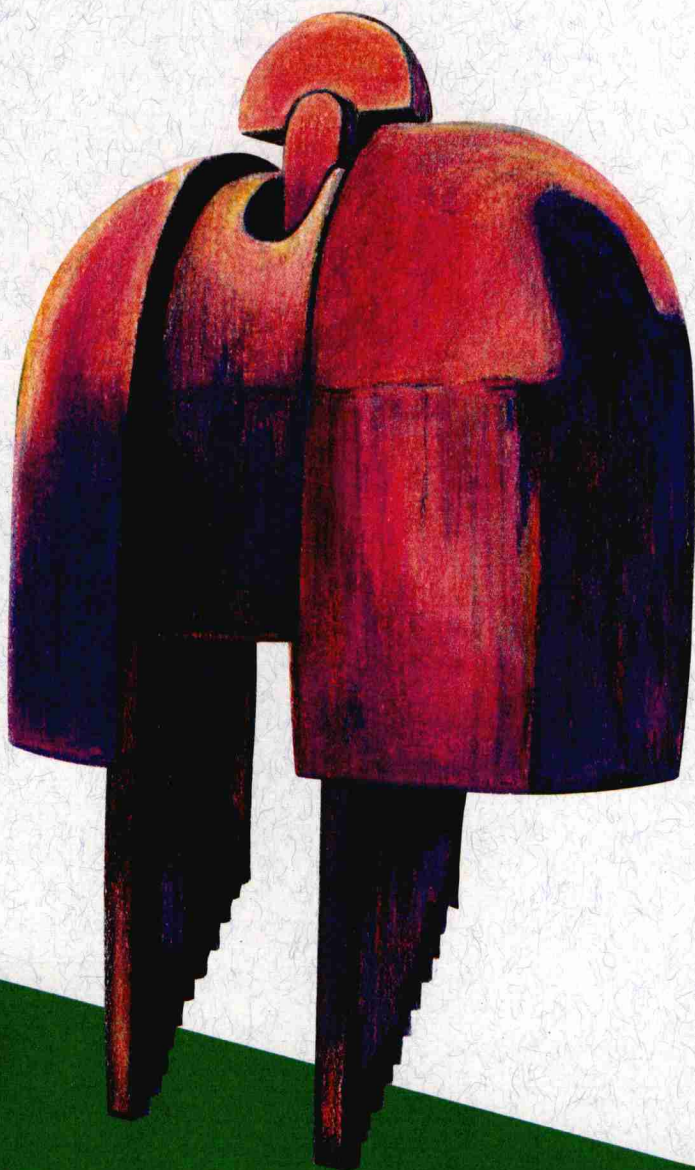


An Industrial Strategy for

the Textile Sector

Johann Maree

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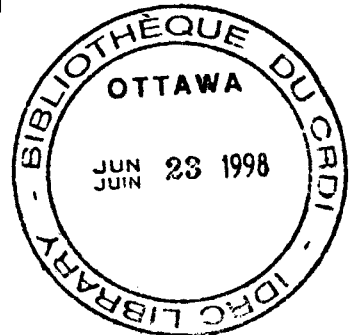
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AN INDUSTRIAL STRATEGY FOR THE TEXTILE SECTOR

Johann Maree

Industrial Strategy Project
Development Policy Research Unit
School of Economics
University of Cape Town

1995



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EDITORIAL COMMENT

This report is one of a series produced by the Industrial Strategy Project.

The ISP has its origins in the Economic Trends Research Group, a collective of economists and other social scientists convened by the Congress of South African Trade Unions in 1986. COSATU, under attack for its support for sanctions, initially asked these researchers to examine the impact of enforced isolation on the South African economy. It soon became clear that sanctions were a small aspect of the problems besetting the South African economy, and the work of the Economic Trends Research Group expanded into a full-blown analysis of South Africa's economic crisis.

The poor performance of South Africa's manufacturing sector loomed large in the litany of problems bedeviling the South African economy. The 1980s had been, in economic terms, something of a lost decade. The manufacturing sector was particularly conspicuous by its inability to create jobs, and to produce commodities that satisfied the divergent requirements of the domestic and international markets. A range of factors contributed to this malaise – apartheid's impact on the skills profile of the workforce, repressive and outmoded industrial relations systems and work organisation, a highly concentrated industrial structure and a concomitantly weak and repressed SME and micro-enterprise sector, and a highly inward oriented trade regime, were the most obvious sources of the crisis in manufacturing.

However, the solutions were less obvious than the problems, and in 1990, again at COSATU's initiation, the ISP was conceived. From the outset, the political environment ensured that the ISP would not be an ordinary research project. The unbanning of the ANC and the certainty of the immediate accession to power of COSATU's political ally, coupled with the union federation's increasingly direct role in policy formulation, ensured that the ISP focus closely on policy, contributing to the development of the industrial policy that would address the poor performance of South African manufacturing.

To this end, the ISP engaged a range of researchers with the purpose of undertaking detailed examinations of the key sub-sectors of South African manufacturing. The fruits of the ISP are to be found in the reports, such as this one, most of which are to be published by the UCT Press. The authors of the reports were assigned, generally for a period of 14 months, to the study of a particular sector. The researchers were required to study the local sector and the factors promoting and restraining its development. They were required to assess its prospects in the light of the likely global trajectory of the industry. Detailed examination of local firms were complemented by international visits that enabled the researchers to consult with international experts and visit factories to enable them to situate South African firms in a comparative perspective.

In addition to the sectoral studies, the ISP also engaged researchers to examine key cross-cutting issues. Those selected for study were human resource development and industrial relations, technology development, market and ownership structures, trade performance and policies, and regional industrial strategies.

Industrial policy is not a plan easily contained between the covers of a single document. It is a process, a process of engagement between the key industrial stakeholders. South Africa's peculiar transition has given concrete expression to this credo, with the tripartite National Economic Forum and the various sectoral task groups the key institutions and processes within which an evolving industrial policy is being developed. COSATU has played the leading role in this process. The ISP has, in turn, made a significant contribution to COSATU's capacities. It has done this by constant dialogue between the ISP and the COSATU leadership, and by a traineeship programme which saw a number of union leaders seconded to the ISP for its duration.

In addition the research process has engaged a range of key actors. Individual researchers have engaged with union and business leaders and experts within government. The ISP was punctuated by a series of intensive workshop attended by the researchers, COSATU and ANC leaders, and other local and international experts. The work-in-progress was thoroughly discussed and critiqued at these workshops and it is appropriate to see each report as owing a great deal to the ISP collective.

A number of researchers are continuing their work from within the industry task forces, the unions, and the structures of the new government. The ISP itself is moving into a second phase, taking up questions still unanswered, re-examining conclusions of the first phase and continuing the unending process of developing industrial policy. It is in this spirit that these reports should be read: they are not final plans, but simply attempts to start a vital process, one that will of necessity be taken forward by all of the major industry participants.

The Industrial Strategy Project was funded by generous grants from the Humanistisch Instituut Voor Ontwikkelingssamenwerking (HIVOS) of The Netherlands, the International Development Research Centre (IDRC), Ottawa, Canada, and the Olof Palme International Centre of Sweden. We benefitted not only from the financial resources of these institutions, but also from the wide-ranging experience of their staff members and their deep and abiding commitment to a democratic and prosperous South Africa.

Avril Joffe
David Kaplan
David Lewis
Raphael Kaplinsky

ISP Co-Directors
Development Policy Research Unit
University of Cape Town

FOREWORD

In the late eighties COSATU commissioned a group of economists to prepare a report analysing the impact of sanctions on the South African economy. We commissioned this work in response to criticism in the media and elsewhere that held us – through our support for sanctions – responsible for the sorry state of the South African economy, including the miserable conditions of our members and others whose interests and aspirations we represented.

The research revealed that the crisis of the South African economy was rooted in the policies of the apartheid era and our commission to the economists was transformed into a full-scale critique of the economics of apartheid. A key consequence of the failures of apartheid's social and economic policies was its unproductive manufacturing sector. It was unable to produce basic goods of a suitable quality and at an affordable price; it was unable to produce goods that successfully penetrated international markets; it relied on low paid, poorly trained workers, and harsh, authoritarian shop floor supervision; above all, it proved incapable of generating desperately needed employment. While manufacturing's contribution to the global economy escalated, South Africa relied increasingly on its natural resource base and the cheap labour that mined and farmed it.

Appreciation of these problems inspired COSATU to request its research collective to undertake research in support of our attempt to formulate a new industrial policy. This request flowered into the Industrial Strategy Project whose output is represented in these reports.

The research process has been characterised by considerable dialogue between COSATU, its affiliates and the researchers. We have learnt much from this interaction; we are confident that we have taught the researchers much. However this work is the output of an independent research collective. As is to be expected in an arms length relationship of this kind, we do not agree with every line of each report, we do not accept every recommendation. But with regard to its major findings, we do agree that there is a real potential for building an efficient manufacturing base, rooted in well paid, productive workers. Above all we believe, and this is endorsed by the ISP, that an independent trade union movement actively and aggressively pursuing its interests is not merely compatible with rapid and sustainable industrial development – it is a precondition.



John Gomomo
President, Congress of South African Trade Unions

ACKNOWLEDGEMENTS

A publication is always a cooperative effort. The people who assisted me are too numerous to list in full. Certain individuals nevertheless deserve special mention.

Brian Brink, executive director, and Errol Keller, marketing and statistics executive, of the South African Textile Federation for always responding positively to my diverse requests;

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Numerous directors and managers of the textile companies I researched for the time they spent in lengthy interviews, showing me around plants, and providing statistics. For reasons of confidentiality they can unfortunately not be named;

Annelie Faure and Tia Rutherford, librarians at South African Nylon Spinners, for making the company's library available to me and assisting in my search for literature;

Raphie Kaplinsky for opening research opportunities and doors in the United Kingdom and for support when I needed it;

In Istanbul – Hacer Ansal and the South African Consulate for selecting suitable textile firms and arranging appointments for me; Ertug Yasar of ITKIB for useful information on Turkey's textile industry;

The two international readers who refereed this manuscript and the detailed page-by-page comments;

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My wife Helen for keeping the home fires burning during my travels, and Paul and Thomas for putting up with my absences.

Johann Maree

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Chapter One: Introduction – focus of the study

1.1 The challenge

Over the next twelve years the South African textile industry is going to face its most serious challenge yet. The challenge is whether the industry is going to survive or not. One source of challenge comes from the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) concluded at the end of 1993.¹ The Uruguay Round determined that tariffs in the South African textile and clothing industries will have to be lowered to approximately half their existing rates over the next twelve years. For the first four years the rates will remain the same, but thereafter they will be reduced more or less steadily over the next eight years to approximately half the existing rates (See Table 4.6 below). This means that the South African textile industry will be faced by unprecedented international competition that will keep on increasing from years five to twelve. In the light of this looming threat it is imperative for the textile industry to develop an industrial strategy. A primary aim of the strategy should be to ensure the long term viability of the textile industry as South Africa re-enters the international community.

1.2 What is an industrial strategy?

Although this is a question which can be answered at many levels, it will be answered purely at the level of an industrial sector. The approach towards industrial strategy developed by Michael Best is adopted in this paper. According to Best, 'the purpose of strategic industrial policy is to promote Schumpeterian competition and (collective) entrepreneurial firms' (Best, 1990:265–6).

In Schumpeterian competition it is not price competition that counts, 'but the competition from the new commodity, the new technology, the new source of supply, the new type of organization . . . competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives' (Schumpeter, 1942, quoted in Best, 1990:118–9). Schumpeter calls this a process of Creative Destruction 'that incessantly revolutionizes the economic structure *from within*, incessantly destroying the old one, incessantly creating a new one' (Schumpeter, 1942:83, quoted in Best, 1990:119).

Best draws three distinctions between a Schumpeterian entrepreneurial firm and a hierarchical firm. The first distinction is that the entrepreneurial firm has a strategic

1 At the time of going to print the government had not yet announced its new tariff regime for the textile industry.

orientation: 1a strategically oriented firm chooses the terrain on which to compete; a hierarchical firm takes the terrain as given' (Best, 1990:11).

'The second distinction between the entrepreneurial and the hierarchical firm is that the goals of the entrepreneurial firm is to gain strategic advantage by continuous improvement in process and product; the goal of the hierarchical firm is to gain minimum production costs by continuity in production operations, product runs, and product design' (Best, 1990:11-12).

The third distinction is in the organisation of production. Success, in Schumpeterian competition, 'depends upon maintaining the organizational flexibility required to be able to adjust a firm's competitive strategy depending upon the strengths and weakness of its competitors at any point in time' (Best, 1990:12).

Best lists four aspects of industrial strategy policy that stand out.

1. It depends upon strong antitrust pro-competition policy, whether formal or informal (Best, 1990:266).
2. Firms do not operate only on a competitive basis, but on finding a 'balance between cooperation and competition' by means of 'preserving and buttressing inter-firm networks' (Best, 1990:266-7).
3. In strategic industrial policy there is a primacy of strategy over planning:

The task of strategic planning is not to plan industries of the future, but to examine the prerequisites for sustaining competitive success and work to ensure that firms, which provide the real dynamic thrust, can respond quickly as new markets emerge (Best, 1990:268).

He warns that 'developing sector strategies is not an intellectual project for detached economic planners'. Rather it requires 'independent but "hands-on" industry studies and the integration of thinkers and doers. This is the role of a forum composed of ministry officers and enterprise leaders' (Best, 1990:268). He should have added trade unionists to the list as well, but goes on to argue for a link between the industrial policy forums and other government instruments such as macro policy, the banking system, and education policy. This is because:

An active industrial policy not only puts pressure on macro policy makers to think long term, but on the banking system to develop strategically oriented lending criteria and the educational system to upgrade the qualifications of the workforce (Best, 1990:268, footnote 15).

4. Strategic industrial policy 'is a universal or sector-specific, as opposed to firm-specific, orientation'. This is because 'sector-specific industrial policies are less prone to special interest politics' (Best, 1990:269).

Best highlights three elements of the successful industrial policy activities of the public authorities in Japan and the Third Italy.

'The first element in a successful industrial policy is a creative use and shaping of the market. Industrial policy fails when it overrides or ignores the market and is based upon the presumption that plans and markets are alternative means of economic coordination. The purpose is not to substitute the plan for the market but to shape and use markets. The market, it has been said, is a good servant, but a bad master.

'Second, successful industrial policy has a production as opposed to a distributional focus. The primary goal of industrial policy in Japan is to promote the New Competition: the entrepreneurial firm, consultative buyer-vendor relations, and inter-firm associations and extra-firm agencies which facilitate continuous improvement in production. As an employment or distributional instrument industrial policy is inherently flawed . . . The sorry record of industrial policy in both American and British experiences has been a failure to target industrial policy to production advancement.

'Third, Japanese industrial policy *has been* strategically focused. it is about the targeting of strategic sectors to maximize industrial growth. It means moving into new sectors a step ahead of the competition . . . Strategic sectors are those where an international competitive advantage can be secured by gaining organizational superiority. But the target is moving. It started with labour-intensive goods, moved to skilled-labour raw-materials intensive sectors, and eventually on to knowledge intensive sectors' (Best, 1990:20-21).

It is salutary to bear Best's points in mind while attempting to develop an industrial strategy for the South African textile industry.

1.3 The need for international competitiveness

The challenge facing the South African textile industry can effectively be encapsulated in a single requirement: the attainment of international competitiveness. Porter (1990), like Best, suggests that there is only one way in which an industry can become and remain internationally competitive today, and that is through continuous improvement of productivity at the level of the firm. He argues that, in a particular country:

A nation's firms must relentlessly improve productivity in existing industries by raising product quality, adding desirable features, improving product technology, or boosting production efficiency. . . . A nation's firms must also develop the capabilities required to compete in more and more sophisticated industry segments, where productivity is generally higher. . . . All this would make it clear why cheap labour and a "favourable" exchange rate are not meaningful definitions of competitiveness. The aim is to support high wages and command premium prices in international markets (Porter, 1990:6-7).

Porter views the industry as the basic unit of analysis for understanding national advantage. He places an emphasis not only on the importance of firms gaining a competitive advantage, but also on the environment in which the firms operate:

Firms gain competitive advantage where their home base allows and supports the most rapid accumulation of specialized assets and skills, sometimes due solely to greater commitment. Firms gain competitive advantage in industries when their home base affords better ongoing information and insight into product and process needs. Firms gain competitive advantage when the goals of owners, managers, and employees support

intense commitment and sustained investment. Ultimately, nations succeed in particular industries because their home environment is the most dynamic and the most challenging, and stimulates and prods firms to upgrade and widen their advantages over time (Porter, 1990:71).

In seeking to develop an industrial strategy for the textile industry in South Africa it therefore makes good sense to research the competitive advantages of the industry at the company level. This paper accordingly places great emphasis on company case studies as a method of identifying areas of competitive advantage of the textile industry in South Africa. At the same time it is immensely important to pay attention to developing the capabilities (such as training) as well as additional institutions at industry level which would be necessary to implement an industrial strategy.

1.4 Scope of the study

The South African textile industry is a large and diversified industry producing a wide range of products, from cotton and woollen fabrics to door and tailgate panels. Because of this diversity it is not easy to research and propose an industrial strategy for the industry as a whole. In addition, the industry forms part of a pipeline in which the raw material (fibre) passes through various distinct transformation processes that often constitute different industries. For instance, in the production of a chemical fibre, its transformation into a garment, and sale to a customer, the fibre passes through four industries: the chemical, textile, clothing and retail industries.²

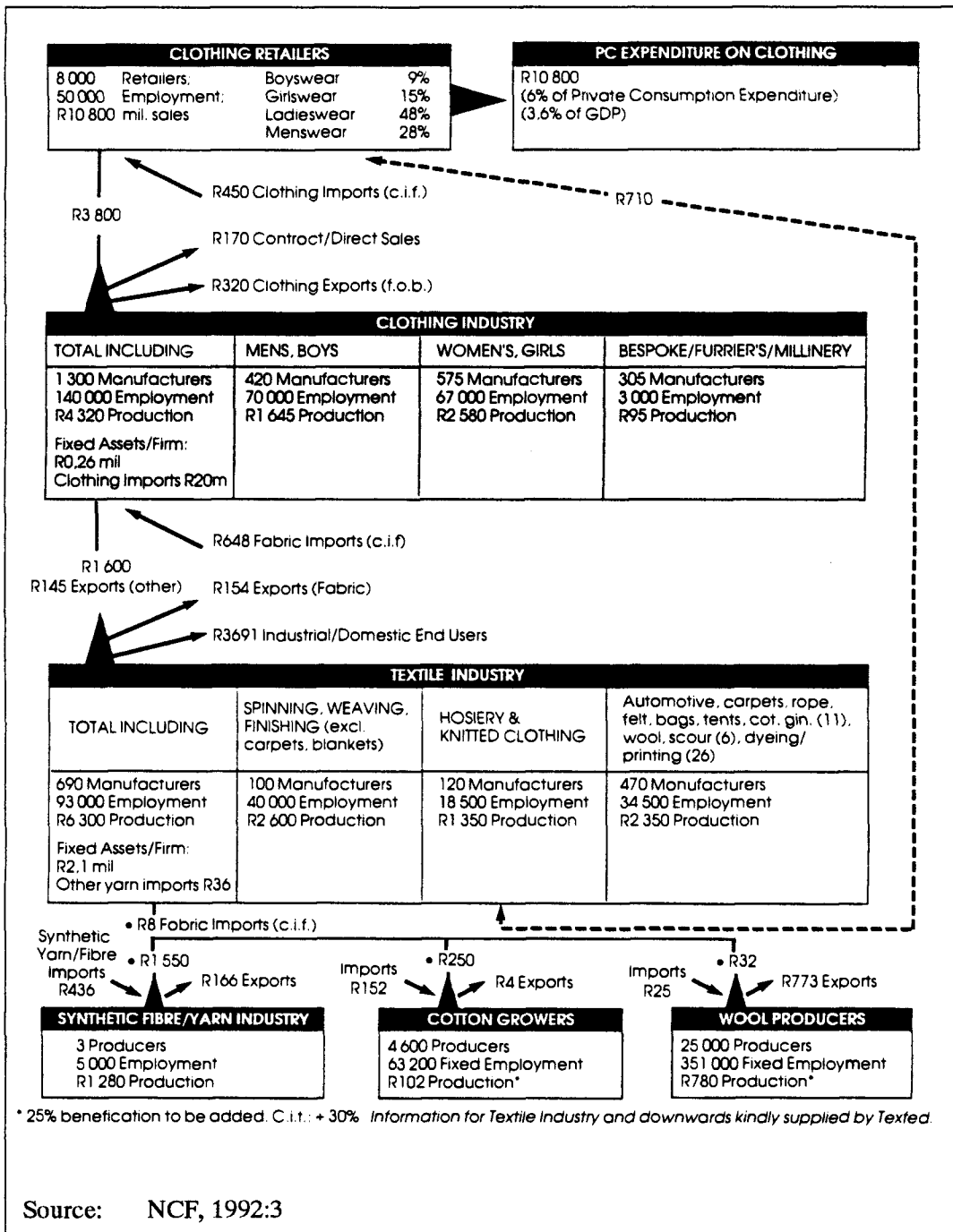
This study concentrates only on the spinning, weaving and finishing segment of the textile industry. This segment was chosen for the following reasons:

- it is the largest segment in the textile industry in terms of employment and production.
- it is the major provider of raw materials to the clothing industry (which has also been studied by the Industrial Strategy Project).
- there is a need for informed debate to assist in resolving the dispute that has characterised the relationship between the clothing and textile industries for a long time.

The industrial strategy developed for the spinning, weaving and finishing segment of the textile industry may therefore not be appropriate for the industry as a whole, especially the segments where their product market differs substantially from that of the spinning, weaving and finishing product market.

2. Throughout this book the term 'chemical fibre' rather than 'man-made fibre' is used. This is to avoid use of the gender-insensitive term 'man-made'. The term 'human-made' seemed more appropriate, but the internationally recognised *Textile Terms and Definitions* of the Textile Institute (1991:114) states that 'chemical fibre' is already being used by people wishing to avoid the term 'man-made fibre'.

Figure 1.1
The South African textile-clothing pipeline
1991 Rand millions



Source: NCF, 1992:3

Figure 1.1 provides a clear presentation of the major segments in the South African textile industry as well as its relationship with other industries in the textile filiere (pipeline). It clearly indicates the spinning, weaving and finishing segment, on which this study focuses. It is important to note that the spinning, weaving and finishing segment also produces household and industrial goods.

1.5 Outline of the paper

Chapter One comprises this Introduction.

Chapter Two commences with an overview of changing trends in production, trade and technology in the international textile industry. It proceeds by outlining the international trade regime. The General Agreement on Tariffs and Trade (GATT), the multi-fibre arrangement (MFA) and South Africa's relationship with the European Community (EC) are reviewed briefly.

Chapter Three contains an overview of the South African textile industry. This includes a brief history of the industry and a macro-economic analysis of the industry over the past twenty years. The chapter ends with an examination of the contemporary structure and employment patterns of the industry.

Chapter Four begins with a broad-brush examination of the South African textile industry's exports and imports over the past 20 years and a more detailed analysis over the past four years. The South African trade regime is then analysed. The complex system of tariffs and export incentive schemes including the discredited Structural Adjustment Program are examined critically. Modifications consistent with the GATT requirements and the Uruguay Round are suggested.

