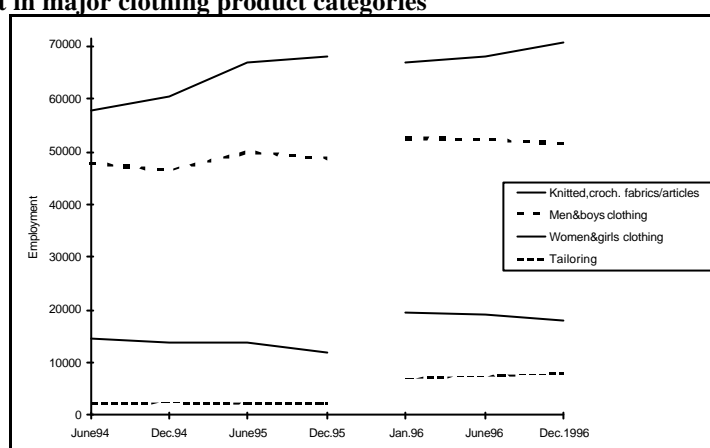
These trends sharply illustrate the need to understand the underlying processes involved. The changes in clothing, especially trends in employment, appear to reflect the reform of non-tariff measures and changes in the structure as well as the levels of tariff protection. While clothing tariffs vary greatly, protection generally increases with the level of processing, meaning high effective rates of protection on finished products, estimated at around 220 per cent (Altman, 1994: 100), although the introduction of a 50 per cent tariff on imports of fabric in 1992 significantly reduced this. Furthermore, the complicated protection structure and highly disaggregated tariff schedule meant that the system was difficult to implement and open to abuse, such as by importers deliberately mis-classifying goods as lower tariff items.

There are also reasons to believe that the ending of the SAP in 1994 has aided domestic producers, especially at the low cost end of the market. Although the SAP aimed to develop a competitive, export-oriented industry, it in effect undermined existing export incentives and producers. By allowing exporters the right to trade licenses to import their inputs duty free it effectively lowered clothing protection, especially on low quality finished goods (on which there was the highest tariff, and therefore the largest gain from using the license to import duty free).<sup>xxxiv</sup> Taking this into account, the effective level of protection for clothing has been estimated to be as low as 37 per cent (Altman, 1994), with the average rate of duty actually paid on clothing imports estimated at less than 8 per cent of their value in 1993 (*Sunday Times*, 30 April 1995, cited in Prinsloo, 1996: 9).

Poor export performance has also persisted despite the implementation of export promotion schemes. Clothing has also been eligible for the General Export Incentive Scheme (GEIS) and the Duty Credit Certificate Scheme (DCCS), which will end in 1997 and 1998 respectively. It has been asserted that the GEIS has had a significant impact by almost equating the value added on a product which is exported with one sold in the domestic market (Belli *et al.* 1993:27-28).<sup>xxxv</sup> 4.4 per cent of the total GEIS payout in 1992/3 went to the clothing sub-sector, but there has been a notable bias to large firms (Nedlac, 1996) who can devote time and resources to accessing various measures. The DCCS enables exporters to claim back duties paid on imported inputs, which overlaps with, and erodes, the incentive provided in the GEIS to export and to increase local content.

The tariff rationalisation programme is therefore only one part of a much more complex picture, while the export promotion schemes have clearly failed to generate the sustained growth hoped for. The end of the SAP (widely used for the import of low cost and worn clothing) may partly explain why trade has decreased and more labour intensive production within the sub-sector has been sustained in recent years despite tariff reductions. In any event, growth in production and employment appears to have been largely for the domestic market, with differential effects within the sub-sector (Figure 17). While men and boy's clothing is the largest export group (1996b), growth in employment has been largely in the women and girl's clothing category.

**Figure 17: Employment in major clothing product categories**



Source: CSS

Note: TBVC included from January 1996

The importance of the domestic market is reinforced by recent survey evidence (Prinsloo, 1996) in which manufacturers reported increasing exports when domestic demand drops and diverting exports to the domestic market during periods of growth in demand. This was evident in 1992, when production dropped and exports rose sharply. Domestic demand is therefore obviously of great importance while, at least for certain product categories, exports appear to be a residual.

The clothing sector also illustrates the need to consider a range of structural factors in order to understand performance in the context of trade liberalisation. In South Africa the clothing sub-sector is relatively concentrated, while production linkages are relatively weak in the 'pipeline' through which clothing products pass. It has been estimated that it takes on average 66 weeks for a product to pass from the initial raw materials through various stages of processing to the finished product, and for 83 per cent of the time the product is not being worked on (Maree, 1995). The lack of co-ordination is despite firms being clustered in a few main locations and being relatively large. Average employment in South African clothing plants in 101 compared with less than 20 in Italy in the 1980s (the world's largest net exporter) (Altman, 1994). International experience suggests that where, as in South Africa, a few retailers and large firms dominate and exert monopsony power over smaller suppliers then competitiveness is sought through cost-minimisation (see, for example, Beneria, 1989; Evciman *et al.*, 1991; Fransen, 1991). This is further supported by reports of retailers cancelling orders and delaying payments, while simultaneously increasing use of home based and informal cut-make-trim operations to lower costs (October, 1996; Prinsloo, 1996).

The rise in employment therefore suggests the importance of the domestic market, as well as the impact of government programmes (paradoxically from the evidence of their negative effects from trying to promote exports). At the same time, the cross sectoral evidence analysed in section 4. as well as international experience of the clothing industry suggest that product differentiation, quality and the ability to respond to changing markets are all important, which requires a strengthening of linkages and co-operation. As liberalisation progresses, South African firms are unlikely to be able to compete with countries such as China in the low cost segments which appear to have benefitted from the reform of the SAP and the structure of protection in recent years. There is little evidence, however, that firms are restructuring to increase production in response to the increased incentives to export, or that the linkages, investment and upgrading of skills required will occur in the absence of the kind of Government intervention which has supported industry in other sub-sectors.

## 5.2 Motor vehicles

The motor vehicle sub-sector accounts for a large proportion of manufacturing activity, with 5.8 per cent of value added and 5.7 per cent of employment in 1996. It has also been subject to the second largest reduction in average tariffs, from 72 per cent in 1994 to 40 per cent in 1996 (including the abolition of import surcharges), with a further reduction to 31 per cent by the year 2000 (IDC, 1996b).<sup>xxxvi</sup> Production and employment both contracted from 1990, with a larger and more prolonged reduction in employment, and in the recovery from 1993 job creation lagged output, before contracting again in 1996 (Figure 14).

The average tariff rate conceals the very different rates applying to finished and intermediate products. In the early 1990s, prior to tariff reductions, completely-built-up units (CBUs) had a nominal tariff of 100 per cent plus a 15 per cent import surcharge (Black, 1994: 53). While, in common with the manufacturing sector as a whole, there was a high degree of variability in tariff rates on auto parts and components, on the whole duties were not very high with 88 per cent of tariff lines subject to a nominal duty of less than 30 per cent (IDC 1993, quoted in Black, 1994: 53). The reduction in tariffs has therefore been much more dramatic for CBUs than represented by the import weighted average, with the biggest reduction having occurred in the initial year, to 65 per cent in July, 1995 (Table 5). The motor vehicle industry has also been subject to a succession of local content programmes with the latest (Phase VI) ending under the Motor Industry Development Programme (MIDP) introduced in 1995 (Black 1996: 14).

**Table 5: Tariff reductions under the MIDP**

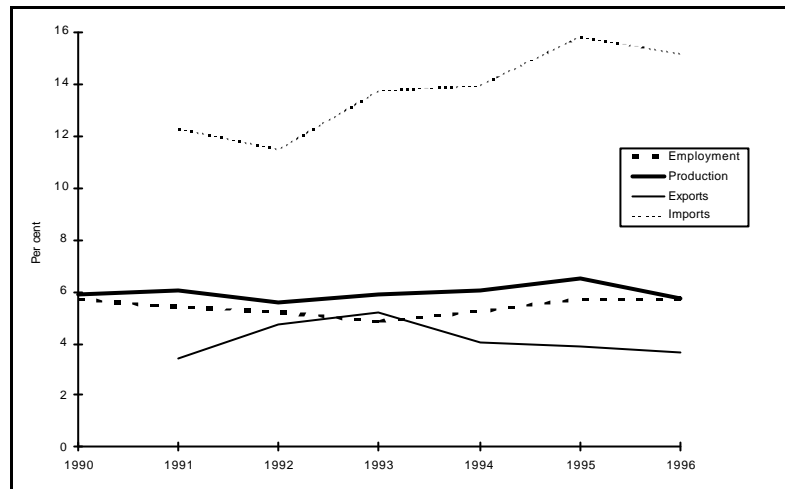
	Nominal import duty (per cent)	
	Built up vehicles	Components
1995	65	49
1996	61	46
1997	57.5	43
1998	54	40
1999	50.5	37.5
2000	47	35
2001	43.5	32.5
2002	40	30

Source: reproduced from Black, 1996: 15

The sub-sector also continues to run a large trade deficit, reflected in the RCA measure (Figure 15) and, on the basis of Customs and Excise data for South Africa alone, exports constituted under 7 per cent of sales in 1996.<sup>xxxvii</sup> Exports are a mixture of assembled vehicles to southern African countries and parts such as catalytic converters to industrialised nations, headed by Germany.<sup>xxxviii</sup> Despite large increases in both imports and exports in the last two years, the great bulk of production is therefore for the domestic market, and the recovery in production was stimulated by domestic demand. The dependence on the domestic market is emphasised by the fall in 1996 of both imports and real production. The recent liberalisation period has coincided with a worsening of trade performance as indicated by the RCA measure, and the changing trade performance of the sub-sector relative to manufacturing as a whole (Figure 18). Over the liberalisation period, the share of imports in the total for manufacturing increased to account for almost 16 per cent of total manufacturing imports, while the share of exports decreased.

**Figure 18: The significance of the auto industry in manufacturing (% share)**





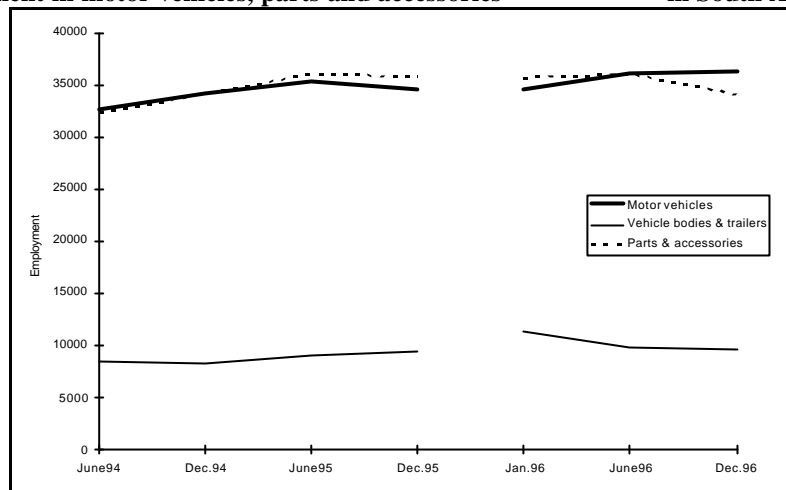
Source: Calculated from IDC and CSS data

Note: Trade data are for SACU, production and employment data are for South Africa; 1996 employment data include TBVC

The industrial structure reflects the differential protection referred to above, which appears to have evolved in response to the industry's demands and has ensured profitability without encouraging long term competitiveness. The structure of protection meant effective rates of protection on car assembly in excess of 400 per cent (Black, 1994) and led to a proliferation of models being assembled in the country with a large proportion of imported components, and production runs being far too low to achieve economies of scale. There are seven assemblers producing approximately 35 different basic models of passenger car and light commercial vehicle (Black, 1996: 11; also see Black, 1994, for more detailed international comparisons). Defining local content under Phase VI of the local content programme to include profits and overheads reinforced the incentive to make profits from assembly without longer term development of productive capabilities.<sup>xxxix</sup>