Chapter Five proposes an industrial strategy for the South African textile industry's spinning, weaving and finishing segment. The approach used is, firstly, a comparative cost analysis and, secondly, company case studies of seven successful and competitive companies. The proposed strategy is that this segment of the industry needs to shift to the production of differentiated higher value-added goods. Quality fabrics have to be differentiated on the basis of design or specialisation in order to compete effectively on local and international niche markets.

Chapter Six provides additional corroboration of the appropriateness of the proposed strategy, on the basis of two international company case studies, one in Turkey and the other in the UK. This study attests to the appropriateness of the strategy identified for the local textile industry. Chapter Five however also includes an analysis of the reasons for the collapse of Turkish textile exports throughout the 1980's.

Chapter Seven broadens the study by analysing the problems in South Africa's textile-clothing pipeline. This analysis concludes that there is considerable volatility in demand for textiles due to the length and the large holdings of stock in the pipeline. A solution to

the problem, the Quick Response technique, is presented in detail as well as its application in South Africa.

Chapter Eight examines the role of the industry's dominant trade union, the South African Clothing and Textile Workers' Union (SACTWU), in formulating and implementing an industrial strategy. The chapter moves on to consider training needs in the textile industry, the training policy of the Congress of South African Trade Unions (COSATU), and finally, recommendations to SACTWU on issues dealt with in the chapter.

Chapter Nine rounds off the study by briefly summarising its major recommendations. Finally, the study is concluded by discussing the adjustment problems that will arise if the suggested industrial strategy is pursued. Although the restructuring will include job losses it is concluded that more jobs will actually be created in the textile and clothing industries combined than will be lost in the textile industry alone.

Chapter Two: Trends in the international textile industry

In mapping out a medium to long term strategy for the South African textile industry it is necessary to be aware of the major trends in the international textile industry as well as in the international trade regime. This chapter accordingly starts with an examination of international developments in the textile industry. It then moves on to analyse the international trade regime faced by the South African textile industry. The significance of GATT and the MFA, as well as South Africa's relationship with the EC are considered.

2.1 International developments in the textile industry

2.1.1 Global production and trade trends 1960–1990

On a global level the textile industry is growing more slowly than most other categories of industry, even in regions where textiles are experiencing comparatively rapid growth. Between 1967 and 1979 the annual growth rate of textile production in the world was 3,6% while the rate for all manufacturing was 5,1%. This could be due to the fact that the share of textile production falls as a proportion of total manufacturing output as GDP per capita rises (Toyne et al, 1984:50–53).

In the twenty years from 1960 to 1980 the growth of chemical fibre production far outstripped that of natural fibre production.¹ In the period world production of chemical fibre increased more than 300 percent while natural fibre increased only by about 36 percent. The combined increase of all fibres was roughly 100 percent resulting in a global increase of per capita textile consumption of 35 percent over the period (Toyne et al, 1984:52 and Table 4.1).

However, in the subsequent decade from 1980 to 1990 the trend did not continue. During the period the share of chemical fibre production as a proportion of total fibre production remained almost stable declining marginally from 47,7 percent to 47,4 percent. This was due, on the one hand, to the fall in cellulosic fibre output and, on the other hand, favourable weather conditions and attractive prices for natural fibres (Anson and Simpson, 1991:8–9).

The trends in global trade tended to follow the trend in world production. Chemical fibre fabric trade experienced the fastest world-wide growth during the 1970's. Out of a total average annual increase of \$3,5 billion in textile trade from 1970 to 1979, chemical fibre

1 Throughout this book the term 'chemical fibre' rather than 'man-made' fibre is used. See *Textiles Terms and Definitions* of the Textile Institute (1991:14).

fabric (SITC Group 653) accounted for \$1 billion. Although cotton lost ground to synthetic fibres, woven cotton fabric (SITC Group 652) still added \$580 million on average per year. In addition yarns of all fibres (SITC Group 651) added a further \$780 million on average each year to the total of textile trade. Between them these three textile groups accounted for more than two-thirds of textile trade growth in the 1970's (Toyne et al, 1984:57).

On a regional level Asian countries made significant headway in the 1970's. Korea, starting from a small output of \$715 million in 1970, increased its production tenfold by the end of the decade. In terms of exports, Japan and South Korea made significant inroads. For the whole decade of the 1970's Japan was the largest exporter of chemical fibre woven products, a result in keeping with Japan's strategy of moving into relatively high value-added, high-technology goods.

In terms of spinning capacity Taiwan, Thailand and Indonesia registered very high growth rates in the 1960's and 1970's. Over the same period the number of spindles in Japan decreased thereby shifting production of lower value-added textiles to lower cost Asian countries (Toyne et al, 1984:58,61,90 and Table 5.14).

In the 1980's a potentially dangerous development took place. It was the production of an over-capacity in the primary textile industry. In the nine years between 1980 and 1988, cotton yarn production in the world outside of Eastern Europe, Russia and China increased by 34 percent. While it rose by only 13 percent in the industrialised countries, it jumped by 50 percent in the developing countries. This rate of increase outgrew the rate of fibre consumption. (Strolz, 1991:33) The over-production was confirmed by yarn stock movements. In 1989 yarn stocks in Europe grew by 25 percent in one year and in Asia by 50 percent. While this could in part be due to the amplification effect in the textile pipeline (see Chapter Seven), it nevertheless points to an over-production in yarns (Munkholt, 1991:34-35).

Herwig Strolz calculated that, for yarn output to have grown in line with consumer demand, 8 percent of the processing capacity in place at the end of 1979 or about 8,5 million spindle equivalents would have had to be taken out of production from 1980 to 1988. He attributed the basic reason for the imbalance between production and consumption to the fact that investors did not pay due attention to the rapidly rising productivity of the new machines they were installing. On average he calculated post-1980 spindles to have a 50 percent higher productivity than pre-1980 spindles (Strolz, 1991:33-34).

The gains in textile production and trade by Asian developing countries was not without impact on highly industrialised countries. In most developed countries output increased up to 1973 and remained more or less constant for the remainder of the 1970's, but with some notable exceptions. At the one extreme Italy's textile industry recovered and showed substantial growth in the 1970's. At the other extreme the UK textile industry experienced moderate expansion up to 1973, but declined rapidly thereafter. By 1980 its production index had fallen to only 70% of its 1973 level (Toyne et al, 1984:88-90).

In spite of the general stagnation of the textile industry in industrialised countries in the 1970's, yarns and fabrics continued to be made competitively in developed countries. Throughout the 1980's Germany continued to be the world's largest textile exporter with 11 percent of world trade. Italy was second with 8 percent of world trade (Anson and Simpson, 1991:15).

2.1.2 Structural changes in the international textile industry

There have been some dramatic changes in the global textile industry during the twentieth century. Most of it happened in the second half of the century as countries in the Far East challenged the dominance of advanced industrialised countries in Europe and the United States of America. Even before World War Two Japan made heavy inroads into Britain's dominance in world trade in textiles: by 1939 Japan was exporting 22 percent of world exports in textiles.

In the late 1950's and early 1960's a fresh generation of export-oriented newly industrialising countries emerged in the Far East, most notably Hong Kong, South Korea and Taiwan. But as their economies matured and wages rose relative to other countries in the region, a third generation of Far Eastern countries came to the fore. During the 1980's the textile and clothing industries of mainland China and some South and South-East Asian economies (particularly Thailand, but also Malaysia, Indonesia and the Philippines) grew very rapidly. These countries had considerably lower wages than Hong Kong, South Korea and Taiwan which, in turn, were well below labour costs in the advanced European countries and the USA.²

The response of the textile industries in the more advanced industrialised countries was to move to higher value-added production requiring more sophisticated technology. The big textile groups in these countries, such as Marotto and GFT in Italy, Steilmann in Germany, Coats Viyella and Courtaulds Textiles in the UK, Milliken in the USA, Toray and Teijin in Japan, was to make use of advances in automation. Some sectors of the textile industry, notably spinning and weaving, were turned into capital-intensive industries thereby undermining the Asian countries' advantage of low labour costs. They thus concentrated on the value-added areas of production where cost is a lesser criterion.³ By so doing they restored their international competitiveness and managed to remain amongst the world's top textile exporters. In 1989 six of the world's top ten textile exporting countries were advanced industrial countries (GATT, 1990b:62).

2.1.3 Changes in technology

The development of textile technology has been divided into three stages. The first stage commenced in the 18th century and extended to the pre World War Two era. It was based on English spinning and weaving technologies for the manufacture of natural-fibre textiles

2. GATT, 1990a: 24; and *Financial Times Survey*, 3 October 1991.

3. Dertouzos and others, 1989:17; *Financial Times Survey*, 3 October 1991.

and was labour-intensive. The second stage from the mid-1930's to the 1960's was dominated by technologies developed in the USA for the manufacture of synthetic and blended fibre textiles. These technologies were also relatively labour-intensive (Toyne, 1984:43). The third stage has extended from the mid-1960's up to the present, is labour-saving, and dominated by European and Japanese technologies. The impetus underlying this stage has been competition within and between countries.

Since a basis of this competition is product differentiation and costs (e.g. shorter runs of specialized fabrics), substantial and rapid improvements occurred in productivity, productive versatility and product quality (Toyne, 1984:44).

During the third stage a fundamental change took place in the basic machinery development process. Textile machinery innovations became available on the open market rather than being the proprietary technology of a textile company. A major factor that had precipitated this shift was technological innovation stemming from many disciplines in science and engineering. This made it well nigh impossible for any but the most technically advanced textile firms to develop all the requisite skills. As a result, any firm could purchase on the open market virtually any one of the major types of equipment, such as spinning frames or looms, embodying the latest technology. This enables developing countries to have access to virtually the same high level technology as in advanced industrial countries (UNIDO, 1990:199).

Major technological innovations have been introduced in the textile industry between 1950 and 1990. These innovations consisted mainly of new automatic bale feeders, aerofeed systems, high-draft spinning, texturisation, shuttleless looms, rotary screen printing, and computer-integrated manufacture (UNIDO, 1990:201). Specific and important changes in spinning and weaving equipment with projections up to the year 2000 are examined next.

Table 2.1
Technological changes in spinning mills

Processing Variables	1975	1987	2000
<i>Roving</i>			
Speed (rev/min)	1 200	1 300	1 400
Cost per unit (dollars)	117 241	124 138	310 345
Work-load (spindles/operator)	310	360	500
<i>Spinning</i>			
Speed (rev/min)	13 000	14 000	18 000
Cost per unit (dollars)	61 572	79 488	148 966
Work-load (spindles/operator)	1 800	2 200	12 000
Source:	UNIDO, 1990, Table IV.36, p.202		

Table 2.1 presents information regarding the conversion of short-staple fibres (cotton and synthetic staple fibres having cotton-like dimensions), processes common to the South African textile industry. The major changes that have taken place within the spinning department are high-draft spinning and the development of new spinning methods, particularly the type exemplified by open-end spinning, or the O-E frame. The impact of these changes has been to reduce the required number of pre-spinning steps, and to limit in most cases, the need for roving to only one step instead of several as before. In addition the newer frames run at much higher spindle speeds.

The figures in Table 2.1 show a most likely trend towards more capital intensive spinning in the future. This is because the cost per unit of frames and the number of spindles per operator are due to increase rapidly up to the year 2000.

Table 2.2
Technological innovations in weaving mills

Processing Variables	Type of Loom			
	Shuttle	Shuttleless air-jet		
	1975	1982	1989	2000
Speed (picks/minute)	210	630	900	1 000
Cloth width (cm)	173	–	330	361
Cost per unit (dollars)	8 500	–	40 000	50 000
Work-load:looms per weaver	120	–	19	30
Source: UNIDO, 1990, Table IV.39, p.204				

Table 2.2 demonstrates that the new shuttleless looms are much faster than the traditional shuttle looms. By 1989 the air-jet loom could make more than four times the number of insertions (picks) per minute (900 as opposed to 210) than the shuttle loom could in 1975. In addition the shuttleless loom can weave a wider fabric and improve the fabric's quality through greater yarn and woven fabric flexibility. Although the air-jet looms cost much more than shuttle looms, they are six times more labour-intensive and their installation would thus be unlikely to lead to a reduction of employment (UNIDO, 1990:204).

Shuttleless looms can be of several types: rapier, projectile, air- or water-jet looms. Due to advances in precision engineering in the 1980's water-jet looms have increased in prominence. Global sales of water-jet looms rose by 135 percent between 1988 and 1992 and accounted for 30 percent of the world market in 1993. Almost 95 percent of all production was being sold in Asia with a Japanese manufacturer dominating the market.

Water-jet looms are not going to replace all their rivals. While they are best for the rapid manufacture of synthetic fibre cloth, air-jet and other shuttleless looms remain the first choice for natural fibres (*Financial Times*, 6 August 1993).

2.2 The international trade regime

In seeking to promote a strategy of international competitiveness for the textile industry in South Africa, it is important to understand the trade regime which the industry faces internationally. On the one hand there are the trade policies pursued by countries or regions round the world. On the other hand there are international trade regulating mechanisms which impact on textile products.

The formation of the European Economic Community holds potentially major implications for the SA textile industry as the region constitutes South Africa's largest export market. In 1987 South Africa textile and clothing exports to the region totalled 295 million dollars constituting 52 percent of South Africa's textile and clothing exports (UNCTAD, 1990:46-47, Table A.11).

The two most important international trade regulating mechanisms in textiles are the General Agreement on Tariffs and Trade (GATT) and the Multi-Fibre Arrangement (MFA). They are considered next.

2.2.1 GATT

The General Agreement on Tariffs and Trade (GATT) came into existence as part of the post-war reconstruction after World War Two in the belief that an international institution could help further the cause of global free trade. It came into being in 1947 as part of the preparatory negotiations to set up an International Trade Organization (ITO) and was meant merely to be a temporary treaty until the ITO was implemented. The ITO was conceived as one leg of a tripod that was to manage different areas of international economic relations: the International Monetary Fund (IMF) was designed to provide short-term finance when countries faced temporary balance of payments deficits; the International Bank for Reconstruction and Development (World Bank) to offer long-term assistance; and the ITO to promote freer trade and to regulate trade policies. However the ITO was never ratified and by default GATT became the basis on which successive rounds of negotiations on tariff reductions were conducted (Tussie, 1987:1).

At its foundation there were 27 member countries, but GATT membership currently extends to 109 countries which between them account for over 90 percent of world trade (*Trade Monitor*, 1993, 1:1).

Three important principles underlie the GATT charter.

1. Most favoured nation treatment: The most favoured nation treatment means that if a tariff is lowered on imports from one GATT member, the same cut will apply to the same imports from all other GATT members.

2. Reciprocity of concessions: GATT signatories must be willing to make tariff cuts as concessions in international tariff negotiations in return for receiving equivalent concessions from other GATT countries. One important aspect of this principle is that all members must be willing to make concessions in any round of tariff negotiations.
3. Protection in the form of tariffs: GATT does allow tariffs, but seeks to lower the level of tariffs and prescribe rules relating to the use of tariffs to protect domestic producers in an emergency. Its rules outlaw quantitative restrictions on trade such as import quotas as they are considered to be more harmful than tariffs. GATT is thus a charter for freer trade, not for free trade.

The articles of the treaty does however provide various loopholes which enable members to impose tariffs under special circumstances. One of the most important is embodied in Article 19, the so-called Escape Clause or Safeguard Clause. It states:

If as a result of unforeseen developments and effects of obligations incurred by a member under GATT (including tariff concessions), a product is imported in such amounts as to cause or 'threaten' 'serious injury' to domestic producers, that country is free to suspend the obligation or modify the concession until the injury is remedied.

At the same time, rules are laid down about the manner in which such tariffs may be imposed and the duration of time allowed.

Since its inception in 1947, there have been seven rounds of international trade negotiations carried out under the auspices of GATT. The eighth round, the Uruguay Round, began in 1986 and was finalised at the end of 1993 (Grimwade, 1989:31–34). The underlying objective in the Uruguay Round is to steer countries in the direction of full trade liberalisation, principally through trade neutrality between domestic and foreign markets. Currently, export promotion measures such as GEIS and those tailored to specific sectors are incompatible with measures of the Uruguay Round. It is unclear whether GATT will grant South Africa developing country status. If it does, South Africa would qualify for 'special and differential treatment', but it will not automatically qualify South Africa for trade preferences. They would have to be negotiated bilaterally with countries concerned (*Trade Monitor*, 1993,1:2,8).

As a result of the gradual lowering of tariffs and removal of certain quantitative restrictions after the various GATT tariff-cutting 'rounds' world trade grew rapidly after World War Two. The most dynamic sector of world trade was manufacturing. In the 36 year period from 1950 to 1986 trade in manufactures grew sixteenfold which was well over twice as fast as the growth of manufacturing output (which increased sevenfold). Much of this growth in world manufacturing trade took place between western industrialised countries. This came about as a result of a specialisation in narrow product ranges within specific industries, i.e. an intra-industry specialisation (as opposed to an earlier inter-industry specialisation) within each country. Hence there was a rapid growth in intra-industry trade between the industrialised countries (Grimwade, 1989:53–55).

However the share of textiles in the global trade of manufactured goods declined. During the thirty year period from 1955 to 1985 the proportion of textiles in the world trade of manufactures fell from 5,1 percent to 2,9 percent. This, according to Grimwade, was due to three factors. The main reason was the low income elasticity of demand for textile products; secondly, the western industrialised countries had been less willing to allow freer trade in these products; and, thirdly, the scope for increased international specialisation was accordingly limited (Grimwade, 1989:68).

The reason why western industrialised countries did not want to allow freer trade in textiles was as a result of the penetration of textile imports they experienced from developing countries as Table 2.3 indicates.

Table 2.3

Exports of textile fibres, yarn and fabrics and clothing. 1970–1987
Millions of dollars (f.o.b.)

Origin Developing countries:	YEAR	Destination			
		EEC	EFTA	USA	JAPAN
America	1970	262	25	135	169
	1980	1202	212	533	254
	1987	914	121	1556	115
Africa (excludes SA)	1970	246	60	13	64
	1980	1229	123	44	163
	1987	2318	144	304	117
West Asia	1970	198	40	9	34
	1980	941	185	38	9
	1987	2814	210	332	8
South and South-East Asia	1970	607	96	862	229
	1980	5777	971	5357	1870
	1987	10349	1840	16433	4874
Source: UNCTAD, 1990, A.11					

From 1970 to 1987 textile and clothing imports from developing countries penetrated heavily into the industrialised countries. Different developing regions penetrated different industrialised countries. Developing America made its major inroads into the USA while Africa and West Asia expanded their exports mainly to the EEC. The South and South East Asian countries however succeeded in expanding their textile and clothing exports extensively to all the major industrialised countries.

Exports of textiles and clothing from the less developed countries (LDCs) have, in the words of Tussie, 'been the great success story' (Tussie, 1987:7). She continues:

Generally, the textile industry is the first rung in the ladder of industrialization. . . . After successful substitution of imports, the LDCs entered the world market to use their acquired textile capacity as a foreign exchange earner. In 1976 textiles and clothing comprised more than one-third of the manufactured exports of the LDCs and exports from LDCs constituted one-fourth of world exports of textiles and clothing. In these circumstances, LDCs' competitive goods were thought to be disrupting the markets of the importing developed countries (Tussie, 1987:7).

It is in this context that the emergence and continuation of the Multi Fibre Agreement can best be understood.

2.2.2 The Multi-Fibre Arrangement (MFA)

The United States of America and Europe have for a long time been placing restrictions on imports of textile and clothing products, from Japan before World War Two and subsequently from the newly industrialised countries. Due to the worsening of the situation in the 1950's a Long-Term Cotton Arrangement was drawn up in 1962 under GATT auspices. It was signed by nineteen cotton-textile exporting and importing nations and involved an agreement on quotas for the main types of cotton textile products. The agreement was for four years, but it was renewed twice and lasted until 1974, when it was replaced by the Multi-Fibre Arrangement. This extended the agreement to cover most kinds of textile, including chemical fibres.

In 1977 MFA1 was replaced by MFA2 which gave way in 1981 to MFA3. An MFA4 was negotiated in 1986. Each new extension involved some tightening in the ceiling imposed on textile exports. Moreover, bilateral restraints were separately negotiated and has increased over time. In 1974 there were only seven such agreements and by 1977 there were thirty-three.

Although the MFAs are sanctioned by GATT, they are a violation of its rules since they impose a system of quota control on North-South textile trade over and above the most favoured nation tariff rates. Since the quotas are agreed on a bilateral basis they also violate the GATT principle of non-discrimination. The existence of the MFA thus means that the textile sector follows principles totally opposed to those for which the GATT stands (Tussie, 1987:64; Grimwade, 1989:355).

In the Uruguay Round of negotiations the agreement reached on the MFA includes an increase in quotas for developing countries in two stages and their removal after ten years. The MFA will by then be phased out completely bringing trade in textiles and clothing under GATT rules. In a proposal dated December 1991 it was proposed that after three years quotas on 17 percent of the volume of imports be lifted; after seven years a further 18 percent be lifted, and after ten years the remaining 65 percent of quotas be lifted (GATT, 1991:O.4). The date of commencement was delayed to after the successful completion of the Uruguay Round of negotiations.

2.2.3 Implications of Uruguay round on MFA and SA textiles

The abolition of the MFA will impact differently on different countries. The ones likely to gain from the trade liberalisation are those that can marry high technology with relatively low labour costs and fashion sophistication (such as Hong Kong, Malaysia and Thailand). So will countries with advantages of market proximity (Central America for the USA) (Watkins, 1992:52). But there will inevitably be losers and South Africa is likely to be amongst them unless it takes appropriate precautionary action over the next ten years. Such a strategy would include the following.

Firstly, the existence of the MFA quotas provides a temporary advantage to South African textile firms as it gives them access to markets that are effectively closed to many successful exporters from developing countries which have used their quotas to the full (*Trade Monitor*, 1993,1:2). South African textile producers should therefore do their utmost to secure export markets. They should actively search market niches where they have or can create competitive advantages based on product differentiation and quality rather than price as it is unlikely that they will be able to compete with developing countries on price after quotas are lifted. Secondly, SA textile producers should try to secure these markets by getting close to their customers. Beside ensuring the quality and reliability of their products and deliveries, textile producers should also take trouble to find out exactly what their customers want in terms of product specifications and try to make sure that they meet all the customers' expectations. Moreover, given the nature of the quantitative controls, revenue, and probably also profits, will be higher with higher unit-value items.

2.2.4 Relationship with the European community

The European Community (EC) constitutes an enormous potential market for the South African textile industry. Although market entry requirements and prospects in Asia and North America are also important issues for the South African textile industry only its relationship with the EC is considered in this study.

The EC is the worlds biggest importer of textile and clothing products and also the biggest exporter. The demand for textile and clothing industry products was very positive in the EC until the end of the 1980's. The consumption of textile and clothing industry products rose by a total of about 20 percent in the second half of the 1980's. Households spent 300 billion ECUs on textile and clothing products in 1989, amounting to six percent of household expenditure. The upward trend in consumption came to a halt in the early 90's due to recessionary conditions in EC countries.

A significant part of foreign trade in textiles is still with industrialised countries. The share of industrial countries in total textile imports into the EC in 1990 was about 42 percent. The second largest group with 40 percent of the share, were those developing countries with which the EC has MFA agreements.

The EC's preferential countries account for about 18 percent of total textile imports.⁴ About half of the EC's exports goes to industrial countries, a quarter to MFA countries and 13 percent to preference countries (UNIDO, 1992:1,5,6).