Liberalisation would be expected to reverse these incentive effects, and some restructuring has been reported in the industry with some rationalisation of vehicle models and a shift towards components production, including the notable examples of catalytic converters, high quality seat leather, alloy wheels and electronic vehicle systems. Exports of components have increased in local content terms, from R139 million in 1988 to R2.45 billion in 1995 (Black, 1996:14) and, according to the IDC (1996b), the fastest growing manufactured export category from 1995 to 1996 has been 'seats and parts thereof', mainly for use in motor vehicles. But, rationalisation and reorientation to component production is not reflected in the aggregate employment data for recent years. What is notable instead is how little the shares of the main segments of the motor vehicle industry have changed (Figure 19). Seats are classified in a separate sub-sector, as are some components of catalytic converters. This illustrates the importance of linkages across manufacturing, but it is also the case that the niches oriented to export have developed for quite particular reasons to do with specific demand or supply conditions in South Africa (such as processing of raw materials in the case of alloy wheels, sourcing of mineral inputs to converters, and domestic demand in the case of electronic systems). Their success does not therefore necessarily represent the foundations of an alternative industrialisation strategy.

**Figure 19: Employment in motor vehicles, parts and accessories in South Africa**



Source: CSS

Note: TBVC data included from January 1996

Changes in production therefore appear to be more closely related to imports than exports, with initial evidence that the restructuring is taking the form of cost minimisation through the rationalisation of product lines. It may be argued that as a previously highly protected sub-sector, consumers will gain and producers will lose from the adjustment, while increased competition from imports will provide the stimulus for future growth. However, in the absence of co-ordinated intervention, the stick of tariff reductions is likely to lead to incremental changes and downsizing as has been experienced notwithstanding success in a few product niches. The continued importance of the domestic market, as well as evidence of the importance of domestic linkages emphasise the need for a sub-sectoral strategy.

International experience provides further support for this interpretation. East Asian countries have developed domestic motor vehicle industries based on directly limiting the number of producers and models and, despite relatively small domestic markets, have surpassed South Africa. South Korea's car production was one sixth that of South Africa as late as 1980 and is now a major independent world producer (Chang, 1997). A comparison of the development of the motor vehicle industry in four countries (Brazil, Mexico, South Korea and Taiwan) has found that the key factor explaining success has been active state intervention (Jenkins, 1995). The worst performer, Taiwan, exhibits many of the problems faced by the South African motor vehicle industry discussed above, of low volume, inefficient production and an inability to export. Taiwan is also where Government policy was closest to non-discriminatory intervention. Success in developing the industry in Brazil in the 1970s rested on an expanding domestic market, co-ordination of Government policy in a single institution and effective negotiation with transnational corporations (TNCs) including an ability to discipline them through establishing export targets. This has been reinforced by the recent experience of Poland in negotiating with both Daewoo and General Motors, playing them off against each other (Chang, 1996).

## **6. TRADE LIBERALISATION AS THE BASIS FOR EXPORT-LED GROWTH? SOME CONCLUSIONS AND POLICY IMPLICATIONS**

It is evident that liberalisation of protection has not yielded the expected gains from incentives to export over the period analysed. Instead, while manufactured exports and imports have increased, output growth has faltered and there have been major reductions in employment. In addition, aggregate investment remains below the levels of the early 1990s.

Underlying the industrial restructuring and lower employment is a complex picture at the sub-sectoral level. In many sub-sectors it was found that improved trade performance had been associated with contractions in production and employment, while in most of the 6 sub-sectors in which employment had increased, trade performance also deteriorated. The dominant feature has been the continued output growth of sub-sectors closely related to minerals processing, without corresponding employment growth, and it would be wrong to interpret growth in these areas as due to relative price effects working through free markets. These sub-sectors have been subject to far reaching Government intervention in the past, and still are in many cases, as well as being highly concentrated.

This lack of a general explanation may seem unsatisfactory, but recent developments can only be understood through an examination of sub-sector specific factors together with industrial structure. The evidence further suggests that many sub-sectors

are characterised by concentration, widespread linkages, differentiated products, and intra-industry trade which impact on performance to differing extents across sub-sectors. In this context, the assumptions of orthodox trade theory, and the efficient markets hypothesis underlying it, are inappropriate and there is little basis from the recent manufacturing performance for believing that market forces will bring about the structural change, growth and employment creation in manufacturing so desperately required. For example, the motor vehicle industry suggests that allowing the rationalisation to occur through market forces and the 'right' prices will not yield an outcome consistent with goals of increased production and employment. Instead, wielding the stick of tariff reductions will lead to the incremental change and downsizing presently being experienced, notwithstanding success in a few product niches.<sup>xi</sup> This is also consistent with the experience of other developing countries surveyed in section 2.

A number of particular conclusions that may be drawn from the data analysis in the context of international experience.

1. There is little evidence of trade liberalisation leading to increasing specialisation according to comparative advantage. Those sectors in which there was a positive revealed comparative advantage measure in 1990 did not generally improve their trade performance, contrary to the expectation of the trade liberalisation position. In addition, as protection has been judged to have such a negative effect on South African industry in the past, it is surprising that there are not stronger indications of gains from its simplification at least.
2. Above all, the trade policy reform has not lead to employment generation. Instead there has been overall 'downsizing' and contraction, with many sub-sectors which have performed well in terms of their net trade flows also reducing employment. International evidence and theories of dynamic comparative advantage and industrial development suggest that higher productivity at the expense of employment may result in vicious cycles, placing the economy on a lower growth path in the long, as well as short, term.
3. There is also no simple relationship between trade and growth. Improvements in trade performance have in some cases been the result of lower imports due to domestic demand factors, or an increase in the effective impact of protection, as may be the case in the clothing industry.
4. There is evidence that differentiating by the destination of exports is important in many sub-sectors, with a relatively strong performance in exports to sub-Saharan Africa. This emphasises the importance of placing trade policy in the wider context of regional development.

In the absence of a radical change in Government intervention, the analysis suggests that South Africa will continue to specialise in sectors closely related to primary resources, to the detriment of employment generation and consideration of the dynamic factors required for broad based growth. While South Africa's trade, production and employment patterns seem contrary to comparative advantage theories (which would suggest more labour intensive production given the high unemployment), they appear to be based on endowments of natural resources and cheap electricity.<sup>xli</sup> The development of the manufacturing sub-sectors based on the processing of minerals have also been strongly influenced by past Government policies including infrastructure provision and finance. Many of these sub-sectors have trade surpluses and export a large proportion of their output.

### *Some policy implications*

The diversity of sub-sector experiences revealed by the analysis supports the need for a selective approach, with sub-sector specific trade and industrial policies.<sup>xlii</sup> The results further imply that trade reform needs to be viewed as part of a wider, co-ordinated, programme of industrial and macroeconomic policies, which starts from a recognition of the centrality of mineral-related manufacturing and corresponding implications for diversification and employment generation. For example, active demand management should be linked with interventions, such as in infrastructure development and in the allocation of credit, which South Africa's previous industrialisation and the experience of other countries indicate are important. In addition, intervention is required if the exchange rate is going to reflect the underlying strength (or weakness) of manufacturing, rather than the continuing significance of natural resources and cheap electricity.<sup>xliii</sup>

The Government's approach to industrial policy (for example, as outlined in a document tabled at Nedlac in November, 1995) draws clear dichotomies between demand- and supply-side policies, and inward and outward oriented strategies. In these terms, the policy stance adopted is broadly identified as a move to an outward strategy with supply-side policies. But, these are false dichotomies, as evidenced by the links between the domestic market, industrial capabilities, and trade performance. The categorisations also risk ruling a range of policies off the agenda. For example, tariffs are identified as demand-side policies and are therefore seen as 'bad'. In reality, successful export promotion in developing countries has been based on placing instruments such as tariffs within a wider strategy for industrial development which essentially views them as having both supply and demand effects simultaneously.

Aside from a range of Small and Medium Enterprise (SME) policies, emphasis has been put largely on incentives such as tax breaks to impact on resource allocation.<sup>xliv</sup> Thus ‘the investment incentives are intended to bring about the leap in appropriate investment which is necessary to restructure the capital base of the manufacturing sector towards international competitiveness and higher rates of growth and development’ (p.x, executive summary, Government of South Africa, 1995).<sup>xlv</sup> This seems inconsistent with the findings of a study conducted by the Stanford Research Institute on behalf of the DTI and reported in the same document, that tax incentives are ‘typically *not* of critical importance to serious investors with viable projects’ but are ‘a basic component of the standard “tool kit” of investment promotion programmes world-wide’ (Government of South Africa, 1995: 47, emphasis added). The incentives do not create the basis on which firms are attracted to invest, this has to do with the underlying fundamentals of the economy of which a major factor is the size and growth of the domestic market.

The term ‘supply-side’ is also used to cover a range of policies encompassing factor markets and technology including development finance, education and training measures, infrastructure provision and research and development support. While programmes on education and training are significant in their own right, it is not clear that the supply-side policies form part of a wider framework of policy co-ordination.<sup>xlvi</sup> Similarly, development finance measures have an important role to play but, to be effective, they should be framed in the context of an industrial development strategy, and should not be a substitute for intervention in credit allocation by the wider financial system.<sup>xlvii</sup>

If the supply-side measures are to form part of such an integrated industrial development programme they need to be built upon to take account of sub-sector specific factors and the potential for exploiting linkages. In this respect there are important initiatives underway, including the Spatial Development Initiatives, which seek to address the imperatives of a proactive approach to industrial restructuring, represent important steps. However, in general, although the ‘supply-side’ policy measures were identified as critical to support the restructuring occurring under trade liberalisation, their design and implementation has lagged behind.

The Government also has room to adjust tariff levels within the ceiling established and restrictions on trade related measures under WTO rules are not as constraining as has sometimes been argued. Instead of a presumption that Government introduces distortions, the focus should therefore be on the capacity of Government to change the course of the economy. Combined with a move away from the contractionary environment under which restructuring and reform has been occurring, support for co-ordinated expansions in production and export capacities can lay the basis for achieving an outward oriented economy through a successful industrialisation strategy. Trade policy is only one element, whose effect will depend on the wider policy environment. Government action is also required in areas including rationalisation of motor vehicle assembly and providing a foundation for new investments in areas of potential growth in the car industry. Similarly, in the clothing sub-sector policies must take into account the existing industrial structure and measures introduced to protect sub-contractors from the monopsony power of large retailers, alongside the measures for training and finance for SMEs.

Finally, it is important to note that much further research needs to be undertaken at the detailed sub-sector level to properly understand the processes of change and the impact of trade liberalisation. It is hoped that this paper may provide the background for further analysis.