South African textile and clothing exports to the EC declined during the 1980's. In 1980 South Africa exported 345 million dollars (fob) worth of textiles and clothing to the EC, but this dropped to 295 million dollars (fob) by 1987. Textile and clothing imports from the EC to South Africa also declined from 273 million dollars (fob) in 1980 to 194 million dollars (fob) in 1987 (UNCTAD, 1990: A44-A47, Table A.11).

In a study on the potential trade policy options which the EC could adopt towards a post-apartheid South Africa Page and Stevens found that many of South Africa's most important exports to the EC would be unaffected by any post-apartheid preferential trade regime. This is because the face low MFN (most favoured nation) tariffs and no serious non-tariff barriers (Page and Stevens, 1992:37).

They thereupon sharpen their analysis by drawing up a table to try and identify more precisely which existing South African exports could benefit from EC trade preferences. Its entries for textile products are presented in Table 2.4. Products for which South African exports to the EC were more than 20 million ECUs in 1990 were considered ones for which *prima facie* trade preference from the EC is most likely to be beneficial to South Africa. Those which could gain from trade preference are marked as A. Some, however, (marked as D) already enter the EC with little or no import duty or other restriction under the existing MFN regime.

The other issue which is addressed in Table 2.4 is to identify the products being exported to the EC by other developing countries which are likely to face trade diversion to South Africa if it is granted improved access. The Table considers three levels of aggregation: all developing countries, the ACP countries which already have Lomé privileges, and the five neighbouring southern African countries, Botswana, Lesotho, Namibia, Swaziland, and Zimbabwe. Exports which might be adversely affected by South Africa were defined as those which are at least 0,2 percent of the relevant group's exports to the EC and for which the value of South African exports to the EC is at least 1 percent of the group's exports. Table 2.4 also attempts to identify those products where South Africa would compete with EC production by comparing South African exports to the EC with intra-EC trade. The potentially competitive products are marked as B in the relevant columns.

Table 2.4, which may have omissions of products, nonetheless provides some useful information. It shows that relatively unprocessed wool does not face a tariff barrier in the

4. The EC provides trade preferences to developing countries under two schemes. The first is the Generalised System of Preferences (GSP) which the western industrialised countries in 1971 in response to pressure from UNCTAD in 1971. This followed years of agitation by developing countries for preferential treatment for their exports in the markets of the industrialised countries. Superimposed on this system of preferences, the EC introduced its own additional preferences on imports from some forty-six African, Caribbean, and Pacific countries (the ACP countries) which in 1975 signed the Lomé Convention (Grimwade, 1989:332).

EC, nor does it threaten to displace imports from the developing countries. Synthetic filament yarn on the other hand, could potentially benefit from preferential access to the EC. The likelihood of being granted preference is however low as it could threaten intra-EC trade. Cotton yarn and woven fabrics of cotton not only threaten to displace intra-EC trade, but also trade from developing countries, the ACP countries, and South Africa's neighbouring states.

Table 2.4

South Africa's principal textile exports to the EC market classified by competitor

HS Code	Product	Exports Million ECU	% Share of Products in EC Imports from:					
			SA Countries	Dev.	ACP	BLNSZ	Intra -EC	MFN Tariff
5101	Wool	162D	0,9	0,0	0,0	0,1	0,0	0
5105	Wool, carded	33D	0,2	0,0	0,0	0,0	0,1	3
5402	Synthetic filament yarn	23A	0,1	0,0	0,0	0,1B	0,4B	9
5205	Cotton yarn	12	0,1	0,1B	0,1B	0,4B	0,1B	4-6
5208+	Woven fabrics							
5209	of cotton	6	0,0	0,1B	0,4B	0,3B	0,3B	10

Notes:

A = All products for which EC imports from South Africa are > 20 million ECUs and which face trade barriers in the EC;

B = Products and suppliers for which South African competition could be important;

D = EC imports from South Africa which are > 20 million ECUs and which do not face any significant barriers.

Source: Page and Stevens, 1992:38-9, Table 9.

The implications of these findings are that South African textiles already have access to the EC for products that are fairly unprocessed and low in value-added, but that it faces tariffs for more processed products with higher value-added. This is a typical trend of tariff structures in industrialised countries. Because of their need for raw materials they present no or low barriers to the importation of raw materials, but they increase the protection the more processed the goods are. If, in addition, the processes are fairly labour intensive, the protection is even higher because of the low cost of labour in developing countries producing the same products. Table 2.5 clearly indicates how tariffs increase with the degree of processing, 'that is as the labour-intensity of production increases' (Tussle, 1987:59).

Table 2.5

Tariff barriers according to degree of processing of selected textile and clothing products in eleven major industrialised countries

Products	Average Tariff Rates (%)
Cotton, not carded or combed	1,1
Carded and combed cotton	5,2
Cotton textiles	8,2
Knitted cotton	12,4
Men's and children's clothing	23,1
Knitted clothing	26,9

Source: Tussie, 1987:60, Table 2.8

Furthermore, because other developing countries are also exporting such products to the EC, South Africa is less likely to obtain preferential access if it has to be negotiated with the EC in consultation with its preference countries on an item by item basis.

Page and Stephens are quite pessimistic about the prospects of the South African textile industry:

Textiles appear unlikely to be competitive even with the most preferential trading regime (Page and Stephens, 1992:52).

I do not share their pessimism about the exporting prospects of the textile industry as there is ample evidence of pockets of international competitiveness within the industry (see Chapter Five). It would also be interesting to know what proportion of South African fabrics actually do go into clothing exports.

Page and Stephens find that, for South Africa, 'assistance in restructuring the economies could be more effective than providing improved trade access', but they do not spell out what such assistance might be. EC assistance in the training of labour and management in the textile industry would help to enhance the performance of labour-intensive manufacturing industry. The textile industry is itself relatively labour-intensive compared to other sectors of the economy such as mining, metals and motors. But its output is also the key input in clothing which is a very labour-intensive sector with export potential. By improving the quality and price of textile fabrics, the international competitiveness of the clothing industry can thus be raised.

The EC would thus be assisting meaningfully in the restructuring and attaining of international competitiveness of the textile and clothing industries if it were to help in the training of labour and management in the textile industry. Such assistance could take three forms: financial, personal and institutional. The financial assistance could provide money to help people to take time off from work to receive training and education; the personal

assistance could come in the form of sending knowledgeable people out to South Africa to assist in the training and education; and the institutional assistance could be in the form of educational and training institutions in the EC making their facilities available to selected candidates from South Africa. Alternatively, institutions could extend their activities relating to training and education to South Africa and make their services readily available to people working in the textile industry.

To conclude, this section's finding is that the textile industry in a post-apartheid South Africa will be best served by the provision of training and educational assistance that will help to improve the performance of the textile industry than would the provision of trade preferences by the EC. This will assist the textile industry to attain a level of international competitiveness more than would providing South Africa with benefits that are not enjoyed by other countries at a similar level of industrial development to South Africa.

Chapter Three: The textile industry in South Africa

3.1 A brief history of the textile industry in South Africa to the 1970's.

The South African textile industry developed in stages. Blanket manufacturing was the first sector to establish itself, which it did properly in the 1920's and 1930's. The apparel, furnishing and industrial fabrics sectors only took off after the Second World War, while the synthetic fibres sector developed in the 1960's. A common feature of all these sectors is that they developed behind protective tariff and quota walls.

(a) The blanket manufacturing industry

Blanket manufacturing was the first sub-sector of the textile industry to establish itself in South Africa (Hirsch, 1979:13). Although the first weaving factory was built in 1891 in King Williamstown to produce blankets for the 'native territories', it was not until 1925, when the customs duties on blankets, rugs, shawls and heavy sheeting were increased, that the blanket industry developed (du Toit, 1978:33; Steenkamp, 1983:7, paragraph 31). The duties were very high, ranging from 197,5% to 312%. By 1933 there were twelve factories producing woollen and cotton blankets in South Africa, and by 1944 there were sixteen factories employing 3 711 people and producing some 90% of the country's needs in the line of blankets, rugs and sheeting (Steenkamp, 1983:7, paragraph 31).

(b) The apparel, household and industrial textile industries

It was only after the Second World War that textiles became a major sector in the manufacturing industry of South Africa. It was during this period that the apparel, household and industrial textile sectors were firmly established. State support for the textile industry contributed considerably to this development. One form of support was financial and was provided through the Industrial Development Corporation (IDC), a public sector institution that played an active entrepreneurial and financial role in setting up textile plants.

The other form of support provided by the state was through protection. According to H A F Barker:

If not the absolute origin, then certainly the recognized establishment and subsequent growth of a textile industry in South Africa were primarily due to the acceptance of certain conclusions set out in a report by the Board of Trade and Industries published in 1951 (1963:285).

The BTI report referred to by Barker, actually published at the end of 1950, had, as its main aim, to determine the prospects of, and the conditions for, the development of the local textile industry to a stage where it could obtain a substantially larger share of the local market on the basis of economic competitiveness, and to determine the level of protection that would be necessary to achieve such a development (BTI, 1950:2, paragraph 7).

The BTI report considered the textile industry to require, with a few exceptions, relatively small production units as far as turnover, number of employees per mill, and capital investments were concerned. Consequently it regarded the South African market for textiles to be "large enough to support a fairly large number of factories of economic size for the production of cotton cloth, rayon cloth and knitted goods, and, in a lesser measure, wool cloth". It also recommended only moderate customs tariff protection. However, "that BTI report laid the foundation upon which the textile industry was to develop. Thereafter quantitative import control was to play an important role in reserving the domestic market for it" (Steenkamp Report, 1983:11, paras 48,49).

In 1950, at the time of the Report was published, duties on cotton and cotton-related fabrics were mostly of a fiscal nature and were, with very few exceptions, below ten percent. To cope with foreign competition ad valorem duties of 15% on yarns and of 25–35% on fabrics were introduced in 1952 (Steenkamp Report, 1983:64–65, paras 370, 372). A year prior to that ad valorem duties ranging from 20–30% had been introduced on worsted fabrics, because the BTI Report stated that there was scope for meeting 75–100% of domestic requirements in this section (Steenkamp Report, 1983:68, paras 387, 388).

From shortly before the Report was published up to 1960/61 "the expansion of the textile industry proceeded rapidly, especially in the spinning, weaving and finishing of cotton and wool products and in the knitting section" (Barker, 1963:292). The first knitting mills were established in the 1930's, and by 1950 there were 18 in existence. They increased rapidly thereafter to 74 in 1960, providing employment for 15 741 workers. Over the same period (1950 to 1960) the number of cotton mills increased from 8 to 52, with employment increasing from 3 000 to 14 849 (Steenkamp Report, 1983:7–10).

In May 1961 control on textile imports was purposefully re-imposed. This provided another spurt to the growth of the domestic textile industry (Barker, 1963:296). In the three-year period from 1960/61 to 1963/64 the number of knitting mills increased from 74 to 130, with employment doubling from 15 741 to 31 392.

Over the same period employment in the spinning, weaving and finishing of non-woollen yarns and fabrics went up by almost 50% from 14 849 to 21 503 (Steenkamp Report, 1983:8-9). However, between 1963 and 1970 the knitting industry shrank by almost a third in terms of employment, while the spinning, weaving and finishing of woollen yarn and fabric grew slightly. It was, however, the spinning, weaving and finishing of non-woollen (mainly cotton) yarn and fabric that showed a vibrancy over this period. The number of establishments in this sub-sector increased from 60 to 73 and employment rose from 21 500 to 35 000 (Steenkamp Report, 1983:8-10).

Barker, writing in 1963, was sharply critical of the Board of Trade and Industries, its Report, and the *modus operandi* of textile industrialists. One of his main criticisms was that the Board, though forewarned, disregarded the practical difficulties in classifying textile fabrics effectively for customs purposes. But once it started appreciating the problem, the Board used it as an argument for widening the scope of duties to include fabrics that were not being produced in South Africa. The 'bogey of substitution' was used on numerous occasions as a rationale for applying duties to a wider range of products than those produced in South Africa at the time. And there were frequent applications for amendments to tariff protection for textiles. Between 1950 and 1963 there were no less than sixty other BTI reports dealing with amendments (Barker, 1963:290).

The apparent readiness of the Board to comply with the wishes of textile industry, led Barker to make the following critical and incisive comment about the industry:

Once an implied pledge of protection had been given and received, there was understandably little disposition on the part of textile manufacturers to consider anything that might tend to limit or regulate the operation of their mills, even temporarily or only tacitly. So the hint of their concentrating on specialized output, with no certainty on how that might accord with future trends, was repugnant, even though at the time it might have helped in attaining growth and stability. In any event when an industry has been conceived, born and brought up in the expectation that its well-being will be ensured by tariffs, it is likely to have a built-in mistrust of its own ability to compete on any other basis (Barker, 1963:291-2).

(c) The synthetic fibres industry

The first factory for the texturising and dyeing of imported polyamide (nylon) yarn was started in 1959 by British Nylon Spinners, a subsidiary of Courtaulds and ICI. In 1964 the company, which subsequently changed its name to South African Nylon Spinners (SANS), commenced producing apparel nylon yarns, and the following year it started producing industrial yarns, which were mainly for the manufacture of tyre cord, and also diversified into polyester filament yarns. In 1968 another leading international and pharmaceutical firm, Hoechst, launched into the manufacture of polyester staple fibre in South Africa (Steenkamp Report, 1983:12-13, paras 53,55,56).

By 1974 there were, besides the above two producers of unprocessed yarn and fibre, a further fifteen companies in the intermediate industry that processed filament and fibre yarns into stretch and bulked yarns (processed yarns). At that time, a major technological change took place with the advent of an integrated drawtexturing process that combined processes previously carried out separately by fibre producers and yarn processors. This

led to a process of rationalisation in which SANS took over a number of manufacturers, so that by the end of 1976 there remained only three independent processors in this sub-sector (Steenkamp Report, 1983:13, paragraph 57). However, in 1978 the Frame Group unexpectedly started producing polyester staple fibre for its own use. The plant had a capacity of six million kilograms, which was doubled in 1981 and extended to the manufacture of polyester fibre yarns. This caught the existing producers by surprise and resulted in an overcapacity in the area of polymer and staple fibres. For a while SANS operated at less than 50 percent capacity (Steenkamp Report, 1983:13–14, paras 59,64; Hirsch, 1978:104).

Once again protection played an important role in the development of this sub-sector of the textile industry. According to the Steenkamp Report:

The synthetic fibres industry would not have been able to exist, let alone to expand as it has done, without the assistance of tariff protection and, in particular, of quantitative import control. The initial rates of duty protection varied from 15 to 20 percent *ad valorem* (Steenkamp Report, 1983:14, paragraph 62).

The conclusion that follows from this brief overview of the history of the textile industry in South Africa is that it was built behind a wall of protection that included both tariffs and quantitative import controls. Although it grew rapidly up to the end of the 1960's this does not mean that it was necessarily an economically efficient or internationally competitive industry. Barker warned in 1963 that, "without the buttress of substantial and widening tariff protection, the outlook for the industry would doubtless be unpromising" (Barker, 1963:302).

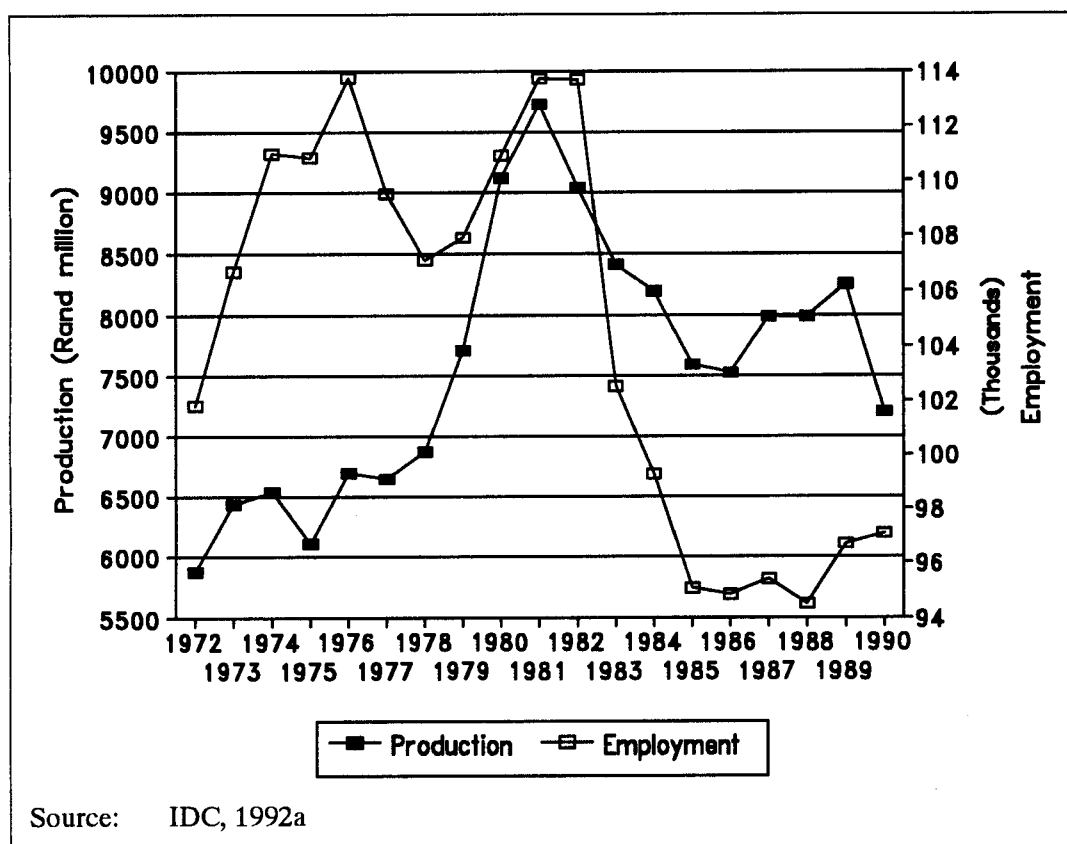
3.2 A macro-economic overview of the textile industry from 1972–1990

(a) Growth: output and employment

There have been two distinct phases in the growth of the textile industry in South Africa over the past two decades (see Figure 3.1). The first period from 1972 to 1981 was one of sound growth of output: the average annual compound growth rate over this period was no less than 5,7%. Production reached a peak in 1981 of R9 721 million (in 1990 prices). Employment also grew during this period, but displayed a cyclical trend with two peaks, one in 1976, and the other in 1981. At the time of the second peak the textile industry employed a total labour force of 113 700 (IDC, 1992).

The second distinct phase from 1981 to 1992 has been characterised by a decline in the textile industry. Output dropped drastically after 1981 and declined by 22% over the four year period 1981–1985. As a result employment fell rapidly over the same period: the textile industry workforce decreased by no less than 18 580, a 16% reduction. In 1986 the downward cycle bottomed out and production and employment increased until 1989.

Figure 3.1
Production (constant 1990 prices) and employment 1972–1990



From 1990 onwards production and capacity utilisation declined once again. Capacity utilisation fell to 79,1% in 1990. In May 1992 it was down to 74%, reaching the lowest capacity utilisation yet (CSS, 1992; van Coller, 1992:4). Once again employment plummeted, falling from 97 500 at the end of 1990 to 91 700 twelve months later, and to 86 800 by October 1992 (CSS, 1993; NCF, 1993:40). The textile industry in South Africa has thus been facing a serious challenge for the past decade.

(b) Capital stock, investment and technology

Over the past two decades capital investment in the textile industry has lagged behind capital investment in the manufacturing industry as a whole. This is clearly borne out by the fact that the proportion of the textile industry's capital stock within the manufacturing sector halved itself from 4,8% in 1972 to 2,4% by 1983. Thereafter (from 1983 to 1990) the proportion of capital stock in the textile industry remained constant at 2,4%.

The low level of investment in the textile industry over the past twenty years means that much of the technology has become dated, as Table 3.1 demonstrates.

Table 3.1
Age of textile machinery in South Africa

Type of Machinery	Number of Machines in each Age Category					Av Age	% >10
	Years:						
	0-5	6-10	11-15	16-20	>20		
Age Median	2,5	8	13	18	25		
<i>Spindles</i>	112502	70155	64752	106298	213799	15,76	67,81
Conventional	87654	65931	57328	100346	210631	16,41	70,57
Open End	24848	4224	7424	5952	3168	8,30	36,27
<i>Looms</i>	500	348	724	692	667	14,53	71,07
Ordinary	0	0	178	0	21	14,27	100,00
Automatic	0	0	7	180	60	19,56	100,00
Shuttleless	500	348	539	512	586	14,05	65,88
<i>Knitting Machines</i>	63	186	173	99	161	14,23	63,49
Circular	60	151	132	64	109	13,47	59,11
Warp	1	35	41	22	40	15,91	74,10
Flat	2	0	0	13	12	19,96	92,59

Note:
Table 3.1 is based on a survey conducted by Errol Keller of the Textile Federation at the beginning of 1992. Most of the large companies in the spinning, weaving and knitting industries were surveyed.

Table 3.1 shows that, at the start of 1992, the average age of textile machinery used in spinning, weaving and knitting ranged from 14 to 20 years, with the exception of open-end spindles which had an average age of 8 years. It also shows that for all the equipment, again with the exception of open-end spindles, more than 50% was more than 10 years old. In most cases a far larger proportion of the machinery exceeded ten years in age. In the case of shuttle looms, 100% were more than ten years old, while 93% of the flat knitting machines, and two-thirds to three-quarters of the remaining machinery, exceeded ten years of age.

The two major technological advances that have been made in spinning and weaving over the past four decades or so have been the development of open-end spindles, and shuttleless looms. Their speeds are considerably higher than the conventional ring-spinning spindles and shuttle looms, thereby increasing productivity significantly

(UNIDO, 1991:198–205). H.Strolz has estimated that the spindles installed since 1980 have a productivity 60 percent higher than those in place at the end of 1979 (Strolz 1991:34).

Table 3.2 compares the extent of investment in new spindles and looms over the 10 year period ending 1988 in South Africa with other countries.

Table 3.2
Comparative ages of textile machinery, 1988

Country	% of Machinery More Than 10 Years Old				
	Spindles Short- Staple	Long- Staple	Open-End Rotors	Looms Shuttle	Shuttle- less
West Germany	79.5	64.7	0.0	98.7	38.5
Italy	50.7	79.4	0.0	99.5	44.5
Turkey	82.2	69.5	19.9	96.4	88.1
Taiwan	63.5	18.2	16.2	88.9	63.5
South Korea	68.0	81.7	8.4	67.0	88.7
Hong Kong	69.2	n.a.	0.0	97.4	54.9
Indonesia	74.8	33.8	14.6	87.2	92.8
Thailand	75.3	22.6	0.0	96.8	96.5
China	98.6	89.5	1.5	99.9	98.1
Australia	n.a.	83.8	34.5	98.8	40.0
South Africa *	78.2	71.0	32.2	100.0	65.9

* South African looms for 10 year period ending 1992.
n.a. not available

Source: UNIDO 1990 Tables IV.50, IV.54, IV.56, IV.62, IV.64.

Table 3.2 demonstrates that South Africa has fallen behind international trends as regards investment in open-end spindles. Of the eleven countries listed it is only Australia that has a larger proportion than South Africa of open-end spindles more than ten years old. No less than five of the countries have completely (or almost completely) replaced all their open-end spindles over the period. With regards to shuttleless looms South Africa falls in the median position, but it lags a considerable way behind the extent to which West Germany, Australia and Italy have replaced their shuttleless looms.