## Notes

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## NOTES

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2. The policy document *Growth, Employment and Redistribution: A Macroeconomic Strategy* stated '...the central thrust of trade and industrial policy had to be the pursuit of employment creating international competitiveness. ....general progress towards an outward-oriented stance is reflected in a number of achievements:
  - replacement of former quantitative restrictions with tariffs;
  - rationalisation of the tariff structure by almost halving the number of tariff lines;
  - abolition of import surcharges, completed in October 1995;
  - phasing down of tariffs, begun in 1995, by on average one-third over five years; and
  - phasing out of the general export incentive scheme, to be completed by the end of 1997.'
 (Republic of South Africa, 1996)
3. The variations between countries also indicate that it is necessary to be cautious about generalisations of the link between investment and growth, and a more detailed investigation of the nature of investment is required.
4. The new trade theories are an eclectic body of models which are variously based on assumptions of oligopoly, product differentiation, learning-by-doing or externalities. See Helpman and Krugman (1985 and 1990) for the different models used, and Ocampo (1993) for a review of their applicability to trade policy in developing countries.
5. Anne Krueger developed the rent-seeking argument with specific reference to trade protection and import substituting industrialisation (Krueger, 1974).
6. The motor vehicle industry in South Africa is a prime example of this.
7. By comparison, other studies by the Industrial Development Corporation (IDC) have presented a very narrow range of evidence to support such prescriptions from 'international experience', as will be discussed in section 3. below.
8. The countries were classified by combining quantitative and qualitative indicators including: the effective rate of protection; use of direct trade controls (quotas import licensing); use of export incentives; and the degree of exchange overvaluation. These classifications have been quite widely criticised, for example Evans (1993).
9. This is despite some measures of liberalisation, but export promotion measures were largely combined with the existing import protection rather than replacing
10. (Amsden, 1993).
11. Although, to the extent that greater domestic demand was not met by increased imports it involved domestic production substituting for imported goods and hence increase in the static costs of protection, as well as the positive effects such as fit economies of scale and learning by doing.
12. Statements by the DTI and the IDC (for example to the Portfolio Committee Trade and Industry) make this quite clear.
13. Woven polyester fabrics, containing less than 85 per cent by mass of such fibre mixed mainly or solely with cotton, of a mass between 300 and 350 grams per square metre. Countries which have faced severe foreign exchange constraints have resorted to counter-trade agreements which are essentially direct product swaps.
14. The 'Dutch disease' normally refers to cases where exploitation of a natural resource endowment negatively affects industrial development through an overvalued exchange rate, following the experience of the Netherlands on exploitation of deposits of natural gas.
15. A natural resource should essentially be treated as a capital endowment instead of as income. If the revenue earned is saved as foreign exchange reserves or in overseas assets, then it will effectively be sterilised and not enter the domestic money supply or impact on the exchange rate. It may then be drawn on over time for investment in productive capacity, and will not therefore directly boost consumer spending. Several countries have attempted to follow this approach, for example Botswana which has saved a large proportion of revenues from exploitation of diamonds.
16. Again, it should be noted that successful development of these sectors does not necessarily imply a trade surplus. It could well mean a continued net trade deficit with them, but in shifting product lines as part of a dynamic growth process.
17. Liberalisation leads to a reduction in the price level of a once-off nature, and not therefore to a sustained lower rate of increase of prices (although over the period of tariff liberalisation the annual rate of inflation calculated would be lower, but would rise again after twelve months as the tariff reduction effect was no longer included). If tariff reductions are staggered, as in the case under discussion, this process would be stretched out over some years. A range of other factors also need to be considered such as the effect on the exchange rate, and the possibility of increased competition having sustained downward pressure on prices.
18. The combination of a tariff reduction and exchange rate depreciation will raise the relative price of exportable goods through the exchange rate (as tradable goods), while they are not subject to the direct effect of lower tariffs in the domestic market (as the production of import-competing goods are). This is obviously a simplification, as the same good may be both exported and imported, implying intra-industry trade. The linking of an exchange rate depreciation to tariff reductions also assumes floating exchange rates, although even with government intervention, in the absence of direct controls on portfolio capital the exchange rate will ultimately adjust to the current account movements, although perhaps with a considerable lag and then an overshooting.
19. The South African Customs Union comprises South Africa, Botswana, Lesotho, Namibia and Swaziland.
20. For a detailed discussion of these issues, refer to Wood (1995). It is likely that a significant proportion of South African exports in manufacturing sub-sectors such as machinery and transport equipment are sold to Botswana, Lesotho and Swaziland (estimated by Wood at just under half in 1983) and these exports are not included in the trade data for SACU as a

whole. As these flows are not subject to tariffs, excluding them from trade flows seems sensible for the purposes of examining the impact of trade liberalisation.

21. For example, it has been reported that many textiles firms moved production to Lesotho and Swaziland in response to the removal of incentives for production located in the former 'homelands'.
22. The manufacturing sub-sectors which have been classified as part of the MEC are industrial chemicals, other chemical products, rubber products, plastic products, other non-metallic minerals, basic iron and steel products and non-ferrous metal base products. The chemical and petroleum product industries are linked to mining through the coal mining industry. Coal is used both to generate electricity for the energy intensive production processes and in the three Sasol plants to produce synthetic fuel and chemicals, including ammonia used for fertilisers. These linkages are reflected by 58.3 per cent of MEC inputs being drawn from the MEC, and 27.7 per cent of MEC output being returned to MEC sectors in 1988 (Fine and Ruston-Jee, 1996: 81). It is also notable that non-MEC manufacturing broadly stagnated from 1960 to 1990, while MEC related manufacturing sub-sectors have been the source of growth. The output data in Table 3 suggest this pattern has broadly continued into the 1990s.
23. A power station was built specifically to supply Sasol II and III.
24. The Herfindahl index is the sum of the squares of the export shares of the sub-sectors.
25. This ratio is calculated as exports minus imports divided by exports plus imports of the product category in question. It does not indicate where the potential for increasing production and exports lies.
26. In fact a regression line would have a very slight negative slope of -0.16, and a very poor fit.
27. There also appears to be little difference if one takes changes over the period from 1991 to 1996, or a shorter period such as from 1994 to 1996. Five sectors in which the ratio declined overall from 1991 to 1996 experienced improvements over the two year period from 1994 to 1996. These sectors include basic iron and steel in which there were only marginal changes, other manufacturing (which includes diamonds) and non-ferrous metals (which is dominated by large investments in aluminium processing). Moreover, the improvement in the performance of textiles from 1994 in fact reflects a rise in the average tariff and significant import substitution, with textile exports falling as a proportion of total manufactured exports.
28. Investment by Transnet has fallen dramatically in real terms over the last five years, from R2 105 million in 1991 to R978 million in 1995 (in constant 1990 prices). This is largely due to Transnet having to fund the inherited South African Transport Services pension fund deficit.
29. In addition, although the performance of processed food was poor over the period, with falling exports and rising imports, this may be partly accounted for by the drought, and there was a notable improvement in 1996.
30. While reclassification prevents comparisons at the sub-sectoral level of employment in chemicals over the period, in the broad grouping of chemicals and petroleum and coal products, there were 13 000 fewer jobs in November 1996, compared with the 1990 level, and this assumes no production was located in former TBVC areas, otherwise the net job loss would be even higher.
31. The inclusion of the employment of the former TBVC means that there is a break in the data series between 1995 and 1996, such that comparisons may therefore only strictly be drawn from 1990 to 1995 and from January to December of 1996.
32. Exports as a proportion of sales has been calculated for South Africa from Customs and Excise data for the first 9 months of 1996, weighted up. It is not equivalent to the value added embodied in exports or production. The trade balance and net export measure is based on SACU data, although using Customs and Excise data for South Africa reveals higher levels of exports, especially up until 1993, suggesting significant South African exports to SACU members. This is consistent with the presence of the major South African clothing chain stores, such as Woolworths and Truworths, in other SACU states.
33. This was in fact linked to an effective increase in protection on some products as the rationalisation initially meant that the tariff rates increased on many clothing product categories in 1995, and the average import tariff on articles of apparel (under the HS classification) increased from 84 per cent to 90 per cent from 1994 to 1995, despite the average tariff on clothing as a whole declining, as noted above. In addition, the SAP, which allowed duty free imports, also ended in the previous year.
34. Only 28 per cent of permits were used to buy imports of fabric (Altman, 1994).
35. Under GEIS, the incentive is calculated from a formula in which the size of the incentive increases with the level of beneficiation and local content.
36. This is even larger than indicated in Table 2, as it includes import surcharges, of 15 per cent on passenger vehicles and 5 per cent on commercial vehicles in 1994, which were abolished in 1995 and 1994 respectively. The difference between tariff rates quoted by the IDC in different documents still seems quite large, and is probably also to do with the valuation of formula duties.
37. As for clothing, calculated from trade data for the first 9 months of 1996 weighted up, and CSS sales data for the year as a whole. It should also be remembered that this does not reflect the contribution of trade to manufacturing value added.
38. These are mainly to parent companies such as BMW and Mercedes, emphasising the importance of linkages, as opposed to the orthodox model of price based free trade.
39. Local content was measured as the ex-works price less the foreign exchange used (net of export earnings). This means increasing profits by raising prices charge domestic consumers raised local content, as did increasing export revenues. The minimum local content requirement was 50 per cent across the model range, with a rebate of excise duty awarded equal to half of the local content value. If the local content target of 75 per cent was achieved, no duty was payable (except for a non-rebatable fiscal excise duty of 2.5 per cent per vehicle). Given the ability of domestic assemblers to raise prices under the high

levels of protection, these targets did not necessarily prove onerous, although Black (1996: 11) estimates the actual local content (excluding profit margins) at between 40 and 45 per cent.

40. In a recent survey (Black, 1996) while a large proportion of respondents were involved in exporting, it was only of very small volumes. 49 per cent of firms expected exports to increase in real terms by more than 10 per cent per annum in the next five years, and a further 40 per cent expect exports to increase by between 1-10 per cent. This expectation has clearly not been met in 1996, while the required restructuring necessitates at least this if the industry is to expand and enjoy economies of scale. The survey was also run under the boom conditions of 1995, when component firms anticipated new investments etc.+
41. This is also consistent with the findings of Bell and Cattaneo (1996) that relatively labour intensive sub-sectors in South Africa experienced greater increases in import penetration ratios.
42. The experience of the motor vehicle sub-sector also suggests that for the rationalisation of the industry to be a foundation for growth, an active and selective industrial policy is required, based on a plan for the future of the industry. This policy stance will also involve strategic negotiation with TNCs, and the ability to enforce targets, adapting them to new imperatives as the industry develops.
43. While the depreciation of the Rand is welcome in this context, it only occurred after the current account moved unsustainably into deficit, and not as part of a structured Government policy. Moreover the extremely high real interest rates over 1995 and 1996 compounded the contractionary pressures on the manufacturing sector.
44. The SME policies have included the establishment of the Ntsika enterprise promotion agency and the Khula finance corporation.
45. The main programme, announced on 26 November 1996, consists of an accelerated depreciation allowance, a small-medium manufacturing development programme, and a tax holiday of up to 6 years, comprising 2 years each for meeting qualifying criteria of producing in a selected sub-sector, within a designated area, with a minimum labour content.
46. The point has been made that the 'supply-side' rhetoric is necessary to wean domestic firms off the practice of lobbying government for protection, rather than develop strategies to expand their production capabilities in response to their changing environment (see Chang 1997). This may be important, but the actual policies put in place to date (especially the emphasis on tax incentives) are consistent with the rhetoric.
47. 47 Development finance measures include the 'World Player Scheme' targeted at subsectors where average nominal tariff protection will decrease by 10 percentage points or more from 1995 to 1999.

## ABBREVIATIONS

ANC	-	African National Congress
BTI	-	Board of Trade and Industries
CBU	-	completely-built-up unit
CSS	-	Central Statistical Service
DCCS	-	Duty Credit Certificate Scheme
DTI	-	Department of Trade and Industry
GATT	-	General Agreement on Tariffs and Trade
GEIS	-	General Export Incentive Scheme
IDC	-	Industrial Development Corporation
IMF	-	International Monetary Fund
ISP	-	Industrial Strategy Project

MEC	-	minerals-energy complex
MIDP	-	Motor Industry Development Programme
NEF	-	National Economic Forum
NICs	-	Newly Industrialising Countries
RCA	-	revealed comparative advantage
SACU	-	Southern African Customs Union
SAP	-	Structural Adjustment Programme
SME	-	small and medium enterprise
TBVC	-	Transkei, Bophuthatswana, Venda, Ciskei
TNC	-	transnational corporation
UNCTAD	-	United Nations Conference on Trade and Development
WTO	-	World Trade Organisation

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<sup>i</sup> This paper evolved out of earlier work in 1995 and has benefitted greatly from the contributions of many people at different stages including Peter Brain, Rashad Cassim, David Dickinson, Zolile Feketha, Ben Fine, Jaya Josie, Stephan Klasen, Joyce Lestrade-Jefferis, Mathane Lethale, Jonathan Michie, Shan Ramburuth, Sizwe Sidloyi and the comments of several anonymous TIPS referees. The author also wishes to acknowledge data and documents provided by the IDC and Jorge Maia in particular, as well as discussions with all the students who have participated in postgraduate seminars on Trade and Industrial Policy over the past two years.