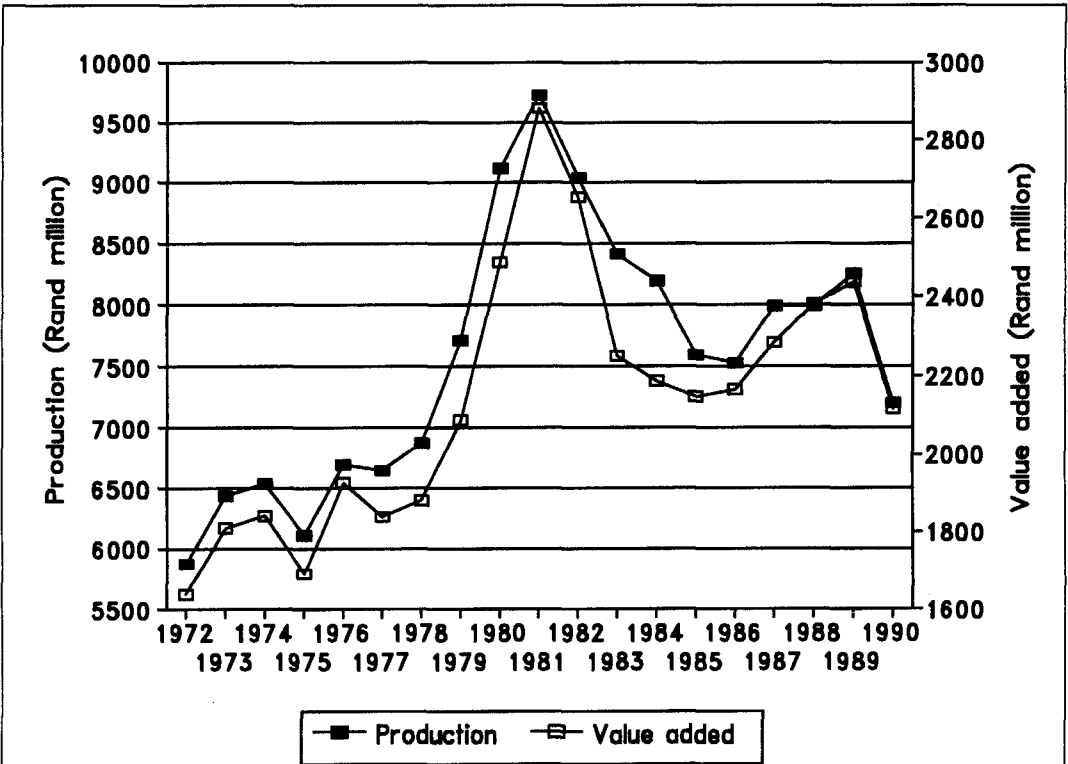
The significance of the age of textile machinery lies in the fact that the world's four top textile exporters in 1988, namely, West Germany, Italy, China and Hong Kong (in that sequence) have, with the exception of China's low replacement rate of shuttleless looms, invested extensively in new open-end spindles and shuttleless looms over the preceding ten year period. The South African textile industry's relatively low level of investment in

new technology therefore serves to undermine its ability to face up to international competition.

(c) Value-added

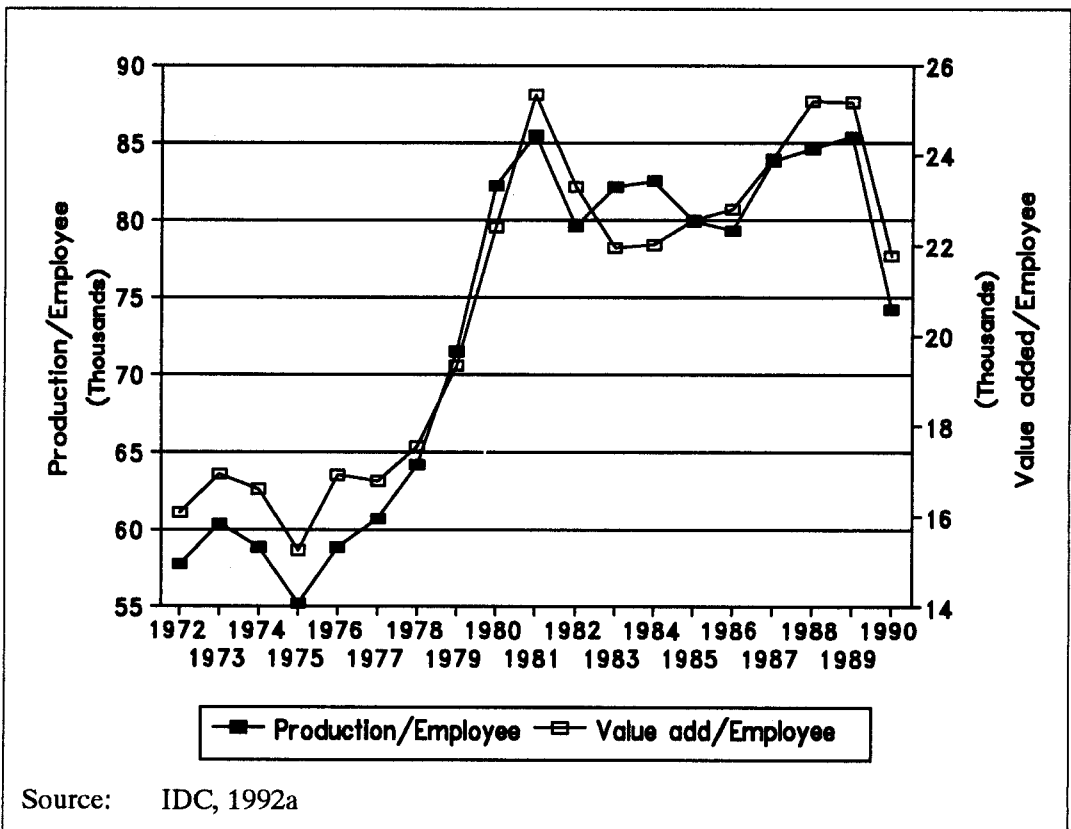
The stage has been reached in South African textile production where the proportion of value-added to the total value of a product is immensely important. A highly desirable feature would be to attain a higher value-added per unit of output over time, but this has not been the case in the textile industry for the period 1972 to 1990. The proportion of value-added in total output has remained virtually constant over the whole period ranging from 27% to 30% of production. This is also visually borne out by Figure 3.2 which demonstrates the close correlation between production and value-added over the period. It clearly demonstrates that value-added has not increased as a proportion of output over the period 1972 to 1990.

Figure 3.2
Production and value-added
Constant 1990 prices 1972–1990



Source: IDC, 1992a

Figure 3.3
Production and value-added per employee
Constant 1990 prices 1972–1990



The value-added per employee has however increased over the period 1972 to 1990, particularly from 1975 to 1981 when it grew at an annual compound growth rate of 8,8% (see Figure 3.3). The rise in value-added per employee during this period was closely matched by the rise in output per employee (labour productivity) which grew at 7,6% per year. Generally, the two relationships, namely value-added per employee and labour productivity, displayed the same cyclical trends over the period.

(d) Productivity and capacity utilisation

Although the levels of labour and capital productivity fluctuated from year to year over the period 1972–1990, they both demonstrated a long-term increase over the period. Least square linear regression analysis reveals that both labour and capital productivity increased over the long term, but labour productivity had a far sharper rate of annual increase on average than did capital productivity. Labour productivity was rising at an annual rate of R1 671 per year while output per unit capital (capital productivity) was almost stagnant increasing at a rate of only R0,02 per annum.

Figure 3.4
Capacity utilisation and labour productivity 1972–1990

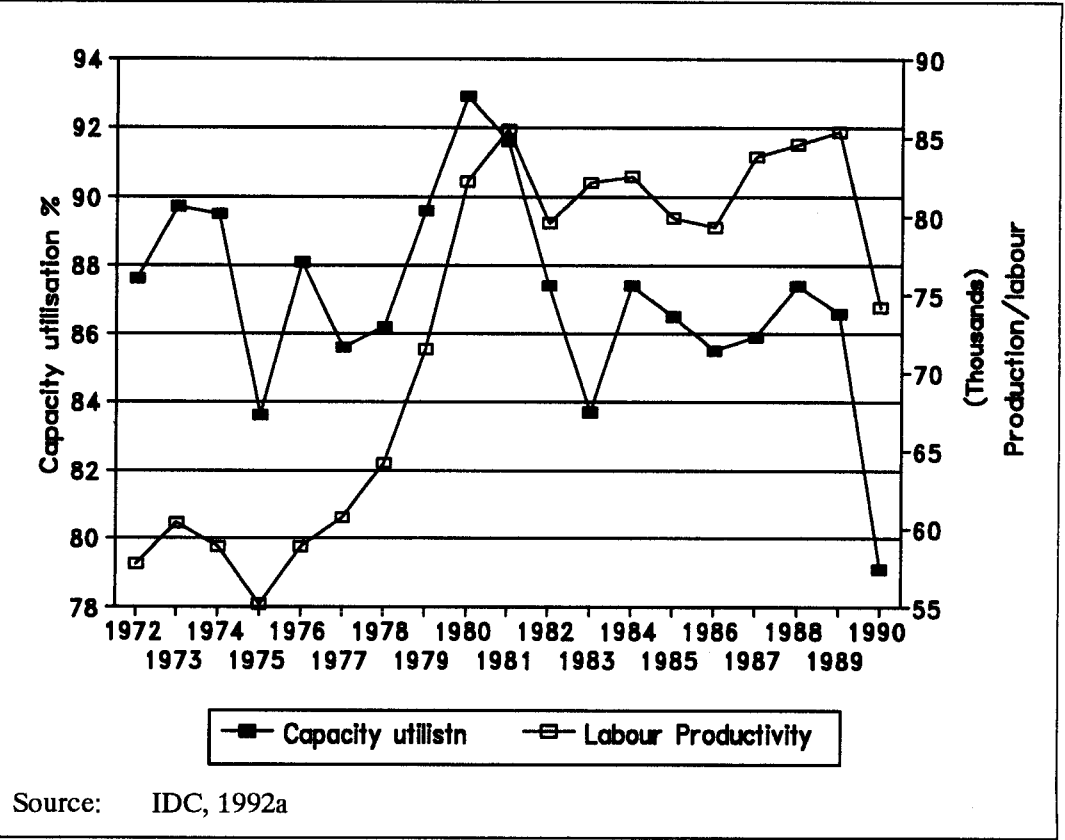
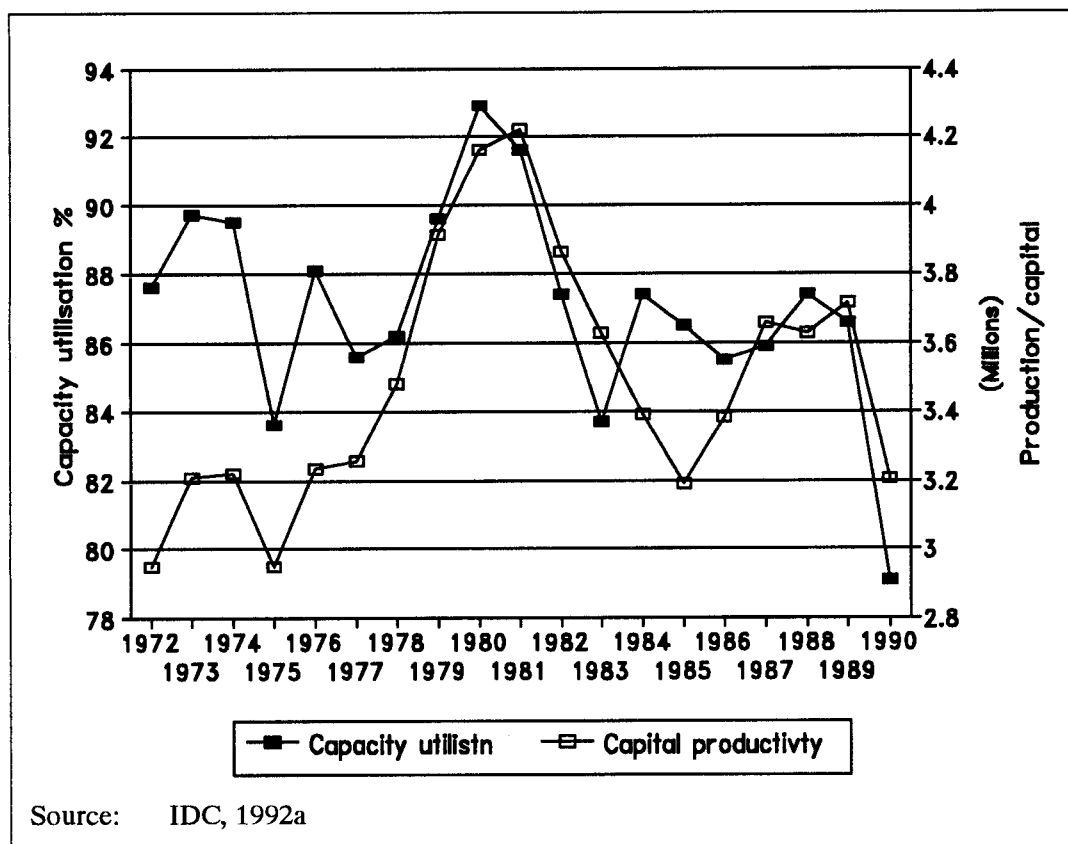


Figure 3.5
Capacity utilisation and capital productivity 1972–1990



Both labour and capital productivity had similar cyclical fluctuations to the level of capacity utilisation in the textile industry, as Figures 3.4 and 3.5 demonstrate. Surprisingly, very little of the variance in both measures of productivity can be explained by the variance of the level of capacity utilisation. Even in the case of capital productivity only 26,6% of the variance (R Squared) could be explained by the level of capital utilisation in a least squares linear regression equation.

(e) South Africa's labour productivity in comparative perspective

How has South Africa performed in production, employment and labour productivity improvement in comparison to other countries during the 1970's and 1980's? Table 3.3 compares South Africa's performance on a global level as well as the developed and developing market economies. Two regions are also singled out because of their importance to the South African economy, namely the European Economic Community (EEC) and the Asian market economies.

In the period 1973–1981 South Africa's textile production performed as well as that of the developing market economies (their increase in production over this period was 47%), but there was an important distinction between how they achieved the growth. In the case of the developing market economies the growth was achieved mainly through an increase in employment, while in South Africa's case it was achieved mainly through an increase in labour productivity. As can be seen from Table 3.3, employment in the developing market economies went up by 41% and productivity increased by 5%, whereas in South Africa employment went up by only 6% and productivity increased by between 43% and 47%. However, during the 1980's South Africa's textile industry performed badly in comparison with the rest of the world. The first striking difference is that in the period 1980/1 to 1988, production in South Africa declined while it expanded in the rest of the world. In the Asian market economies in particular, production almost doubled itself over this period (it increased by 97 percent), while in South Africa it *decreased* by 13 percent.

Employment in textiles in South Africa also decreased in the 1980's (it fell by 15%), and while it fell by the same amount in the EEC there are two important distinctions between South Africa and the EEC. Firstly, production in the EEC increased by 12 percent during this period, while it decreased in South Africa. Secondly, the reduction in employment in the EEC took place as a result of an increase in labour productivity, while employment in South African textiles declined because production slumped. Whereas labour productivity in the EEC rose by 34%, it probably remained static in South Africa.¹

The Asian market economies, by contrast, increased *both* their employment and labour productivity during the 1980's. The fact that they could achieve both was due to their phenomenal growth in production over this period.

1. According to the Industrial Development Corporation it increased by 5% over the period, but according to the National Productivity Institute it declined by 6%.

Table 3.3
Production, employment and productivity growth in textiles 1973–1988

South Africa in comparative perspective					
Indices: South Africa 1981 = 100;					
Rest of World 1980 = 100					
Region/Country	1973	Year 1980/1	1988	Percent Change	
				73-80/1	80/1-88
<i>Production</i>					
World	81	100	128	23	28
Developed M.Econs	89	100	121	12	21
EEC	92	100	112	9	12
Developing M.Econs	68	100	149	47	49
Asian M.Econs	65	100	197	54	97
South Africa	68	100	87	47	-13
<i>Employment</i>					
			1986/7/8		80/1-86/8
World	90	100	99	11	-1
Developed M.Econs	106	100	89	-6	-11
EEC	111	100	85	-10	-15
Developing M.Econs	71	100	110	41	10
Asian M.Econs	70	100	118	43	18
South Africa	94	100	85	6	-15
<i>Labour Productivity</i>					
World	85	100	129	18	29
Developed M.Econs	87	100	121	15	21
EEC	84	100	125	19	25
Developing M.Econs	95	100	134	5	34
Asian M.Econs	95	100	134	5	34
South Africa: IDC	70	100	105	43	5
NPI	68	100	94	47	-6
Notes:					
Production figures in the third column for all countries are for 1988, but Employment and Labour Productivity figures are for different years: World and Developing Market Economies = 1986; Developed Market Economies = 1987; South Africa = 1988.					
Source: South Africa: Industrial Development Corporation, 1992a, and National Productivity Institute, 1991 (only for labour productivity); Rest of World: UNCTAD, 1990.					

3.3 Structure and employment in the textile industry

(a) Structure in the mid-1980's

Table 3.4

Standard Industrial Classification Subgroup	Employment	Number of firms	Output (000's)	Cap.stock (000's)
Spinning, weaving and finishing of non-woollen yarns and fabrics	36 845	94	R1 235 575	R210 232
Garment and hosiery knitting mills	13 499	98	R224 311	R34 323
Soft furnishings	8 103	183	R167 988	R24 311
Blankets	6 311	8	R119 781	R3 859
Other knitting mills	4 324	25	R187 790	R53 368
Dyeing, bleaching, printing and finishing	4 179	30	R223 527	R17 762
Spinning, weaving and finishing of woollen yarns and fabrics	4 108	11	R86 750	R12 821
Carpets and rugs, mats and matting	4 042	32	R202 805	R20 568
Automotive textile goods	2 613	86	R89 539	R8 178
Pressed felt, padding and wadding; Tyre cord and fabric	1 984	21	R62 391	R5 820
Notes:				
Output is the value of gross output in Rand terms.				
Capital stock is the end Rand value of the following fixed assets: plant, machinery and other equipment. It excludes the value of stocks on hand, land, buildings and vehicles.				
Source: South African Statistics, 1992: 12.30-12.33; and CSS Census of Manufacturing, 1985: 33-34				

By the mid-1980's the South African textile industry was very comprehensive – some would say too comprehensive – in terms of the products which it manufactured. In the latest available (1985) *Census of Manufacturing* the ten largest subgroups in terms of employment were as shown in Table 3.4. It shows the dominance of the spinning, weaving and finishing of non-woollen yarns and fabrics subgroup in terms of employment creation. It is followed by the knitting mills and then by the subgroup that makes up soft household furnishings.

There is a distinct regional concentration of the textile industry. Table 3.5 indicates that it is mainly concentrated in two areas, namely the Durban-Pinetown-Pietermaritzburg region and the Western Cape. There are four smaller areas of concentration, namely the Pretoria-Witwatersrand-Vereeniging region, Border, Natal Midlands and Port Elizabeth-Uitenhage. Between them these seven areas account for most of the textile employment in South Africa.

Table 3.5
Employment by region 1985

Region (Statistical Region)	Number of firms	Employment
Western Cape (01, 02 and 08)	180	21 053
Kimberley (20)	4	263
Western Transvaal (25)	4	1 003
Eastern OFS (29)	7	2 004
Border (38)	11	8 270
PE & Uitenhage (47)	27	6 450
Durban, Pinetown & Pietermaritzburg (48 and 50)	149	29 936
Natal Midlands (51 and 60)	23	6 961
S Tvl & Kangwane (64 and 96)	6	1 347
PWV (71, 72, 73 and 75)	215	10 726
Lebowa (94)	4	653
Source: SA Labour Statistics, 1992: 2.177–2.227, based on the 1985 Census of Manufacturing.		

The number of firms within the industry as a whole and in each of the sub-sectors implies a competitive market structure for the South African textile industry. However, the reality is that there are significant areas of oligopoly and production is very concentrated in the hands of the largest enterprises. In 1985, the category comprising the largest enterprises (i.e. with a gross output of more than R10 million per annum), produced 71 percent of gross output and employed 66 percent of the labour force in the textile industry.

Some of the largest firms are subsidiaries of conglomerates such as Anglovaal Industries, Tongaat-Hulett's, Barlow Rand and Anglo American. The Frame Group is controlled by Seardel Investment Corporation, via Seargreg Investments. Industex is however a privately owned company. In addition there are group holdings which own a large number of small textile companies. The larger group holdings and their number of subsidiaries (in brackets) include the following: Debonair Group (11), Glodina Holdings (4), Gubb and Inggs (21), Ninian & Lester (4), SA Bias Industries (45), Strebel Group (8), Trimtex Trading (5), and Unispin Holdings (9).

Within certain textile product ranges there are some very oligopolistic structures. The Board of Trade and Industry found in 1988 that 90 percent of production of all spun yarn was in the hands of five companies while more than 90 percent of continuous filament yarn was in the hands of only one company (BTI, 1988:19, paragraph 52).

Almost 100 percent of the country's requirement of polyester and polyamide fibres were in the hands of three manufacturers and although two new entrants started producing polyamide yarns and another one started producing polyester continuous filament yarns, it still remained an oligopolistic structure (BTI, 1988:15, paragraph 35-36). Although the structure is very oligopolistic, it appears to the outsider to be a competitive rather than collusive oligopoly.

(b) Employment in the textile industry

A more detailed breakdown of employment by population group and gender in the 1985 census for the textile industry subsectors is provided in Table 3.6.

Total employment in the textile industry in terms of population group in 1985 and 1991 were as indicated in Table 3.7. It shows that more than half of the labour force in the industry is African and slightly more than a quarter is Coloured. Whites constitute only about one-tenth of employees and Asians even less (about 7 percent).

In terms of gender more males were employed in the textile industry than females in 1985. The total number of males was 51 133 (54%) and total number of females 43 947 (46%), but there were significant differences between the population groups as shown in Table 3.6. Among Whites the overwhelming majority were male (72%) while among Coloured people females significantly outnumbered males (by 60% to 40%). For Asians the ratio was reversed with males (60%) outnumbering females (40%), whereas among Africans the ratio of males (55%) to females (45%) was about the same as the average for the textile industry as a whole.

Table 3.7
Employment in the textile industry by population group

	1985		1991	
White	9 014	(9,5%)	10 600	(11,6%)
Coloured	24 816	(26,1%)	24 900	(27,2%)
Asian	7 075	(7,4%)	6 500	(7,1%)
African	54 175	(57%)	49 700	(54,2%)
Total	95 080	(100,0)	91 700	(100,0%)

Source: CSS, *Census of Manufacturing*, 1985: 135-136;
SA Labour Statistics, 1992:2.177-2.227.

An important aspect of the South African textile industry not touched on as yet, is trade. This is considered in the next chapter.

Chapter Four: South African textile trade and trade regime

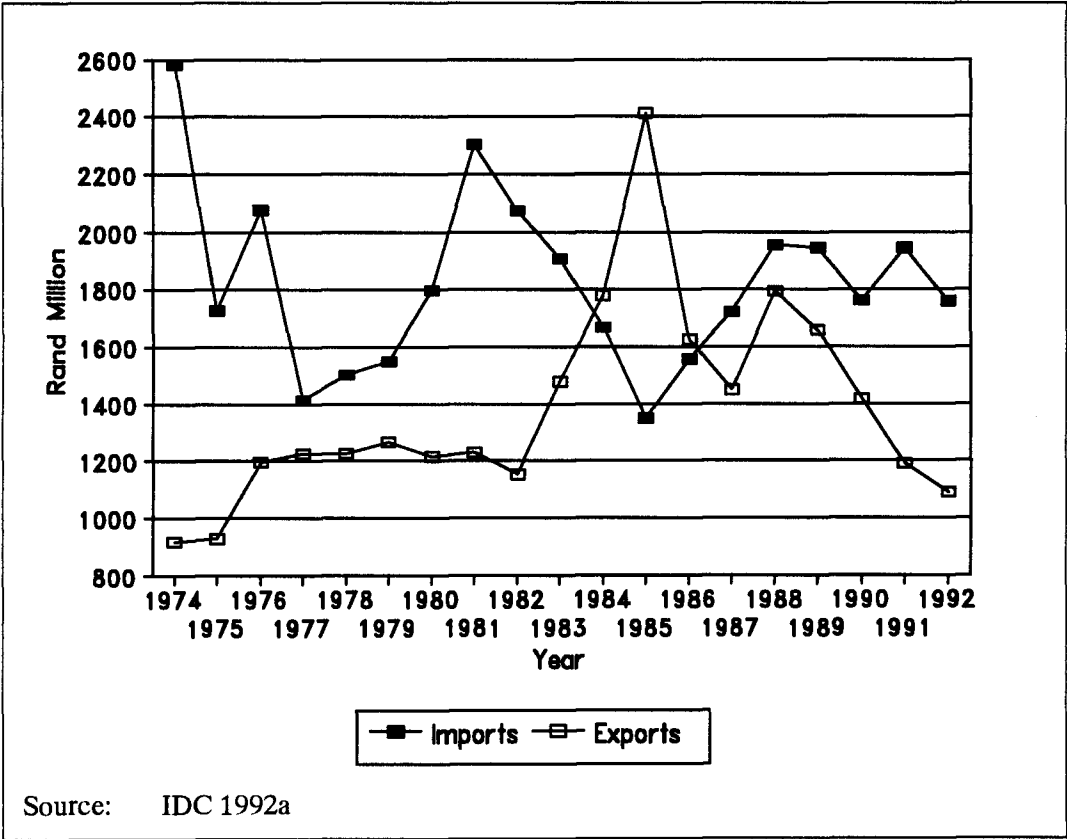
This chapter commences by examining the South African textile trade and then proceeds to investigate the complex South African trade regime for textiles. It ends with a brief exposition of the phasing down schedule of textile tariffs accepted by GATT in the Uruguay Round of negotiations. This schedule is of great importance to the textile industry as it is a clear signal that textile tariffs are going to be reduced over the next twelve year period.

4.1 South African textile trade

Textile exports, as a proportion of domestic production, averaged about 6% in the 1970's, but increased steadily in the 1980's to 15% in 1989. According to the IDC *Sectoral Data Series* exports in the textile industry during the 1970's and 1980's constituted more or less the same proportion of domestic textile production as manufacturing exports did in the manufacturing industry. Textile imports, on the other hand, constituted a smaller proportion of domestic demand in the textile industry in the 1970's and 1980's than did manufacturing imports in the domestic demand for manufactured goods. Textile imports from 1972 to 1989 constituted, on average, 14% of domestic demand in textiles whereas manufacturing imports constituted 19% of domestic demand over the same period (IDC, 1992a).

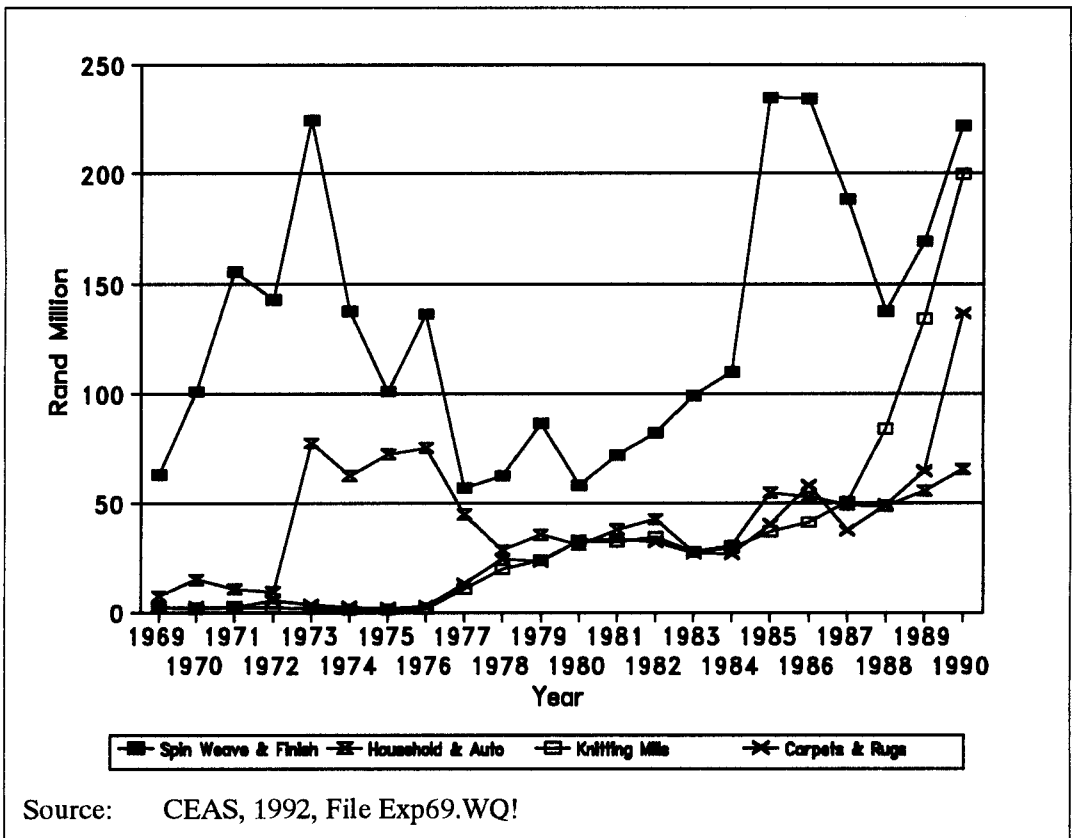
Trends of imports and exports in the textile industry and in sub-groups of textile products are presented in Figures 4.1 and 4.2. Figure 4.1 shows that, except for three years in the mid-1980's, textile imports consistently exceeded textile exports over the nineteen year period from 1974 to 1992.

Figure 4.1
Textile imports and exports 1974–1992, constant 1990 prices



Breaking these figures down to subsectors of the textile industry according to the Standard Industrial Classification reveals that there are four major subsectors that have shown considerable growth in exports from 1988 to 1990. They are (1) the spinning, weaving and finishing, (2) the fabric knitting, (3) the household and automobile, and (4) the carpets and rugs subsectors (Figure 4.2).

Figure 4.2
Export of textiles (Four SIC sectors), Constant 1990 prices



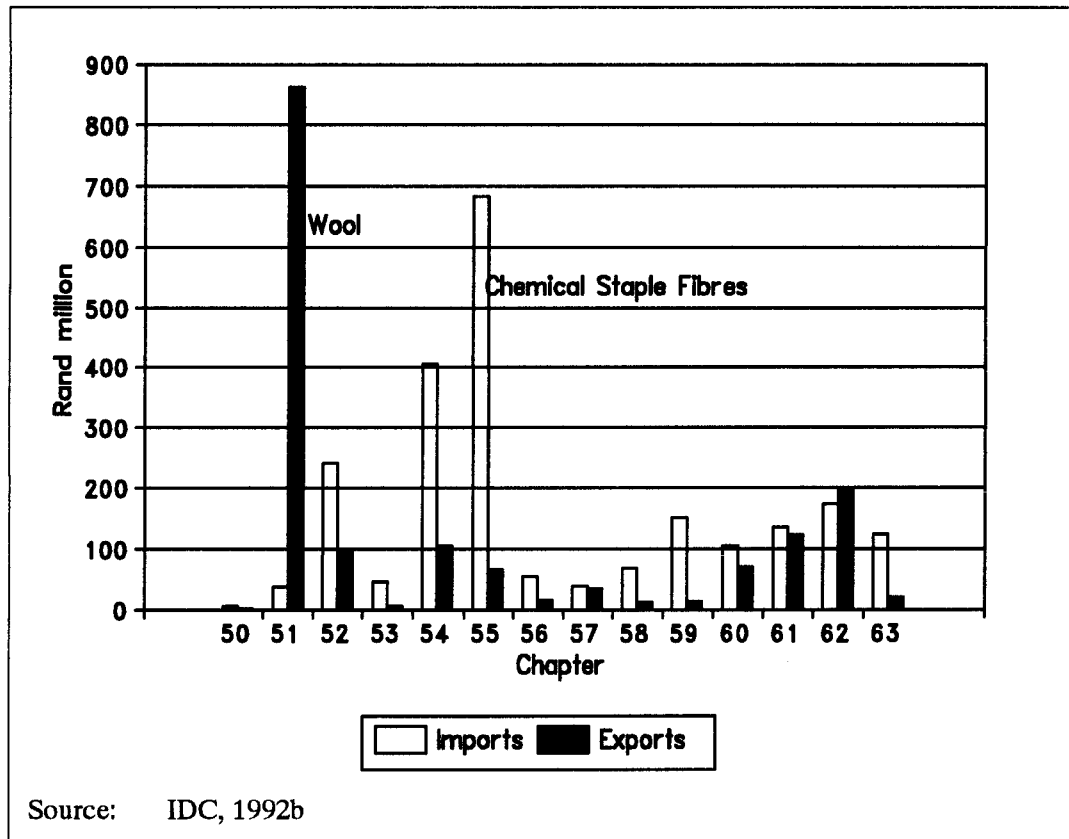
A pertinent question that arises is how the existing South African textile trade fits into the industrial strategy proposed later in this study. The strategy is based on the finding that the South African textile industry is potentially more internationally competitive in higher value-added products that are specialised or differentiated in one way or another. On the other hand it is not internationally competitive at the basic commodities end of the market. It is therefore proposed that the South African textile industry should focus on the production of higher value-added products. Do the trade figures reflect this trend or not?

The Department of Customs and Excise Harmonised System figures for the thirteen product groups (called chapters) of textiles and textile articles (including apparel) provide a good starting point for trying to answer these questions.

Figure 4.3 presents the exports and imports in 1991 for each of the thirteen chapters.¹

Figure 4.3

Imports and exports 1991. Harmonised system



1. The Thirteen Chapters of the Harmonised System are:

- 50 - Silk
- 51 - Wool and other Animal Hair
- 52 - Cotton and Cotton-related Products
- 53 - Other Vegetable Textile Fibres
- 54 - Chemical Filaments
- 55 - Chemical Staple Fibres
- 56 - Wadding, Felt; Ropes & Cables
- 57 - Carpets and Other Floor Coverings
- 58 - Special Woven Fabrics
- 59 - Industrial Textiles
- 60 - Knitted Fabrics
- 61 - Knitted Clothing
- 62 - Clothing not Knitted
- 63 - Other Textiles and Worn Clothing

The first striking feature of South African textile imports and exports is that it is overwhelmingly dominated by the export of wool-related products (Chapter 51) and the importation of products related to chemical staple fibres and chemical filaments (Chapters 54 and 55).²

Of the R989 million wool-related products exported in 1991 the overwhelming proportion was unprocessed wool. About one half of it (R444 million) was not carded or combed and consisted mainly of shorn wool, while the other half (R448 million) was carded or combed wool and was mainly wool tops. Only a very small proportion (0,7%) consisted of woven fabrics of wool and other fine animal hair.

There is thus a strong *prima facie* case for the beneficiation of wool in the textile industry in that it could both add value to exports and created considerable investment and employment opportunity. As it is common cause that there should be wool beneficiation in the textile industry and there is a Technical Committee under the chairmanship of Paul Hatty on the long-term Panel, this paper does not delve into the matter. The position adopted is to support the beneficiation of wool to the stages where South Africa is internationally competitive on a sustainable basis and to recommend expeditious action on that front.

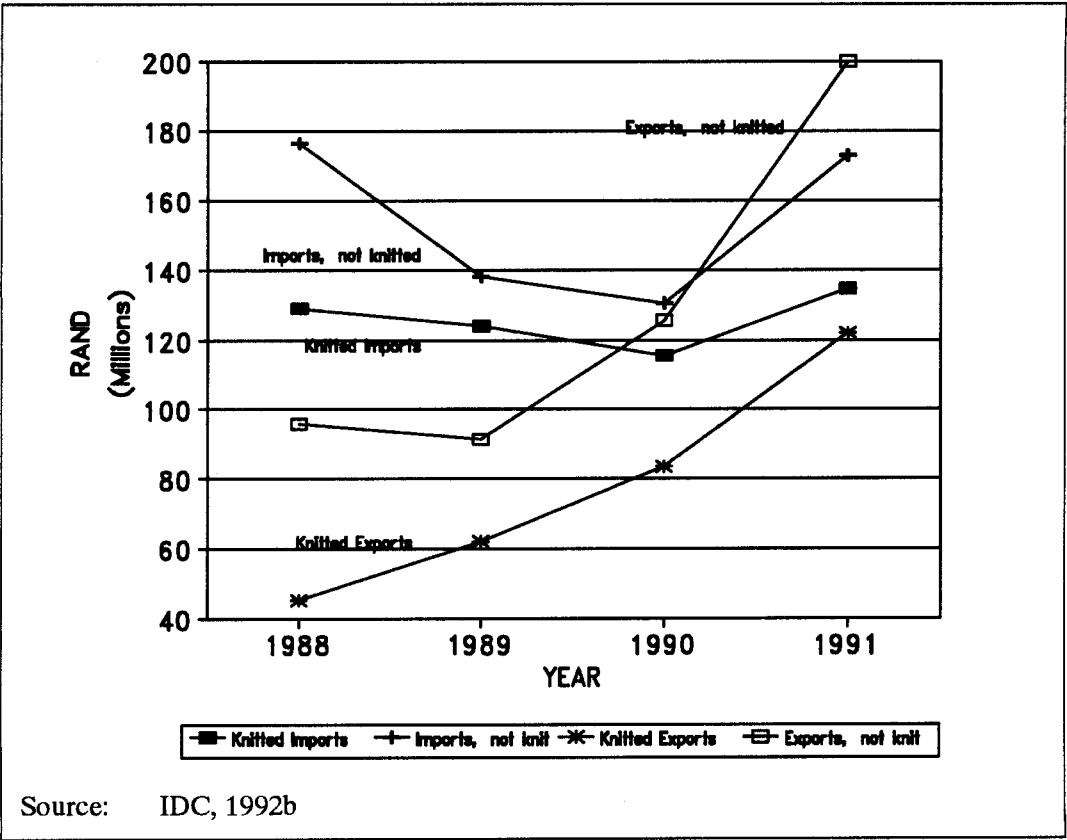
The titles of Chapters 54 and 55 (chemical filaments and chemical fibres) are rather misleading in that their imports consist mainly of fabric and yarn made from chemical fibres and filaments. The two major components of Chapter 54 imports in 1991 were R101 million yarn and R340 million woven fabric. Chapter 55 comprised R264 million filament and fibres, R54 million yarn and R429 million woven fabric. Thus almost two-thirds of the imports under Chapters 54 and 55 consisted of woven fabrics. As regards the export of chemical filament and fibres the picture is reversed. Only R20 million or 11% of exports in both chapters consisted of woven fabrics, the remainder consisting of staple fibres and yarn. A considerable volume of filament yarn to the value of R102 million was exported in 1991. Although a considerable degree of technological know-how is required to produce export quality filament yarn, what emerges from the trade pattern of goods in Chapters 54 and 55 is that South Africa imports a considerable proportion of higher value-added woven fabric and exports mostly lower value-added filament yarn (IDC, 1992b).

As regards cotton-related products (Chapter 52) the ratios are similar, but not as dramatic as in the case of woollen and chemical fibre and filament related products. In 1991 almost 60% of the R264 million's worth of cotton-based imports were woven fabrics whereas almost 60% of the R104 million's worth of exports constituted cotton and cotton yarn. Hence, once again, in cotton textiles, South Africa exports mainly lower value-added products and imports mainly higher value-added fabric (IDC, 1992b).

2 Throughout this book the term 'chemical fibre' rather than 'man-made fibre' is used. See *Textiles Terms and Definitions* of the Textile Institute (1991:14).

An important group of higher value-added textile products in which exports have been growing much faster than imports are garments. Although they fall outside the scope of this study, it is important to note that the value of exports in knitted and other garments has increased considerably between 1988 and 1991 with the result that knitted garment exports had almost caught up with imports while other garment exports exceeded imports in 1991 (see Figure 4.4). This is a significant development for the domestic textile industry as the growth of garment exports can create a demand for local fabric that could well require shorter lead times and higher quality fabric.

Figure 4.4
Apparel imports and exports 1988–1991, constant 1990 prices



4.2 The textile trade regime in South Africa

4.2.1 Protection

(a) Introduction: complexity and fluidity of textile tariffs

It is no easy matter to present an overview of the tariff structure in the textile industry. This is primarily because of the complexity of the South African tariff system which Belli et al (1993:3) has described as 'one of the most complex in the world'. There are a variety of duties each with a multitude of rates which may be used separately or combined in complex ways with each other. Some rates are *ad valorem*, some are specific, while others are based on formulae. In some cases the specific duties are not related to the import price, but are just stated as specific rand amount per unit of weight, volume, or other product characteristic. In others, there is an *ad valorem* rate and an alternative specific rate. Still in other cases there are specific duties coupled with maximum or minimum *ad valorem* rates and, finally, for some items the specific rate applies in addition to the *ad valorem* rate (Belli et al, 1993:3-4).

The tariff structure of the textile industry is no exception to the rule. If anything, it has one of the most complex tariff structures because of the extensive representations the industry has made to the Board of Trade and Tariffs over the years. Added to this are the relatively frequent changes in the tariff rates as well as the vast number of textile products covered by tariff duties. For instance, in the revised schedules of November 1992 more than 2 300 products are listed, most of which are covered by a combination of *ad valorem* and formula duties (*Government Gazette*, No.14405, 13 November 1992).

The Industrial Development Corporation has calculated nominal and effective duties for the economy as a whole down to fairly small product groups in the manufacturing sector (IDC, 1990). It has also done subsequent calculations which Pedro Belli and others used extensively in their World Bank publication reviewing trade policy in South Africa (Belli et al, 1993). In fact, most of the tables in Belli et al on nominal and effective rates of protection in South Africa are based on IDC calculations. Between them these two publications make it possible to present an overview of the textile trade regime in South Africa.

(b) Levels of protection of textile products

i. Nominal tariff rates

The textile, apparel, and leather products subsector is one of the most protected, if not the most protected subsector in the manufacturing industry. Table 4.1, which pertains to the years 1989-1991, demonstrates the high level of nominal protection which the subsector receives compared to manufacturing industry as a whole.

The Table reveals that, within the subsector, nominal protection is higher for wearing apparel and footwear than for textile products. The weighted mean of the nominal rate of protection of textile, apparel and leather products is more than twice the manufacturing weighted average (66 percent as opposed to 28 percent). But the weighted mean for apparel goods is almost four times higher than the manufacturing average and for footwear more than three times the manufacturing average. This is the case even though textiles has the maximum rate of 1 389 percent (Belli et al, 1993:13–15, Tables 3–5). The maximum rate applies to only one product: woven polyester fabrics, containing less than 85 percent by mass of such fibres, mixed mainly or solely with cotton, of a mass between 300 and 350 grams per square metre (Belli et al, 1993:12).

Table 4.1

South Africa: Nominal rates of protection on manufacturing, textile, apparel, leather and footwear (1)

Sector/ Subsector	Wghted Mean (2) %	Unwghtd Mean %	Min. Rate %	Max. Rate %	Coeffct of Variatn (3)
Manufacturing	28	30	0	1389	158,4
Textile, Apparel & Leather Products	66	62	0	1389	129,6
Textiles	69	60	0	1389	140,6
Apparel	104	81	5	265	51,3
Leather	15	23	0	90	88,5
Footwear	90	65	0	659	130,5

Notes:

(1) The Table is based on 1989, 1990 and 1991 tariff schedules. They were changed twice in 1992 and ended up higher than before (Belli et al, 1993:7).

(2) It is customary to weight the tariff rates by some suitable set of weights, such as the country's 'own' trade weights (imports, for example), or world trade weights. In South Africa, with the exception of consumer goods and goods of agricultural origin, the difference between weighted and import-weighted averages are not markedly different (Belli et al, 1993:12).

(3) The coefficient of variation is the standard deviation of a distribution divided by the arithmetic mean.

Source: Belli et al, 1993:13–15, Tables 3–5.

ii. Tariffs based on import duty collections

Moving onto tariff collections, South Africa follows the pattern in most countries. The nominal tariff rates are three times higher than the tariffs collected. The incidence of protections is however much the same. Manufacturing is the most protected sector while, within manufacturing, the textile, apparel and leather products subsector is the most protected. Table 4.2 provides the details. It also shows that wearing apparel and footwear have protection rates that are well above the average for textile, apparel and leather products.

Table 4.2

Protection based on duty collections manufacturing, textile, apparel, leather and footwear

Sector/ Subsector	Wghted Mean %	Unwghtd Mean %	Min. Rate %	Max. Rate %	Coefft of Variatn
Manufacturing	9,4	17,0	0,0	450,0	99,1
Textile, Apparel & Leather Products	19,7	25,6	0,0	450,0	78,7
Wearing Apparel	35,8	37,7	0,2	151,0	37,3
Footwear	36,2	36,4	0,0	56,1	31,1
Source: Belli et al, 1993:16-17, Tables 6 & 7.					

iii. Effective rates of protection

Nominal rates of protection however provide a distorted picture of the actual or effective protection products receive. This is because tariffs are also imposed on imported inputs used in the manufacture of the final products. Hence in order to comment sensibly on state intervention one has to focus on the entire protective structure, not just on protection which is afforded to the final stage of the production process. In the case where tariffs are the only form of intervention, whereas an output tariff acts like a subsidy to the producer of a given commodity, an input tariff acts as a tax on value-added. The net protection to value-added in an activity therefore depends on the relative magnitude of output and input tariffs (Greenaway, 1988:78).

The effective rate of protection of an activity is defined as the change in the value-added due to the tariff structure as a proportion of the value-added at world prices (Holden, 1992:187).

According to calculations by the IDC using 1989 data inputs in the manufacturing sector had a nominal protection of about 13 percent on average while output had 18 percent protection, providing effective protection of 30 percent. Table 4.3 shows that the textile, apparel and leather subsector enjoyed an effective protection three times higher than the manufacturing average. The 94 percent effective protection of the subsector is in fact the highest of all the manufacturing subsectors (Belli et al, 1993:22, Table 9).