<sup>ii</sup> The policy document *Growth, Employment and Redistribution: A Macroeconomic Strategy* stated ‘....the central thrust of trade and industrial policy had to be the pursuit of employment creating international competitiveness. ....general progress towards an outward-oriented stance is reflected in a number of achievements:

- replacement of former quantitative restrictions with tariffs;
- rationalisation of the tariff structure by almost halving the number of tariff lines;
- abolition of import surcharges, completed in October 1995;
- phasing down of tariffs, begun in 1995, by on average one-third over five years; and
- phasing out of the general export incentive scheme, to be completed by the end of 1997.’

(Republic of South Africa, 1996)

<sup>iii</sup> The variations between countries also indicate that it is necessary to be cautious about generalisations of the link between investment and growth, and a more detailed investigation of the nature of investment is required.

<sup>iv</sup> The new trade theories are an eclectic body of models which are variously based on assumptions of oligopoly, product differentiation, learning-by-doing or externalities. See Helpman and Krugman (1985 and 1990) for the different models used, and Ocampo (1993) for a review of their applicability to trade policy in developing countries.

<sup>v</sup> Anne Krueger developed the rent-seeking argument with specific reference to trade protection and import substituting industrialisation (Krueger, 1974).

<sup>vi</sup> The motor vehicle industry in South Africa is a prime example of this.

<sup>vii</sup> By comparison, other studies by the Industrial Development Corporation (IDC) have presented a very narrow range of evidence to support such prescriptions from the ‘international experience’, as will be discussed in section 3. below.

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<sup>viii</sup> The countries were classified by combining quantitative and qualitative indicators including: the effective rate of protection; use of direct trade controls (quotas and import licensing); use of export incentives; and the degree of exchange rate overvaluation. These classifications have been quite widely criticised, for example Evans (1993).

<sup>ix</sup> This is despite some measures of liberalisation, but export promotion measures were largely combined with the existing import protection rather than replacing them (Amsden, 1993).

<sup>x</sup> Although, to the extent that greater domestic demand was not met by increased imports it involved domestic production substituting for imported goods and hence an increase in the static costs of protection, as well as the positive effects such as from economies of scale and learning by doing.

<sup>xi</sup> Statements by the DTI and the IDC (for example to the Portfolio Committee on Trade and Industry) make this quite clear.

<sup>xii</sup> Woven polyester fabrics, containing less than 85 per cent by mass of such fibres, mixed mainly or solely with cotton, of a mass between 300 and 350 grams per square metre.

<sup>xiii</sup> Countries which have faced severe foreign exchange constraints have resorted to counter-trade agreements which are essentially direct product swaps.

<sup>xiv</sup> The 'Dutch disease' normally refers to cases where exploitation of a natural resource endowment negatively affects industrial development through an overvalued exchange rate, following the experience of the Netherlands on exploitation of deposits of natural gas.

<sup>xv</sup> A natural resource should essentially be treated as a capital endowment instead of as income. If the revenue earned is saved as foreign exchange reserves or in overseas assets, then it will effectively be sterilised and not enter the domestic money supply or impact on the exchange rate. It may then be drawn on over time for investment in productive capacity, and will not therefore directly boost consumer spending. Several countries have attempted to follow this approach, for example Botswana which has saved a large proportion of revenues from exploitation of diamonds.

<sup>xvi</sup> Again, it should be noted that successful development of these sectors does not necessarily imply a trade surplus. It could well mean a continued net trade deficit in them, but in shifting product lines as part of a dynamic growth process.

<sup>xvii</sup> Liberalisation leads to a reduction in the price level of a once-off nature, and not therefore to a sustained lower rate of increase of prices (although over the period of tariff liberalisation the annual rate of inflation calculated would be lower, but would rise again after twelve months as the tariff reduction effect was no longer included). If tariff reductions are staggered, as in the case under discussion, this process would be stretched out over some years. A range of other factors also need to be considered such as the effect on the exchange rate, and the possibility of increased competition having sustained downward pressure on prices.

<sup>xviii</sup> The combination of a tariff reduction and exchange rate depreciation will raise the relative price of exportable goods through the exchange rate (as tradable goods), while they are not subject to the direct effect of lower tariffs in the domestic market (as the production of import-competing goods are). This is obviously a simplification, as the same good may be both exported and imported, implying intra-industry trade. The linking of an exchange rate depreciation to tariff reductions also assumes floating exchange rates, although even with government intervention, in the absence of direct controls on portfolio capital the exchange rate will ultimately adjust to the current account movements, although perhaps with a considerable lag and then an overshooting.

<sup>xix</sup> The South African Customs Union comprises South Africa, Botswana, Lesotho, Namibia and Swaziland.

<sup>xx</sup> For a detailed discussion of these issues, refer to Wood (1995). It is likely that a significant proportion of South African exports in manufacturing sub-sectors such as machinery and transport equipment are sold to Botswana, Lesotho and Swaziland (estimated by Wood at just under half in 1983) and these exports are not included in the trade data for SACU as a whole. As these flows are not subject to tariffs, excluding them from trade flows seems sensible for the purposes of examining the impact of trade liberalisation.

<sup>xxi</sup> For example, it has been reported that many textiles firms moved production to Lesotho and Swaziland in response to the removal of incentives for production located in the former 'homelands'.

<sup>xxii</sup> The manufacturing sub-sectors which have been classified as part of the MEC are: industrial chemicals, other chemical products, rubber products, plastic products, other non-metallic minerals, basic iron and steel products and non-ferrous metal basic products. The chemical and petroleum product industries are linked to mining through the coal mining industry. Coal is used both to generate electricity for the energy intensive production processes and in the three Sasol plants to produce synthetic fuels and chemicals, including ammonia used for fertilisers. These linkages are reflected in 58.3 per cent of MEC inputs being drawn

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from the MEC, and 27.7 per cent of MEC output being returned to MEC sectors in 1988 (Fine and Rustomjee, 1996: 81). It is also notable that non-MEC manufacturing broadly stagnated from 1960 to 1990, while MEC related manufacturing sub-sectors have been the source of growth. The output data in Table 3 suggest this pattern has broadly continued into the 1990s.

<sup>xxiii</sup> A power station was built specifically to supply Sasol II and III.

<sup>xxiv</sup> The Herfindahl index is the sum of the squares of the export shares of the sub-sectors.