Table 4.3
Effective protection on manufacturing and textiles, apparel and leather subsector

Sector/Subsector	Protection on		Effective Protection
	Inputs	Output	
Manufacturing	12,6	17,8	30,2
Textiles, Apparel, & Leather	27,8	43,6	93,6
Source: Belli et al, 1993:22			

There is also immense variation in the effective rates of protection within the textile, apparel and leather subsector as Table 4.4 indicates. According to the IDC calculations it ranges from -26 percent in wool and cotton processing to 239 percent for non-knitted garments.

Belli et al suggests that the effective rates of protection reveal a clear tendency towards the promotion of increasing local value-added, in accordance with stated policy objectives of beneficiation. While there generally is low or even negative effective protection for unbeneficiated products, the pattern of effective protection for higher value-added products is however haphazard with some inconsistencies (See Annexure 8 of IDC, 1990). Table 4.4 also demonstrates the variability in rates, for instance, between the effective protection rates for garment knitting mills and other knitting mills (99 percent as opposed to 235 percent).

Table 4.4

Nominal and effective rates of protection textile product groups, clothing and footwear

Product Group	Protection Nominal %	Effective %
Wool and Cotton Processing	9	-26
Spinning and Weaving	40	94
Made-up Textile Goods	22	45
Garment and Hosiery Knitting	87	99
Other Knitting Mills	58	235
Carpets and Rugs	30	161
Cordage, Rope and Twines	25	15
Other Textiles	20	18
Clothing other than Footwear	75	239
Footwear	35	87

Note:

Method of Calculating Effective Rate of Protection.

Effective protection is calculated from value-added before and after protection. Since the effect of protection is included in all economic statistics, value-added after protection is readily available. Value-added before protection is calculated by the IDC from its input-output table. It is done by reducing the price of every material input in the input-output table by its nominal tariff rate. The reduced material input prices are then added together to attain their value before tariffs. Similarly the value of production before protection is calculated by reducing the price of every product by the nominal protection on that product. Value-added before protection is then derived by subtracting input costs before protection from the value of production before protection. Note that this method assumes that all inputs and products are marked up by their full rate of nominal protection.

Source: IDC, 1990, Annexure 8.

4.2.2 Export incentive schemes

Under the Customs and Excise Act exporters are eligible for drawback (item 521.00) or exemption (item 470.03) of customs duties paid or payable on imported materials used in making or packaging goods for export. Firms however make little use of duty drawbacks and exemptions. In 1991 there were only 319 applications under 470.03 and 38 under 521.00 of which the Board rejected only 2 under 470.03 (Belli et al, 1993:23-24).

(a) The General Export Incentive Scheme (GEIS)

GEIS is the major export incentive schemes for manufacturing industry as a whole. In the textile industry there was a second very important export and import incentive scheme, namely the Structural Adjustment Program (SAP), which has been replaced by a Duty Credit Certificate (DCC) scheme. GEIS dates back to April 1990 and was designed to offset the price disadvantage the South African exporters face in international markets. It provides a tax-free financial subsidy to exporters based on the value of exports, the degree of processing and the local content of the exported product. The export subsidy increases with the level of beneficiation (processing), the level of local content, and with the value of the Rand against a basket of currencies.

The amount of assistance provided under GEIS is calculated using the formula

$$Z = U*(M+or-E)*P$$

Where Z is the amount of the subsidy, U is the FOB value of the export, M is a manufacturing level factor, E is an exchange rate factor used to adjust M for inflation and exchange rate fluctuations, and P is the local content factor of the export product.

Export products are classified into four categories, according to the degree of processing. This categorisation is used to determine the M-value which each particular export product receives for the purpose of calculating assistance. The categories and corresponding M-values are:

i.	Primary products:	0%
ii.	Beneficiated primary products:	7,5%
iii.	Material-intensive products:	12,5%
iv.	Manufactured products:	25,0%

However, due to the exchange rate factor E the adjusted manufacturing levels factors (M minus E) as from September 1991 are:

i.	Primary products	0%
ii.	Beneficiated primary products:	2,5%
iii.	Material-intensive products:	6,0%
iv.	Manufactured products:	18,5%

The local content factor P is equal to zero if the proportion of imported inputs is above 65 percent of the value of the exported product, and equal to one if the proportion of imported inputs is below 25 percent. Between these two extremes P varies in proportion to the ratio of imported inputs to exported product (Belli et al, 1993:24-25).

The question arises what the net effect of the protection and export incentives policies is on the propensity to export. The anti-export bias coefficient is a measure commonly used to compare the effects of domestic policy on incentives to export. If policies raise value-added for domestic production more than for export, the anti-export bias coefficient is greater than one. If, on the contrary, policies render exports more attractive than domestic production, the anti-export bias coefficient is less than one. If policies are neutral, then the coefficient is exactly one (Belli et al, 1993:27).

The importance of GEIS in reducing or even removing the anti-export bias in manufacturing is evident from the following findings. The additional revenue obtained through GEIS in the manufacturing sector as a whole was estimated to increase the value-added in exports by about 83,9 percent in 1991. On the other hand value-added in domestic sales without GEIS would have been 88,6 percent higher than in exports. With GEIS the difference shrinks to a fairly negligible 4,7 percent. It is therefore doubtful that South Africa could sustain the present level of manufactured exports without GEIS (Belli et al, 1993:27–28). But it is equally doubtful whether the state can afford to sustain GEIS. In 1991 R 900 million was paid out under GEIS; of this, R100 million went to the clothing and textile industries. In 1992 it is estimated that GEIS paid out R1,5 billion (*Trade Monitor*, 1993, 1:8).

The importance of GEIS as a financial incentive was confirmed in a different study aimed at establishing whether certain South African regions offered a competitive environment for the establishment of industrial plants designed to supply manufactured goods to the European market. In a sensitivity analysis to policy and other changes in the environment it was found that the financial feasibility is very sensitive to the availability of the export incentive (GEIS) and changes in the financial Rand discount. The removal of GEIS was the factor that made expected return on investment fall most and reduced the South African regions' competitiveness vis-a vis other countries round the world (Plant Location International, 1993:22; Bridgman, 1993:7–9).

(b) The Structural Adjustment Program (SAP)

Although the SAP has been phased out, it is instructive to examine because of the unintended consequences it had on the textile industry. It is therefore important for policy-makers to understand why the SAP went awry.

The history of the textile industry, as mentioned above, has been characterised by protectionism. In fact, the textile industry developed a reputation of lodging more complaints about imports and tariffs with the Board of Trade and Industry (BTI) (as it was then called) than any other industry in South Africa (Interview, BTI, 24 March 1992). The result of such active representation, as shown above, made it the most protected industry in South Africa.

Protection was however the basis of the state's industrialisation policy of import substitution which it pursued throughout the 1950's and 1960's. This was also the state's policy with regards to the textile industry. As from 1972, with the Report of the Reynders Commission, the state started developing a policy of export promotion as well. The policy measures to promote exports were not however adequate to turn South Africa's manufacturing industry into an export-oriented industry. Industries such as the textile industry also continued to pursue their protectionist strategy with strength and vigour.

The high protection of the textile industry generally worked to the detriment of the clothing industry because it led to an increase in the cost of fabric and other textile inputs into the clothing industry. Consequently the history of the relationship between the textile and clothing industries has been characterised up to 1992 by conflict and opposition of each other's tariff objectives. The second half of the 1980's was no exception and the tussle between the textile and clothing industries to have tariffs raised or lowered continued unabated.

The state had however increasingly become aware of the primacy of manufactured exports as a policy objective by the mid-1980's. In 1988 the BTI published a major policy document, *A Policy and Strategy for the Development and Structural Adjustment of Industry in the Republic of South Africa*. It was a path breaking document in many ways and argued the case for much greater support on a selective basis to promote the structural adjustment of certain chosen industries. It introduced notions such as dynamic comparative advantage and performance criteria for granting incentives (Black, 1991:4-5).

The textile industry was one of the industries selected by the BTI for a structural adjustment programme which was finalised in October 1988. The BTI realised that it had to give exporters access to inputs at world prices and assistance to improve their own productivity (BTI, 1988:59, paras 172&3). In order to make fabrics available at world prices, it proposed that textile and clothing manufacturers be able to import, under full rebate of the duty, 10 percent of their domestic purchases for the year for processing locally (Ibid:62, para. 179). Beneficiaries of the rebate would be expected to perform in terms of certain specified criteria. The Board also recommended that participants in the SAP who performed according to the criteria should qualify for working capital loans at preferential rates from commercial banks (Ibid:163, para.182).

Furthermore, to encourage exporters the BTI recommended that they be allowed to import a certain percentage of the value of their exports under rebate of the full duty. The values of the permits issued ranged from 70 percent of the previous year's exports for clothing, down to 40% for exporters of yarns of human-made fibres. The rates were set in such a way that there was a greater incentive for exporters of higher value-added goods (Ibid.:63, para.183).

Although the BTI opposed tariff protection in principle it was of the opinion that it could not be withdrawn without a disastrous effect on local industries. It accordingly recommended moderate tariff protection with the inclusion of formula duties to prevent disruptive competition in the textile and clothing markets (Ibid:59–60, para.175). In keeping with this spirit the lengthy list of recommended amendments to Schedule No 1 to the Customs and Excise Act stipulated low ad valorem rates of duty. They ranged from free through 10, 15, 20, up to 30 percent (Ibid:72–244).

To improve local productivity assistance was recommended for productivity improvement programmes. Such programmes were to include productivity as well as quality improvement schemes, technology development schemes and production management improvement schemes. Preference was to be given to human resource development programmes (Ibid:67, para.192).

The SAP was implemented on April 1989, but unfortunately only very limited aspects of the proposed Programme were implemented. The export incentive scheme was implemented, but in a way that undermined export incentives as well as the textile industry. This was because clothing and textile fabric manufacturers who exported at least 2,5 percent of their turnover, in terms of value, qualified under the SAP for the duty-free import permits. The value of the permits was the sum of the values of two separate bases. The one basis was the export of products manufactured from raw materials produced locally or imported on which the full duty was paid. In this case the value of the permits for clothing manufacturers was 70 percent of the previous year's exports of clothing and for textile manufacturers 50 percent of the previous year's exports of fabrics. The other basis was the purchase of raw materials manufactured locally and the value thereof was 10 percent of purchases of such raw materials (yarns and fabrics) (Board of Trade and Industry, 1991).

Arising from the Structural Adjustment Programme a local textile company calculated that a clothing company could obtain duty-free imports that were 2,7 times the value of its exports once it managed to export 2,5 percent of its output. The figure was arrived at as follows:

Suppose a clothing company produces R100 million worth of clothes annually of which it exports R2,5 million, and that local raw materials constitute 50% of production.

Then it can import duty-free:

70% of previous year's exports	=	R1,75 million
10% of locally purchased raw material	=	0,1 x R50 million
	=	R5 million
Total value of duty-free imports	=	R6,75 million

Hence by exporting R2,5 million the company can obtain duty-free import permits to the value of R6,75 million or 2,7 times as much as it exports.

Even if the assumptions in the above example are slightly distorted, it serves to highlight the nature of the impact of the SAP export incentive. While the exporting firms enjoyed the advantage of cross-subsidising exports from the rents they obtained via duty-free imports, the impact on other firms was negative. This was because firms in the apparel textile and clothing pipeline were encouraged to export at the expense of output of their former suppliers (since duty-free imports would replace purchases from local suppliers). What is more, the penalty which other firms had to pay in terms of foregone sales due to duty-free imports could be of a much greater magnitude than the value of the exports (in the example above 2,7 times more).

Furthermore, the export incentive was not on a smooth sliding scale which meant that an exporting firm received no incentive until it exported at least 2,5 percent of output whereupon it suddenly receives a considerable reward. Thereafter the incentive did not increase until exports reached at least 15 percent of turnover, but the increase then was proportionately far less as the permit was based on 12,5 percent of local purchases. There was thus a strong incentive for textile and clothing firms simply to reach the 2,5 percent export level and leave it at that.

Hence there were two central problems with the SAP export incentive scheme. Firstly, it encouraged exports in the textile clothing pipeline at the expense of production in the same pipeline and, secondly, it only provided an effective incentive for firms to export a mere 2,5% of their output.

4.2.3 Suggestions for modifications to the trade regime

In suggesting modifications to the existing trade regime policy by the state it is important to clarify first what the aims of the trade regime policy should be. Then every effort should be made to formulate the policy in such a way as to achieve the desired results.

The aims of the textile trade regime should be the following:

- to facilitate the restructuring of the textile industry in order to raise productivity and so make it internationally competitive. International competitiveness includes both the ability to export commodities at domestic prices in world markets and to compete with imports entering the country at their domestic prices while facing moderate tariffs that are in line with the GATT requirements.
- to minimise and, if at all possible, to avoid a reduction in the size of the labour force in the textile industry during the restructuring phase.
- to achieve economic growth in the textile industry and in the textile pipeline as a whole so that there is a positive rate of job creation.

In order to become internationally competitive in both the international and domestic markets the anti-export bias needs to be removed to the point where trade policies are at least neutral or, as the experience of East Asian exporters suggests, biased in favour of exports. In order to achieve export neutrality two separate requirements need to be met. First, all exporters must have free access to imported inputs. Second, incentives to export must be brought closer in line with incentives to produce for the domestic market (Belli et al, 1993:41).

South Africa has very high levels of unemployment and it is therefore imperative that, during the transition phase of restructuring the textile industry, job losses are restricted to a minimum. For this reason the immediate need of trade policy reform is not liberalisation, but rather to maintain protection in a way which provides for a net export bias. In addition protection needs to be transparent and rationalised radically to ease the administration and improve the efficiency of tariff policy implementation by South African customs officials.

Rationalisation of the textile tariff regime should commence by moving away from the laser beam approach of levying duties to particular items at the eight-digit level of detail, but rather down to the six or even four-digit level (Belli et al, 1993:41).

Rationalisation could also entail lowering the extremely high tariff levels to moderate tariff levels. As Belli et al say, 'It is doubtful that tariffs as high as 44 times the average are needed in order to protect a textile manufacturer in South Africa.' For a start, the extremely high tariff levels should be lowered to a maximum that will not cause disruptive imports into the country. But what should that level be? Table 4.5 casts some light on the matter.

Table 4.5 shows that a lowering of the maximum duty to 150 percent would have a relatively minor effect on the weighted and unweighted average duty for textile, apparel and leather products reducing them from the existing levels by 12 and 7 percent respectively. A reduction of the maximum rate to 50 percent would almost halve the existing weighted mean to 34 percent while the new unweighted mean of 37 percent would be 60 percent of the existing level. Also if duties actually collected are a more accurate reflection Table 4.2 above shows that wearing apparel and footwear will not be affected at all by a lowering of the maximum duty to 150 percent. (In Table 4.2 wearing apparel's maximum rate of duty collected is 151 percent and footwear's maximum is 56,1 percent.)

Table 4.5**Resulting tariff structure if highest tariff is reduced: textiles, apparel and leather sector**

Maximum Level of Duty	Weighted Mean %	Unweighted Mean %	Min. Rate %	Max. Rate %	Coeffct of Variation
Existing: 1389%	66	62	0	1389	129,6
150%	54	55	0	150	71,8
50%	34	37	0	50	37,9
20%	17	19	0	20	21,8

Source: Belli et al, 1993:14,43-45, Tables 4,16-18.

It would thus appear that a reduction of the maximum level of duty to 150 percent would have a small impact on the textile industry. This is a very conservative estimate. According to Mr Hein Wiese, convener of the Statistics Subcommittee of the Task Group developing a long-term plan for the textile-pipeline, a maximum rate as low as 50 percent will have a minimal impact on the textile industry (Discussion, Cape Town, 29 March 1993). What is not known however, is exactly how many companies and what level of employment would actually be affected by reductions of the maximum tariff rate to 50 percent.

More light has been shed on this issue by Miriam Altman. She has identified 64 trade sensitive items of mostly woven fabric. She proposes that apparel fabric duties should be moved to a uniform ad valorem rate of 50% except for the 64 trade sensitive items she has identified. She suggests that they should be subject to a specific duty as well and that the higher of the ad valorem or specific duty should apply (Altman, 1992:1, Appendices 1 and 3).

Further research that shows which companies would have their employment levels affected by lowering tariff levels from 150 percent down to 20 percent in increments of, say 10 percent, would be most useful and of great assistance in devising a new tariff policy. Until that is known it would be unwise to try to formulate here a detailed reduction in tariff policy proposal. However, what does seem clear is that rationalisation of the tariff structure in the textile industry could immediately commence by reducing the maximum duty for most textile products to 50 percent except for identified sensitive items which could also have a specific duty not exceeding 150 percent. Further reductions of the maximum level of duty should only take place after research has clarified the questions raised above. Then it will be important to set a specified time frame such as ten years and clear milestones that have to be achieved by intermediate dates. Once set, they may not be changed due to representations from sectional interests in the textile-clothing pipeline. Instead, there should be a permanent tripartite body with stakeholders from the whole textile-clothing pipeline that would have to give its approval to any changes the tariff policy.

4.3 Textile tariffs after the GATT Uruguay round

The Uruguay Round of multilateral trade negotiations of GATT was completed at the end of 1993. South Africa's tariff offer on textile and clothing products was accepted. As a result South Africa has committed itself to a phased reduction of tariffs according to a definite schedule over the next twelve years. The phasing down schedule is presented in Table 4.6.

A great advantage of the GATT phasing down tariff schedule is that it specifies a definite time-table for tariff reductions over the next twelve years. This should stop the frequent upward and downward adjustments in duties that the industry has been subject to over the past decade. Another feature is that the phasing down schedule is very gradual: over the first four years it in fact remains static at existing levels and only from the fifth year onwards does it commence decreasing gradually. The existing maximum specific duties may also be retained for the first four years. The textile industry would therefore not be faced with a rapid and sudden influx of duty-free imports. Instead, it would be given a period of grace of more than a decade over which to adapt to gradually lowering tariff rates.

However in the light of discussion in the previous section it appears as if South Africa's Uruguay Round Market Access offer in the textile and clothing industries is leaving some problems unresolved. The specific duties would still have to be implemented at the eight-digit level to allow for the different weights of the material. The extraordinarily high rates of specific duties for particular products will also remain in place as no ceiling has been placed on them. It would thus appear that the Uruguay Round of textile tariff reductions has left some very important loopholes in South Africa. While this may help to retain existing levels of production and employment in certain mills, it removes the strong incentive that lower tariff rates would have had in bringing about productivity improvements.

Table 4.6**South Africa textiles and clothing: tariffs phasing down schedule**

Product	Clothing Group	Made-up	Fabrics Products	Yarn	Fibres
HS Codes	61 62	63.01- 63.04	51.11- 51.13 52.08- 52.12 54.07- 54.08 55.12- 55.16 58.01- 58.02 58.06- 58.08 58.10 59.06- 59.07 60	51.07 51.09 52.04- 52.07 54.01 54.03 55.08- 55.11	5501.20 55.03 55.05 55.06
Existing rates Reduction Schedule Year:	100% or specific duties	60% or specific duties	50% or specific duties	35% or specific duties	15% or formula duties
1	100	60	50	35	25
2	100	60	50	35	25
3	100	60	50	35	25
4	100	60	50	35	25
5	94	56.5	47	33	23.5
6	87	53	44	31	22
7	80	49.5	41	29	20
8	73	46	38	27	18
9	66	42	35	25	16
10	59	38	32	22.5	14
11	52	34	29	20	12
12	45	30	25	17.5	10

Note: Present minimum and maximum specific duties may be retained and the maximum specific duties will be subjected to the same reduction schedule.

Source: Department of Trade and Industry Press Release, 21 December 1993

Chapter Five: A strategy for the South African textile industry

This chapter commences by comparing the costs of some of the factors of production in spinning and weaving between South Africa and other countries. After criticising the inadequacies of such an approach it moves on to examine the strategies adopted by competitive South African firms and the factors that accounted for their success. On the basis of the findings an industrial strategy for the spinning, weaving and finishing sector of the South African textile industry is presented.

5.1 Comparative costs of production

5.1.1 Total costs of production

To arrive at a comparative figure between different countries for the total cost of production broken down into different components is no easy matter. Table 5.1 however provides such a breakdown comparing total fabric costs between six countries in 1991. Unfortunately South Africa is not one of the countries.

Even so Table 5.1 does provide some valuable indicators. Firstly, it shows that capital and raw materials constitute the two major cost components. While raw materials constitute approximately one-third of the cost, the cost of capital shows greater variance ranging from 26% in the case of Germany to 49% for India. Secondly, it demonstrates that the proportion of labour cost is closely related to the level of wages in a country. Hence in the low wage countries (Brazil and India) the proportion of labour cost is only one-quarter to one-fifth the proportion of labour costs in the high wage countries (Germany, Japan and the USA). (Compare with Table 5.2) The exception is Korea where, in spite of higher wage levels the labour cost component is low, but Korea's raw material cost is probably high because it constitutes a considerably larger proportion of total cost than for the other five countries.

Arising from this, it is interesting to compare South Africa's labour cost with that of other major textile producers in the world.

5.1.2 Labour costs

Table 5.2 presents comparative labour costs between South Africa and other countries in spinning and weaving in 1980, 1989, 1990 and 1991. It presents the total hourly operator cost (including social charges) and shows that, in spite of a considerable increase in wage levels in 1990, South African labour costs are still relatively low. Nonetheless, there are newly industrialised countries in the Far East paying only about one-fifth to one-third of South Africa's wage in 1991.

Table 5.2
Labour cost comparisons: spinning and weaving

Country	Total Cost per Hour in US\$				Ratio to US Cost in 1991 %
	Spring 1980	Spring 1989	Summer 1990	Summ/Aut 1991	
USA	6.4	9.7	10.0	10.3	100
Belgium	11.8	13.4	17.9	17.4	168
West Germany	10.7	13.2	16.5	17.0	164
Italy	9.1	13.0	16.1	17.3	168
United Kingdom	5.8	8.2	10.2	10.2	98
Turkey	1.0	1.3	1.8	3.1	30
South Africa	n.a.	0.7	1.6	1.6	16
Brazil	1.6	1.8	2.0	1.5	15
China	n.a.	0.4	0.4	0.3	3
Hong Kong	1.9	2.4	3.1	3.4	33
India	0.6	0.7	0.7	0.6	5
Indonesia	0.6	0.2	0.3	0.3	3
Japan	4.4	14.0	14.0	16.4	159
South Korea	0.8	2.9	3.2	3.6	35
Malaysia	n.a.	0.8	0.9	1.0	9
Pakistan	0.3	0.4	0.4	0.4	4
Singapore	0.9	n.a.	2.8	3.2	31
Taiwan	1.3	3.6	4.6	5.0	48
Thailand	0.3	0.7	0.9	0.9	8

Source: Werner International, 1992.

In 1990 South Africa had the distinction of recording the highest increase in labour cost in the textile industry in the world. In US dollar terms the increase was about 47 percent representing a rise of 43 percent in Rands. Wolfgang Crone of Werner International has commented that, 'Even with the rapid rise in labour cost South Africa falls into the group of countries which have a definite advantage in the textile industry with a labour cost of less than two US dollars per month.' (*Textile Industries Dyegest SA*, May 1991:4)

Table 5.3
Labour cost comparisons for South Africa 1982–1991
Spinning and weaving

	Sum/Aut 1991	Spring 1987	Autumn 1982	% Diff 1991/82
Direct wages – local currency	4,57	2,01	1,52	
Other cost paid to operator:				
local currency	0,44	0,21	0,22	
Other costs paid by company:				
local currency	0,37	0,30	0,22	
Total cost per hour – local currency	5,38	2,52	1,79	200,6
Rate of exchange US\$/Rand	3,29	3,07	1,07	
Total cost in US\$	1,64	0,82	1,67	-1,8
Ratio to US cost: %	16	9	22	
Source: Textile Industries Digest, Southern Africa, 1991				

It is worth pointing out that presentation of the South African labour cost in US dollars makes it subject to changes of two variables, namely the wage rate expressed in local currency (Rands) and the exchange rate between the US dollar and the Rand. This is clearly indicated in Table 5.3 which demonstrates that, during the period 1982 to 1991, the hourly Rand cost of labour increased by 200,6 percent while it decreased by 1,8 percent in terms of US dollars, thereby slightly increasing South Africa's international labour cost competitiveness. The exchange rate can also function to disadvantage countries internationally as was the case with the high wage countries of the European Community. Between 1989 and 1990 their wage increases ranged from 4 to 8 percent, but translated into US dollars the increases magnified, ranging from 24 to 32 percent (Barthold, 1991:47). These examples thus demonstrate the immense importance of the rate of exchange as a factor determining the international cost competitiveness of a country's industry.

5.1.3 Raw materials: cotton and polyester

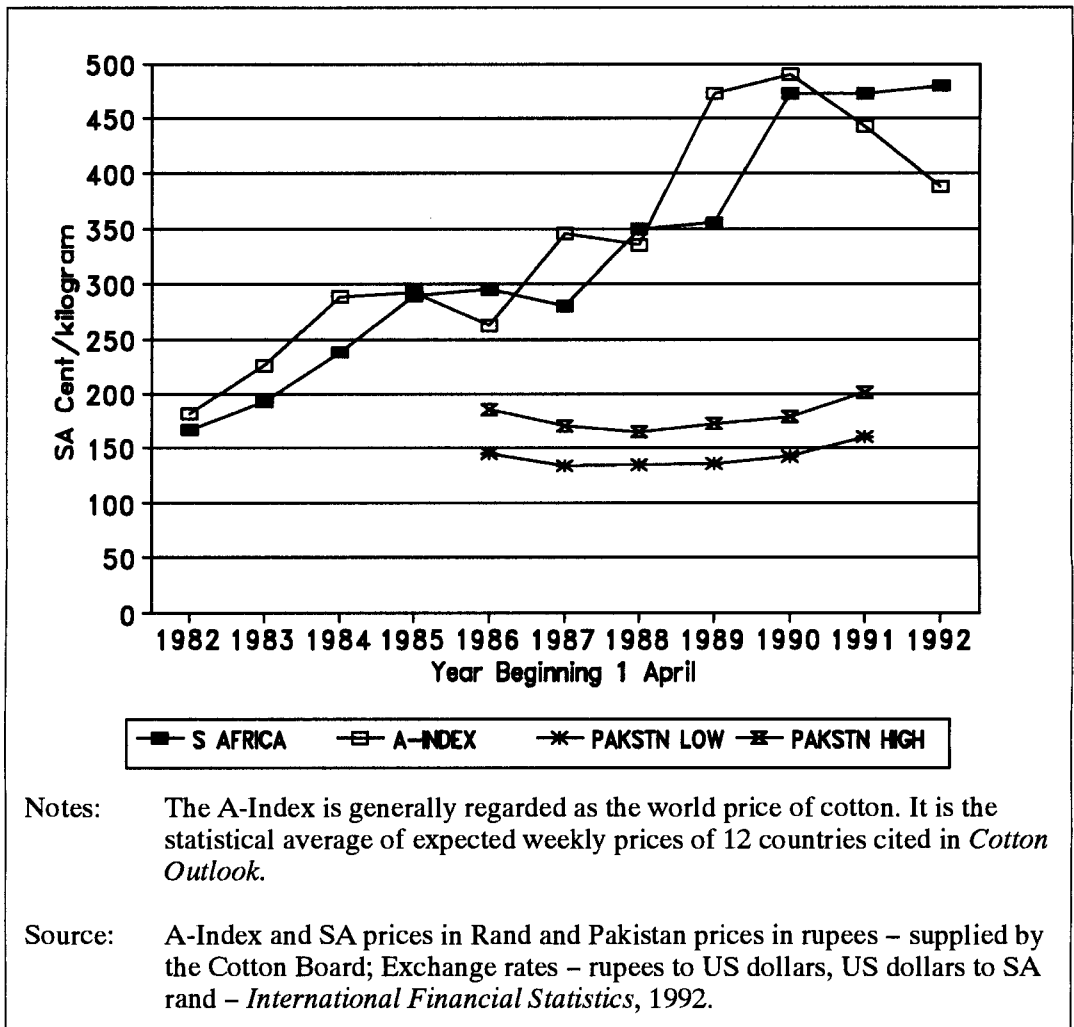
Cotton and polyester are the two major fibres used in the South African textile industry that are grown and produced in South Africa. Figure 5.1 compares South African cotton prices with the Liverpool A-Index prices (usually regarded as the world price) from 1982 to 1992, and the Pakistan official minimum support prices from 1986 to 1991.¹

1. The A-Index is generally regarded as the world price of cotton. It is the statistical average of expected weekly prices of 12 countries cited in *Cotton Outlook*. The data was kindly provided by the Cotton Board.

Although South African prices have been lower than world prices in seven of the eleven years recorded, it was a matter of grave concern to the textile industry that the South African cotton price in 1992 was well above the world price. This is because the South African cotton spinners have to buy their annual quota of South African cotton before they are granted permission to import cotton. Normally this constitutes about 70 to 80 percent of the cotton requirements of spinners, but in 1992 it only made up about 30 percent of their requirement due to a drought.

Figure 5.1

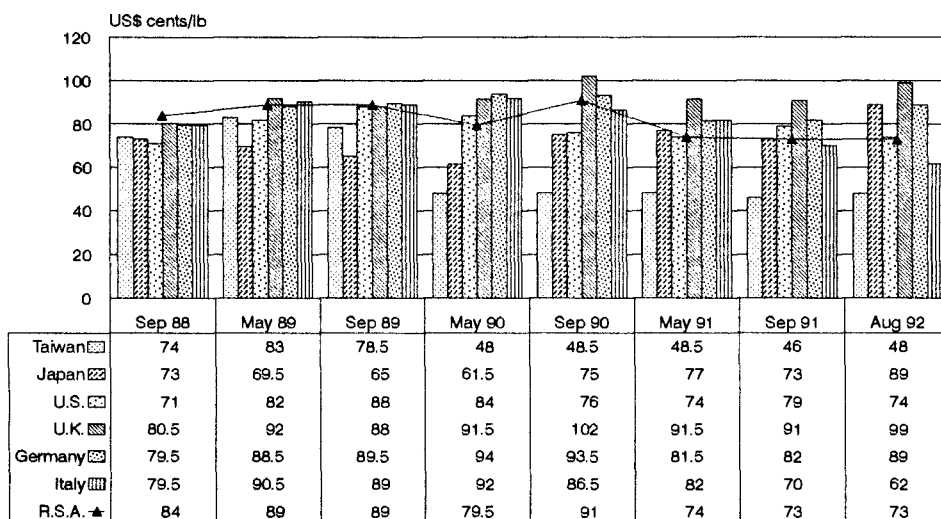
South African cotton prices compared 1982 to 1992. SA cent/kilogram



The South African price of cotton and purchase requirement is presently an additional cost burden to the textile producers, especially when it is compared to the price of cotton in the East. In the case of Pakistan, for instance, Figure 5.1 shows that the price of cotton in South Africa between 1986 and 1991 has been 2 to 3 times higher than the official minimum support price in Pakistan. However, market prices in Pakistan have consistently been above support prices throughout the 1980's and the Minimum Export Price of cotton from Pakistan ranged from 60% to 75% above the support price from 1988 to 1991 (ICAC, 1992:2-3). Although this reduces the extent to which cotton in Pakistan is cheaper than South African cotton, it still meant that both the domestic and export price of cotton in Pakistan is lower than the price of South African cotton.

Figure 5.2

Polyester staple fibre prices for cotton spinning, DTEX 1.7/38MM, RSA: DTEX 1.5/38MM



NB: RSA price:

Sep 88:	R/kg 4.56	(Exch. Rate 2.46)=0.84 US\$/lb
May 89:	R/kg 5.28	(Exch. Rate 2.69)=0.89 US\$/lb
Sep 89:	R/kg 5.48	(Exch. Rate 2.80)=0.89 US\$/lb
May 90:	R/kg 4.60	(Exch. Rate 2.63)=0.795 US\$/lb
Sep 90:	R/kg 5.20	(Exch. Rate 2.59)=0.91 US\$/lb
May 91:	R/kg 4.60	(Exch. Rate 2.83)=0.71 US\$/lb
Sep 91:	R/kg 4.60	(Exch. Rate 2.86)=0.73 US\$/lb
Aug 92:	R/kg 4.48	(Exch. Rate 2.78)=0.73 US\$/lb

Source: Hoechst SA, 1992.

With regards to polyester staple fibre the South African price was about 35 percent above world price in 1992 while polyester filament cost about 15 percent more in South Africa. Figure 5.2 compares the cost of polyester fibre at one of South Africa's major producers with that of six other countries over the period 1988 to 1992. It shows that the South African price has tended to be amongst the top end of the price range. Furthermore, in August 1992 the South African price was about 50% above the Taiwanese price.

Thus, as far as the costs of labour and raw materials are concerned South Africa tends to be at a cost disadvantage compared to some of the newly industrialised countries in the Far East.

5.1.4 Overcoming the limitations of static comparative cost analysis

While the comparison of cost components between South Africa and other countries does serve to indicate where SA has comparative cost advantages and disadvantages, there are severe limitations to such an approach. It is, in the end, a static approach. Even where it provides the information in a time series it does not allow for the dynamics of innovation in the creation of products and search for market niches. Nor does it take into consideration the production process where dynamic human skills of organisation as well as technological progress come into play and interact with each other.

A way of overcoming the limitation of a comparative static analysis of production costs is to study what companies themselves do. Even though such an approach runs the danger of not providing a representative picture of the totality, it does have the advantages of showing what is feasible and what opportunities exist.

5.2 Comparative company case studies

What follows next is a case study approach of seven competitive South African companies which commences with a relatively detailed look at three of the competitive South African companies. Then the strategies adopted by all seven successful companies are examined to establish what factors have contributed to their competitiveness. Because of requests for confidentiality from some companies, the names of the companies are not revealed.

5.2.1 Three South African companies

Texco One

Brief description of company

Texco One is a fully vertically integrated textile company which has three mills, two large and one small. It manufactures household goods, apparel fabric, and industrial textiles.

Strategy of company: marketing

A crucial feature of the company's strategy lies in its marketing strategy. It operates in four distinct markets, namely household, apparel, home sewing, and industrial textiles, and treats each market as a separate division within the company. Each division is seen as a profit centre which is expected at least to break even or do better. In this way the company buffers itself against drops in sales in any one division.

The diverse nature of our marketing division has proven to be a tremendous strength to the company because there is nearly always one division of the company which is doing very well (Marketing Director, Interview).

Another feature of Texco One's marketing strategy is the undertaking to despatch within 48 hours any order they receive for 'out of range' fabric, that is, any fabric the company has designed and is marketing (Chief Executive, Interview). This is done by keeping 'out of range' fabric in stock without increasing the level of stocks by means of careful statistical analysis of how and when the colours sell (Marketing Director, interview). Stock levels at Tex One are, however, high (see below for more detail).

This service Texco One views as part of its niche marketing strategy. They understand niche markets not only as providing a unique product, but also as a unique service. Another marketing strategy that the company views as a niche market has been the introduction of computer aided design. With the aid of computerised scanning and design modification the company has been able to reduce the lead time to replicate a new design from sixteen weeks down to one week.

Again we feel that we have stolen a march on competitors who are all working on the same project but we are just that little bit ahead of them, in a niche market if you like. For a period we can do it faster than anybody else (Marketing Director, Interview).

Exports and imports

The trade strategy of Texco One is almost completely determined by the export incentive scheme of the Structural Adjustment Programme (SAP) outlined above.

In view of this incentive scheme Texco One has set itself the task of exporting only 2,5 percent of its output because the benefits to the company peak at that level. This is because the company merely breaks even on exports including the benefits of export incentives (Marketing Director, Interview). However, as soon as its export level reaches the target of 2,5 percent of output it qualifies for duty-free import permits to the value of approximately 4,5 percent of output.² Increasing its exports any further does not increase the duty-free import permits (unless exports exceed 15 percent of output). Therefore it is

2. This figure is arrived at as follows:

50% of previous year's exports = 1,25% of output

Raw materials approximately 33% of cost of production (ITMA, 1991a:16)

10% of raw materials = $0,1 \times 33\%$ = 3,3% of output

Total duty-free import permits = 4,55% of output.

optimal for Texco One only to reach the target export level of 2,5 percent in order to qualify for the duty-free permits.

The company does not use all its duty-free permits and sells what it does not need. For instance, it obtained a permit for polyester filament which it could not use and sold it to Edgars even though it realised it was pulling the rug from underneath other producers in the textile pipeline.

Generally the company policy with regards to imports is to import what it requires to satisfy its market. It imports from the cheapest satisfactory source which, nine times out of ten, is the Far East countries, Japan, Korea or Taiwan, but it has also been importing cotton fibre from Zimbabwe.

Technology and production methods

The age of the equipment in the two large vertically integrated mills varies immensely – from very new equipment being installed to more than twenty years old. The composition of the age varies between different stages of production as Table 5.4 below indicates.

Table 5.4

Stage of Production	Age Less than 20 years	More than 20 years
Blending and Carding	50%	50%
Spinning	20%	80%
Weaving (1)	67%	33%
Dyeing and Finishing	45%	55%
Colouration Preparation (1)	80%	20%
Dyeing	40%	60%
Printing	40%	60%
Finishing	25%	75%
Note		
(1) measured in terms of output or capacity, not the actual machinery		

In spinning, for instance, the company has a large proportion (80%) of very old ring spindles, while in the colouration preparation most of the capacity (80%) comes from very new technology. The latter forms part of investment in new computerised technology by the company in four production processes. Firstly, computer aided design equipment, secondly computer sample printing equipment, thirdly computer-linked laser engraving of rotary screens used in printing, and finally a computerised dyehouse which was in the

process of being installed. In the dyehouse the computer will blend the correct colours in the correct quantities.

The investment policy of the company is based on a number of criteria in descending order of priority. The first priority is to invest in machinery essential to the efficient running of the mills while the second is to upgrade technology in areas which would most directly effect the quality of the service provided to customers.

In the acquisition of new technology the company virtually never has restrictions placed on it by the supplier. Only in the case of branding arrangements with a major British textile company are there some restrictions. Usually the restrictions are placed upon the supplier in that the company requires it not to supply the same service to one or other of its competitors (Manufacturing Director, Interview).

Production performance

Certain indicators of production performance of the company in its two integrated mills for the past five years are presented in Table 5.5. It indicates that there has been a substantial improvement in the quality of both production and customer service by the company, but other aspects of production performance have more or less remained static. Lead times have been cut by 40 to 50 percent over the five year period from 1988 to 1992 and the percentage of rejects and reworks have also dropped by half. Deliveries on time have shot up from 50 percent to 88 percent, and the percentage of deliveries more than two weeks late has dropped from 18 to 2 percent. Set-up times at major stages of production have however remained constant over the five year period even though batch sizes have been decreasing in size. Although the stocks of raw materials declined by more than half in terms of weeks of input, stock turns have declined slightly over the period and the stock of finished goods increased by 70 percent in terms of weeks of output. Finally, although the throughput time declined it was still 12 times higher than actual value-added time by 1992. There is thus still scope for considerable production cost savings at the mills.

Economic performance of company

Texco One has remained profitable throughout the economic recession although its profit margin has been declining over the past three years. It declined from 25,4% in 1990, to 19,3% in 1991, to 14,4% in 1992. The overall financial position of the company has however remained sound.

Table 5.5

Indicator	1988	1989	Year 1990	1991	1992
Stock turns/year	2.3	2.0	1.9	1.7	2.0
Stock:					
Raw materials (weeks of input)	22	20	18	15	10
Work in progress (weeks of production)	3	3	4	4	4
Finished goods (weeks of output)	5.0	6.0	7.0	9.0	8.5
Throughput time (weeks)	15	14	13	13	12
Value-added time (weeks)	1	1	1	1	1
Lead times: (weeks)					
Out of range	2.0	2.0	1.5	1.0	0.5
Exclusives	18	16	14	12	10
Colour Preparation	20	18	16	14	12
Rejects: (% of output)					
Seconds	12%	9%	9%	7%	5%
Fents and rags	4.0%	4.0%	4.0%	3.5%	3.0%
Reworks (% of output)	20%	20%	18%	15%	10%
Deliveries:					
% on time	50%	60%	65%	75%	88%
Late:					
% less than 2 weeks	32%	24%	20%	18%	10%
% more than 2 weeks	18%	16%	15%	7%	2%
Set-up times:					
Spinning (shifts)	0.5	0.5	0.5	0.5	0.5
Beaming (shifts)	0.5	0.5	0.5	0.5	0.5
Weaving (shifts)	1	1	1	1	1
Dyeing (hours)	1	1	1	1	1
Printing (minutes)	48	48	48	48	48
Batch sizes:					
Spinning			a continuous process		
Beaming (1000 m)	20	20	20	15	10
Weaving (1000 m)	8	8	8	4	4
Dyeing			continuous dye lot = 3000 m		
Printing (1000 m)	3.0	3.0	2.0	1.5	1.0

Texco Two

Brief description of company

Texco Two manufactures apparel, parachute fabric, heavy weight and light weight industrial fabrics, and PVC coated fabrics. It sells, amongst others, to clothing and sporting manufacturers, and industrial fabricators. Its products tend to be made with specialised equipment which most other mills in South Africa do not have. It is not a fully vertically integrated mill as it buys in yarn and takes production through the warping, sizing, weaving, dyeing and finishing stages. Its turnover is about R100 million (Managing Director, Interview).

Strategy of company

The strategy of the company is based on its product specialisation.

We have specialised equipment in our warping and sizing. We have specialised equipment in our weaving and we have specialised equipment in our dyeing and finishing. Now for anybody else to open up from scratch on the same basis, firstly, they'd have to get the skills which sure you can buy, but the capital investment is going to be so large that it is in actual fact going to frighten you. So as I say we are global competitors, not really local competitors (Managing Director, Interview).

Not only does the company have specialised equipment, it also spends a considerable amount of effort and money on product development. The primary area of development is in apparel fashions, but also in new industrial fabrics. The managing director is of the opinion that its development programme is one of the most extensive in the country and that it stays ahead of the pack through its development work.

Exports and imports

The company uses its specialised production and development as the basis for exporting to all corners of the globe. It exports parachute fabric to Israel, United Kingdom, Germany, Austria, Canada, United States of America, Zimbabwe, Mauritius, Australia and New Zealand. It had recently commenced exporting the fabric in large quantities. Exports constitute no less than 40 percent of parachute fabric output, although it is only 3 percent of the value of total output. On the industrial side it exports 20 percent of industrial output.

The basis of the company's exports is product specialisation, not price, and the managing director is firmly of the opinion that his mill would never be able to compete with the newly industrialised countries of the Far East on the basis of price.

No matter whether we stood on our head or produced at 100% efficiency with the cheapest yarn in the world, we could still never compete with their prices. We have no hope in Hades in competing against the East (Managing Director, Interview).

A strong motivation for exporting is to keep the level of plant utilisation high because it is only with high levels of plant utilisation that return on capital investment is rewarding. Furthermore the company only makes a small profit on exports. Were it not for GEIS, which is at the rate of 6,5% for the company, it would be exporting at a loss.

The company imports surprisingly little yarn considering the large volume of duty-free import permits it is awarded for its exports. It only imports 15 percent of yarns and buys the rest locally.

The managing director has a strong patriotic conviction which leads him to buy raw materials locally and not to sell import permits on principle. He does however swap import permits with his company's main supplier.

Technology

The successful export performance of the company is predicated on having state of the art technology in the mill. Not that the mill does not have some dated technology as well, it has 52 shuttle looms that are 19 years old, but it also has state of the art air-jet looms.

The company has regularly invested in new technology. Over the last six years, for instance, it invested R39 million on technology, most of it being machine replacement with a certain amount of new types of machinery being purchased as well. The proportion of machinery in the mill that was six years or younger in August 1992 is presented in Table 5.6.

Table 5.6
Age of machinery

Proportion Equal to or Less than Seven Years Old	
Machinery	Proportion
Looms	65%
Sizing	50%
Warping	40%
Dyeing	70%
Finishing	50%

The key benefit that new technology provides is speed. In weaving the latest looms do 750 insertions per minute, replacing looms that did 200 insertions per minute. According to the managing director 'productivity in this game is machine speed and any person who thinks he can compete with an older machine is going to die'.

There appears to be no constraints placed on the use of technology by the company. Previously it was part of the international group, Carrington-Viyella, and appears still to have a working relationship with them in the development of technology.

Production performance

The efficiency level of the mill in terms of machine utilisation is high. For looms it is generally in excess of 90%. The week prior to my visit the efficiency level was considered not to be good: it was 87,8%. A plant visit also showed that not all machinery was in use. This was probably due to cut backs because of stock build up. However, the plant is kept running 24 hours per day and 7 days per week.

It also appears to be running efficiently in terms of the following indicators for 1992:

Stock turnover	- 4,6 times per year
Reject rate	- 6%
Deliveries on time	- 95%

Economic performance of company

Although financial details of the company are confidential and cannot be released, the company is highly profitable with positive real rates of return on capital expenditure and investment.

Texco Three

Brief description of company

Texco Three is a fully integrated spinning, weaving, dyeing and finishing mill. It considers itself to be a small company, but is actually quite sizable with a labour force of 500. It produces heavier weaves in the apparel industry suitable for men's trousers and women's skirts and dresses. Ninety percent of its products are made from chemical fibres: 65 percent polyester and 35 percent viscose. The remaining 10 percent is woollen related.

Economic performance

The company has been performing well in spite of the fact that the South African economy has been in recession and that the textile industry has been declining. It has grown in sales each year from a turnover of R24 million seven years ago to one of R61 million in 1992. It has also made very good profits with a profitability rate of 10% on turnover.

A large proportion of company profits is ploughed back into the company through extensive investment in new technology. This is discussed below.

Strategy of company

The success of the company lies in the reliability and quality of its products and services, its relaxed non-bureaucratic style of management, its skilled middle management staff and its good relationship with customers.

According to the director in charge of sales and manufacturing Texco Three delivers 93 percent of all its orders on time. This is well above the industry average which is allegedly of the order of 50–60 percent.

Quality is another aspect of production that the company concentrates on. It purchases quality fibres for which it is prepared to pay a premium price. This is because good quality starts at the bottom: if the fibre is not good a great deal can go wrong with production downstream. The company also has a laboratory set up in full conformance with Woolworths standards.

The relaxed non-bureaucratic style of management contributes to efficient company management by virtue of the fact that there are very few meetings at the company because the management team ‘make decisions on their feet’. The management style also facilitates communication and problem-solving within the company by virtue of the ‘hands-on’ policy of management. In each department there is a manager in charge of and responsible for operations who is willing to ‘role up his sleeves’ and ‘get stuck in’ if there is a technical problem that needs attention. This style of management is facilitated by the relatively small size of the company.