<sup>xxv</sup> This ratio is calculated as exports minus imports divided by exports plus imports of the product category in question. It does not indicate where the potential for increasing production and exports lies.

<sup>xxvi</sup> In fact a regression line would have a very slight negative slope of -0.16, and a very poor fit.

<sup>xxvii</sup> There also appears to be little difference if one takes changes over the period from 1991 to 1996, or a shorter period such as from 1994 to 1996. Five sectors in which the ratio declined overall from 1991 to 1996 experienced improvements over the two years from 1994 to 1996. These sectors include basic iron and steel in which there were only marginal changes, other manufacturing (which includes diamonds) and non-ferrous metals (which is dominated by large investments in aluminium processing). Moreover, the improvement in the performance of textiles from 1994 in fact reflects a rise in the average tariff and significant import substitution, with textile exports falling as a proportion of total manufactured exports.

<sup>xxviii</sup> Investment by Transnet has fallen dramatically in real terms over the last five years, from R2 105 million in 1991 to R978 million in 1995 (in constant 1990 prices). This is largely due to Transnet having to fund the inherited South African Transport Services pension fund deficit.

<sup>xxix</sup> In addition, although the performance of processed food was poor over the period, with falling exports and rising imports, this may be partly accounted for by the drought, and there was a notable improvement in 1996.

<sup>xxx</sup> While reclassification prevents comparisons at the sub-sectoral level of employment in chemicals over the period, in the broad grouping of chemicals and petroleum and coal products, there were 13 000 fewer jobs in November 1996, compared with the 1990 level, and this assumes no production was located in former TBVC areas, otherwise the net job loss would be even higher.

<sup>xxxi</sup> The inclusion of the employment of the former TBVC means that there is a break in the data series between 1995 and 1996, such that comparisons may therefore only strictly be drawn from 1990 to 1995 and from January to December of 1996.

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<sup>xxxiii</sup> This was in fact linked to an effective increase in protection on some products as the rationalisation initially meant that the tariff rates increased on many clothing product categories in 1995, and the average import tariff on articles of apparel (under the HS classification) increased from 84 per cent to 90 per cent from 1994 to 1995, despite the average tariff on clothing as a whole declining, as noted above. In addition, the SAP, which allowed duty free imports, also ended in the previous year.

<sup>xxxiv</sup> Only 28 per cent of permits were used to buy imports of fabric (Altman, 1994).

<sup>xxxv</sup> Under GEIS, the incentive is calculated from a formula in which the size of the incentive increases with the level of beneficiation and local content.

<sup>xxxvi</sup> This is even larger than indicated in Table 2, as it includes import surcharges, of 15 per cent on passenger vehicles and 5 per cent on commercial vehicles in 1994, which were abolished in 1995 and 1994 respectively. The difference between tariff rates quoted by the IDC in different documents stills seems quite large, and is probably also to do with the valuation of formula duties.

<sup>xxxvii</sup> As for clothing, calculated from trade data for the first 9 months of 1996 weighted up, and CSS sales data for the year as a whole. It should also be remembered that this does not reflect the contribution of trade to manufacturing value added.

<sup>xxxviii</sup> These are mainly to parent companies such as BMW and Mercedes, emphasising the importance of linkages, as opposed to the orthodox model of price based free trade.

<sup>xxxix</sup> Local content was measured as the ex-works price less the foreign exchange used (net of export earnings). This means increasing profits by raising prices charged to domestic consumers raised local content, as did increasing export revenues. The minimum local content requirement was 50 per cent across the model range, with a rebate of excise duty awarded equal to half of the local content value. If the local content target of 75 per cent was achieved, no duty was payable (except for a non-rebatable fiscal excise duty of 2.5 per cent per vehicle). Given the ability of domestic assemblers to raise prices under the high levels of protection, these targets did not necessarily prove onerous, although Black (1996: 11) estimates the actual local content (excluding profit margins) at between 40 and 45 per cent.

<sup>xi</sup> In a recent survey (Black, 1996) while a large proportion of respondents were involved in exporting, it was only of very small volumes. 49 per cent of firms expected exports to increase in real terms by more than 10 per cent per annum in the next five years, and a further 40 per cent expect exports to increase by between 1-10 per cent. This expectation has clearly not been met in 1996, while the required restructuring necessitates at least this if the industry is to expand and enjoy economies of scale. The survey was also run under the boom conditions of 1995, when component firms anticipated new investments etc.

<sup>xli</sup> This is also consistent with the findings of Bell and Cattaneo (1996) that relatively labour intensive sub-sectors in South Africa experienced greater increases in import penetration ratios.

<sup>xlii</sup> The experience of the motor vehicle sub-sector also suggests that for the rationalisation of the industry to be a foundation for growth, an active and selective industrial policy is required, based on a plan for the future of the industry. This policy stance will also involve strategic negotiation with TNCs, and the ability to enforce targets, adapting them to new imperatives as the industry develops.

<sup>xliii</sup> While the depreciation of the Rand is welcome in this context, it only occurred after the current account moved unsustainably into deficit, and not as part of a structured Government policy. Moreover the extremely high real interest rates over 1995 and 1996 compounded the contractionary pressures on the manufacturing sector.

<sup>xliv</sup> The SME policies have included the establishment of the Ntsika enterprise promotion agency and the Khula finance corporation.

<sup>xlv</sup> The main programme, announced on 26 November 1996, consists of an accelerated depreciation allowance, a small-medium manufacturing development programme, and a tax holiday of up to 6 years, comprising 2 years each for meeting qualifying criteria of producing in a selected sub-sector, within a designated area, with a minimum labour content.

<sup>xlvi</sup> The point has been made that the 'supply-side' rhetoric is necessary to wean domestic firms off the practice of lobbying government for protection, rather than develop strategies to expand their production capabilities in response to their changing environment (see Chang 1997). This may be important, but the actual policies put in place to date (especially the emphasis on tax incentives) are consistent with the rhetoric.

<sup>xlvii</sup> Development finance measures include the 'World Player Scheme' targeted at sub-sectors where average nominal tariff protection will decrease by 10 percentage points or more from 1995 to 1999.

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