Coupled with this is the fact that the company has adopted an approach of self-reliance on the grounds that, if it has to rely on outsiders, it can be let down. To this end each major department has its own workshop and technicians. In addition the mill has its own general maintenance department. Consequently its machinery is kept in very good repair and well looked after.

Texco Three has skilled and competent middle management. ‘Our strength is in our people’, according to the sales and manufacturing director. Because highly skilled staff is hard to come by in South Africa, the company has acquired a cosmopolitan staff consisting of Italians, Germans, British and Portuguese. They are ‘well looked after’ and stay on at the company.

Finally, Texco Three has succeeded in developing close and good market relationships with its customers. In a *Reputation Audit* conducted by a consultancy firm customers were asked to rate the performance of six South African textile companies using wool fibre and overseas suppliers with respect to specific service and product criteria. Three of the criteria that were found to be critical by the audit were ‘understanding customer problems’, ‘attitudes to customers’ and ‘responses to enquiries’. In all of these criteria Texco Three was rated the top company (MPCS, 1991). These results demonstrate that the company has succeeded in building a close relationship with its customers based on a market and service orientation.

Marketing, exports and imports

Texco Three has, up to the present, focussed exclusively on the domestic market. It exports less than one percent of its output. Because of its reputation it does not need to advertise. Yet it has a very wide and suitable spread of customers around the country. Its customers constitute both chain stores and retailers, the latter being mostly clothing firms on the Rand. Woolworths is one of its customers and it has taken a policy decision not to sell more than 15 percent of its output to any one chain store in order not to make itself beholden to any one company. It is not known at this stage what plant capacity utilisation has been and whether the company has been able to sustain demand through the recession, but it does sustain an output of about 400 000 linear metres per month.

The company does import raw materials in the form of viscose and polyester fibres although it does purchase some polyester fibre on the local market. Its policy is to try and find reliable suppliers of good quality fibres and then to stay with them. It imports polyester fibre largely from Germany and Japan and viscose from Japan only.

Technology

As mentioned above, the company reinvests a considerable amount of its profits in new technology every year. Over the past four years the company has invested an average of R5 million per annum in new technology. Although the plant does have some old technology, there is a high proportion of technology not more than 7 years old as Table 5.7 indicates.

Table 5.7
Age Of Machinery

Machinery	Average Age
Spindles	7 years
Twisting	4 years
Looms	6–7 years
Stenters	6 years
80% of dyeing equipment	4–5 years

The director of manufacturing is satisfied that the company keeps abreast of new developments in textile technology. One senior manager travels abroad at least once a year to update himself while two directors visited the ITMA Exhibition in Germany late in 1991. Agents for textile equipment also visit the company. Erectors usually come to install the plant and train management on the use thereof. People are also sent overseas for training. There have been no trading restrictions or royalties placed on machinery that was purchased by the company.

Production methods

While the company does strive to improve the quality of its products and its service, it is not trying to implement Just in Time techniques by moving towards a reduction of work in progress. This was vividly demonstrated by a store room approximately 50 metres by 50 metres and 10 metres high with shelves almost up to the ceiling. It was brimful with different types and colours of yarn to the value of about R5 million.

Nonetheless the company perceived the stock as the 'secret' of its success because it enables the company to start processing an order rapidly without first having to make the appropriate yarn first. In this way the customer lead time can be shortened. In the *Reputation Audit* done by MPCS Texco Three had the highest rating amongst South African companies for speed of deliveries. Remarkably, its rating was still below that of overseas companies suggesting that there is still considerable room for improvement in quick responses.

5.2.2 Strategies of Seven South African Companies

A common feature of all seven companies researched is that they all base their strategies on the production of differentiated products with higher value-added. None of them seek to base their strategies on 'commodities', which is the textile industrialists' term for products that are basic, undifferentiated, relatively straightforward to produce, and low in value-added. This is because they either perceive the 'commodity' market as over-supplied or because they do not think they can compete with the Far East NICs on price. (The primary basis for competition in 'commodities' is price.) However, the way in which the companies add higher value or differentiate their products varies considerably between them.

The principle strategies adopted by the seven successfully competing firms are briefly summarised in Table 5.8. The strategies are subsequently discussed in more detail. Where reference is made in the following discussion to one of the three companies (Texco One to Texco Three) already presented above, no additional information is normally provided, but when one of the four remaining companies (Texco Four to Texco Seven) is discussed, additional information is usually included.

Table 5.8
Principle Strategies adopted by Successful Companies

Strategies	
• differentiated higher value-added products	– all 7
primarily by means of:	
design and marketing	– 2 out of 7
consistent quality	– 3 out of 7
product specialisation	– 1 out of 7
make-up into garments	– 1 out of 7
all 7 operate in niche markets	
• investment in new technology	– all 7
• drive to improve quality and service	– all 7
• strive to improve production process	– all 7
Exports	
major exporters in particular niches	– 4 out of 7
export enough to qualify for SAP permits	– 2 out of 7
not in export market	– 1 out of 7

Two of the companies (Texco One and Texco Four) primarily add higher value on the basis of design for either apparel or household goods or both. In addition they aim their different designs for particular markets. One of them (Texco Four) describes its business as being that of 'fabric decoration'. In apparel it provides weave, colour, design and sampling services. It has placed itself in the fashion market by which it means 'garments which are really mainstream retail at any one time'. In household furnishings it designs an extensive package aimed at particular markets as the following three quotes from the marketing and creative directors indicate:

One of the resources which is in short supply is in fact creative designs resource for furnishings. So we are in fact selling a design service as well (Market Director, Interview).

We have a unique advantage. Because we are a vertical operation we offer from a design creation package right through to advertising package to a high level of quality going through the mill, all under one roof. So we can go into a specific market and say, what are your needs (Creative Director, Interview).

Ten years ago one was able to design with a spray and pray approach: just design and try to go and sell overseas. Those days are gone. Now it is a highly competitive design origination. If you want to get into a market you've got to design specifically for that market. What you've got to do is to get into that market, go down to that market, go and see and speak to the people, and develop relationships (Creative Director, Interview).

One company (Texco Two) mainly adds higher value by means of product specialisation where either the technology or the process of production or both are highly specialised. In that way the company creates speciality niches for itself with the ability to export to numerous countries right round the world.

Three companies (Texco Three, Six and Seven) base their strategy primarily on consistent quality and reliability. Texco Three, which claims to deliver 93 percent of its orders on time, has discovered that

People are prepared to pay premium prices to get goods of quality and have them delivered on time. We pride ourselves on our quality. We have a laboratory set up in full conformance with Woolworths (Interview, Manufacturing Director).

Texco Seven (which also supplies Woolworths) blends no less than 96 bales of cotton simultaneously in order to ensure that it produces consistent quality. To some extent it is due to the fact that the company has to buy its quota of South African cotton which is not always of the quality the company desires. It therefore mixes the South African cotton with many other bales of better quality cotton to obtain the required quality.

The third company whose primary strategy is based on quality, Texco Six, is a producer of synthetic filament and yarn. It introduced a system of Total Quality Management (TQM) based on W E Deming's philosophy. During the 1980's it adopted an export-oriented strategy and achieved considerable success. By 1993 it was exporting 30% of its turnover based on the attainment of world class standards.

The following example illustrates the effort put into attaining world class standards by the company. Traditionally Texco Six's warping fault rate on certain yarns was 0,5–0,6 per million metres. A customer in Italy then sampled the yarn, but refused to place regular a regular order unless the fault rate could be reduced to \pm 0,3 per million metres. The company's technical people felt that no improvement was possible with old technology and equipment. After six months of hard work investigating the spinning and drawtwist problems and making improvements, the plant team managed to reduce the warping fault rate to 0,2–0,3 per million metres. By doing so, the company captured a significant volume of export business at a time when local demand was low (Total Quality Management Seminar Facilitator Notes, 1992:53).

One company (Texco 5) has adopted a strategy very uncommon to South Africa (but not elsewhere in the world) to raise the value-added to its production. It does so by making the fabric up into garments through subcontracting and then marketing the garments. It has gone a step further by branding one of its garments which it sells into the upper end of the market internationally. The company considers itself to compete in the world market and has adopted a number of ancillary strategies to try to ensure its international competitiveness (see Table 5.9).

Table 5.9 presents more details of the seven companies' strategies on a company by company basis. It shows that three of the companies export a fairly substantial proportion of their output by value (between 18 and 35 percent) while a fourth exports a considerable proportion (40 percent) of its parachute fabric. Two of the companies deliberately appear to export only sufficient amounts to qualify for duty-free import permits under the Structural Adjustment Program (SAP) while one company concentrates exclusively on the South African market. It has a record of reliability, consistency, and closeness to the customer which has ensured its continued success. Table 5.9 also shows that all the exporting companies rely, to a greater or lesser extent, on export incentives provided by the state for maintaining their existing level of exports.

Table 5.9
Details of Company Value-Added and Export Strategies

Company Texco	Principle Strategy	Secondary Strategies	Investment Policy	Exports as % of Turnover	Dependent on Export Incentives
One	design and marketing	shorten lead times; product innovation	invest to upgrade consumer service & increase efficiency	2,5% enough to qualify for SAP	yes; SAP permits
Two	product and technology specialisation	product development	invest regularly; high speed equipment essential	3% but 40% of parachute and 20% of industrial	some dependency on GEIS
Three	quality	reliability; close to customer; shortened lead time	keep abreast of new technology	negligible	not applicable
Four	design (fabric decorator)	niche marketing	invest in wet processing; facilitate consistent quality production	18% 30% for furnishings	yes, GEIS to a large extent
Five	make-up into garments	brand own garments; cost on lower rate of return; employee profit sharing	completely new tech- nology	35% export fabric, yarn and garments	some dependency on GEIS and DCC(1)
Six	quality	close to customer; niche marketing; ongoing improvement	extensive investment exclusively for exports	30%	some dependency on GEIS
Seven	quality			3-4%	yes, SAP permits

Notes: (1) DCC = Duty Credit Certificate

All seven companies have invested extensively in new technology over the past ten years. In most plants new state of the art technology make up a considerable proportion of the existing technology. In one mill (Texco 5) 100 percent of the looms are new, but in most mills there is a mixture of old and new technology.

In addition to the three companies for whom it is the primary strategy, all four other companies also place an emphasis on improving the quality of their output with different companies placing emphasis on different aspects. In three of the companies it is the primary strategy. In one company a system of Total Quality Management based on W E Deming's philosophy which requires a major reorientation on the side of management is being implemented. In two other companies statistical process control is in place.

Similarly there is a general drive to improve production processes, but there are usually not specific systems being adopted except in the company where Deming's TQM is being implemented. One company had installed Manufacturing Resource Planning (MRP2) no less than eight years ago. Usually a mixture of systems, adapted to suit the needs and circumstances of the company, is being pursued. But this does not always work well. Almost all the companies still keep high stock levels, for instance. In the case of raw materials this is sometimes due to uncertainty about the country's political and social stability and large stocks are being held for 'just in case'. Two of the companies have however turned their large stocks of finished goods into marketing assets by implementing quick delivery times for out of range fabrics.

Actual production performance indicators and how they have changed over time has been presented above for Texco One, Two and Three. In the case of Texco Four Table 5.10 shows the production performance improvements that the company was able to achieve over a four to five year period.

Table 5.10
Texco Four production performance indicators

Activity	Date	
	1987-88	1992
Set Up Times:		
Printing (to change a design)	1 hour	15-30 min
Colour Changes(dyeing machine)	30 min	10 min
Household furnishings	12 months	3 months
Batch Sizes:		
Continuous Dye	...	100-500
metres		
Rejects	8,5%	4%

5.3 An industrial strategy: Higher value-added production

The preceding analysis based on comparative costs of inputs and company case studies clearly points in a particular direction for a future South African textile industry. It shows that, in this segment of the industry, South Africa is not internationally competitive in the basic commodity end of the market where undifferentiated products are made. Nor is there a likelihood that it will become competitive in the foreseeable future due to the emergence of newly industrialised countries in the Far East with much lower labour costs than South Africa. In addition their raw materials are often subsidised which further lowers their costs. In the case of China there is also a manipulation of the exchange rate which drives their prices down.

On the other hand successful South African companies have shown their ability to compete effectively, either in the South African market or internationally, in differentiated higher value-added products. In both the areas of design and specialised production the companies have been able to penetrate the markets of advanced industrial countries. In specialised production exports are truly global. This has been achieved on the basis of niche markets.

It is thus clear that the future of the spinning, weaving and finishing segment of the South African textile industry (and quite possibly for others) rests on the development of the higher value-added, differentiated product end of the spectrum and not the basic commodity end. This would most probably ultimately mean a decline in the production of basic textile commodities in South Africa, but every effort must be made to try to ensure that it is preceded by an expansion in growth and employment of higher value-added textile products.

Chapter Six: Comparative strategies: Turkey and the United Kingdom

6.1 Introduction: Why Turkey and the United Kingdom?

In a study of fifteen countries representing over two-thirds of world trade in textile goods Munkholt found that

The star export performer of the decade [1980's] among the 15 countries under consideration was quite clearly Turkey (Munkholt, 1991:33).

What is more, exports went up faster the higher the value-added to the product: most in apparel, then fabrics, then yarns. This changed the Turkish export profile into a higher value-added composition: the yarn share dropped from 73 percent of total fibre good exports in 1980 to only 41 percent in 1989 (Munkholt, 1991:33). But the important question that arises from the Turkish textile export performance in the 1980's is whether it is sustainable into the 1990's and beyond. The answer to this question holds important implications for both the South African textile industry and government policy towards the textile industry.

By way of contrast the United Kingdom textile industry has declined severely in the 1970's and 1980's with no less than 300 000 jobs being lost. What have been the reasons for the decline and what strategies did the industry adopt to maintain a healthy core? Once again the answer to these questions are informative and highly relevant to the South African textile industry.

The chapter commences by examining the sustainability of Turkey's textile export performance in the 1980's. In order to do so it is necessary first to ask what accounts for sustainable exports.

6.2 Turkey's textile industry and export performance in the 1980's

6.2.1 Creating sustainable exports

The rapid growth of exports of developing countries in the 1980's has not necessarily been synonymous with good overall economic performance. The reasons for these divergent experiences have been researched by Kell and Marchese (1991) at the industry level and come up with very clear findings in the textile industry. They argue that two key variables are sufficient at the industry level to demonstrate whether export expansion results from or

contributes to improved industrial performances. First is the rate of capital accumulation as a measure of the development of the net stock of invested capital and the degree to which improved process techniques are diffused throughout the industries; second are productivity changes as a measure of the growth-stimulating effect of investment and exports (Kell and Marchese, 1991:16).

The empirical findings of Kell and Marchese for the textile industry reveal that export expansion coincided with increased domestic consumption only if net stocks of imported capital goods and productivity also developed positively. Their evidence leads them to suggest that export expansion in developing countries during the 1980's was of two types: (a) export expansion sustained by capital formation and productivity gains; and (b) export expansion not based on capital accumulation, improved technologies and corresponding productivity gains, but apparently induced by policy constraints. They suggest that export expansion in developing countries may change in two directions. Firstly, there is sustainable development where increased exports are both the cause and effect of technological advance. Export growth, based on technological progress, facilitates efforts to acquire capital and technology, thus further strengthening technological competitiveness. Secondly, there is unsustainable development, where export growth is not accompanied by efforts to maintain or improve technological competitiveness. In a dynamic setting this development leads inevitably to a further weakening of relative competitive positions. The associated depletion of capital stocks is likely to mean that export growth is not sustainable. Just to maintain existing exports further policy measures are required in order to compensate for the erosion of the capital stock. These measures increasingly lose their effectiveness as the existing capital falls further and further behind the technological frontier. This moreover limits the abilities of the countries to produce higher value-added goods (Kell and Marchese, 1991:26).

The authors' study of the 1980's however did not include Turkey, the 'star export performer of the decade'. In examining the reasons for Turkey's export expansion in textiles and clothing in the 1980's, attention is paid to whether it is sustainable or unsustainable as well as the validity and applicability of Kell and Marchese's conditions.

6.2.2 The Turkish textile industry's performance

The textile and clothing sector accounts for a third of manufacturing employment and is the largest industrial and export manufacturing sector in Turkey. Its exports during the 1980's accounted for 35–40 percent of all manufactured exports (Arslan and Celasun, 1992:17, Table 7). The EC was Turkey's largest export market in 1990, accounting for 72 percent of all textile and clothing exports. The largest export market in the EC was Germany which accounted for 54 percent of all EC exports in 1990, followed by the UK with 12 percent and Italy with 11 percent.

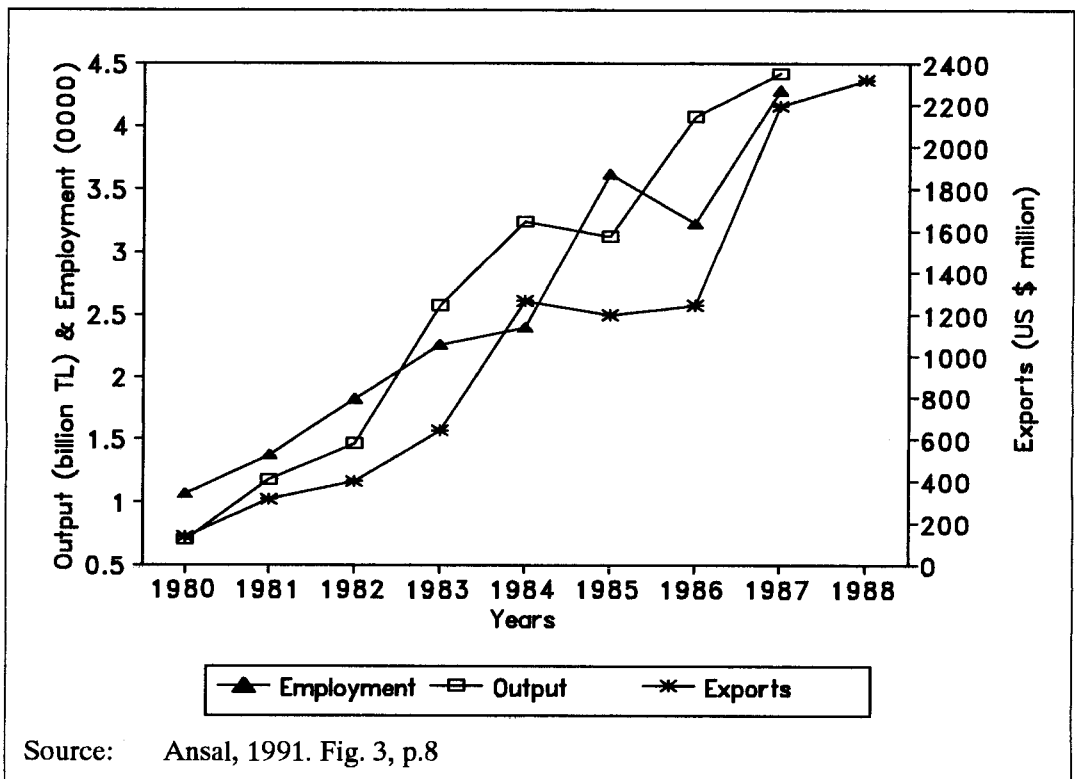
The Turkish textile sector is generally fragmented in terms of company size and is not dominated by a single large producer. The state is also a textile producer, but accounts for only about ten percent of total production (Bodgener and Duruiz, 1991:51).

Turkey's cotton production is large by world standards. The existing Turkish cotton growing areas are capable of an output of more than 500 000 to 600 000 tons per year, equivalent to 3,5 percent of all the cotton produced in the world, which makes Turkey the seventh largest cotton producer (Bodgener and Duruiz, 1991:50, 61).

The Turkish textile and clothing industries are closely inter-related and commonly viewed as one sector in Turkey. They are not characterised by a division between them as is the case in South Africa. Many of the vertically integrated mills produce both textile fabric and clothing. In Istanbul two of the three integrated mills I visited made ready-to-wear clothing as well. Cotton clothing has a very high content of local cotton fabric as imports constitute a small proportion of Turkish cotton fabric production (3,4 percent in 1989). There is also a well developed subcontracting network in which relatively large firms operate with 40–60 small workshops, each containing ten to fifty sewing machines (Bodgener and Duruiz, 1991:53, 57,58, Tables 2 and 5).

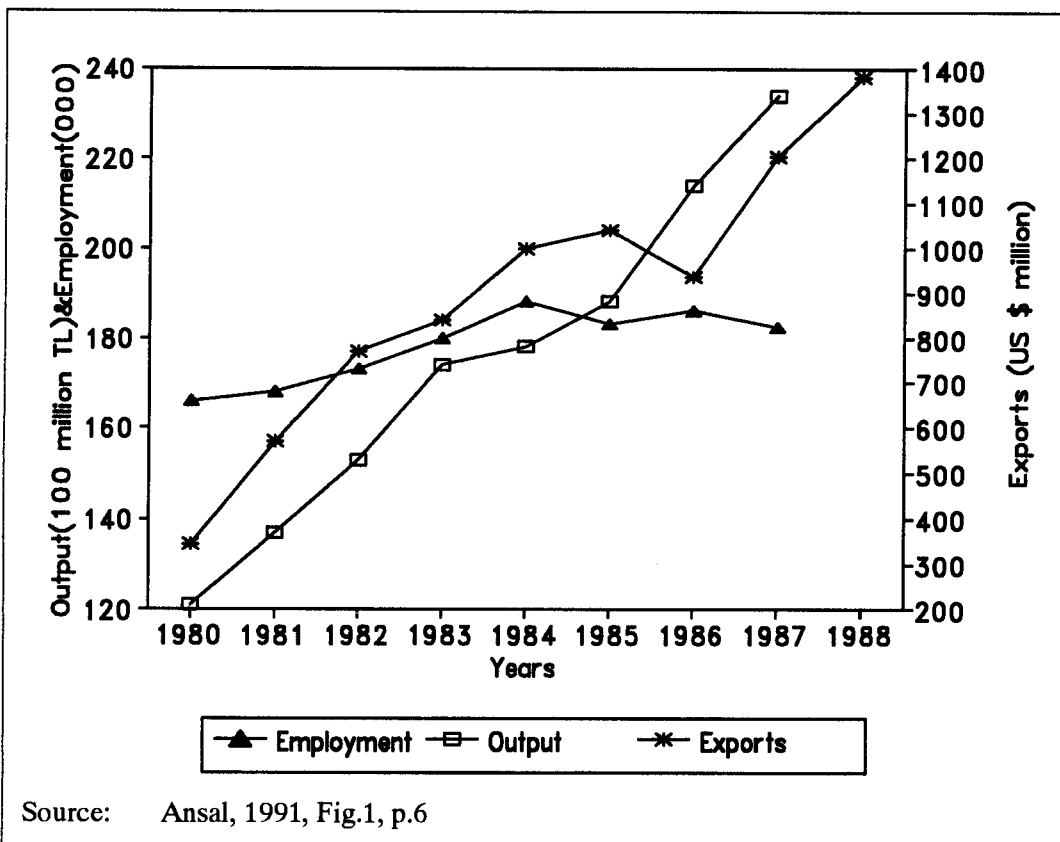
As mentioned above, it was really exports of the clothing industry that grew very rapidly during the 1980's. Figure 6.1 presents the trends in exports, output and employment for the clothing industry (SIC Group 322) from 1980 to 1988. Except for the decrease of output and exports in 1985 (and employment in 1986) they all grew rapidly over the period with exports growing fastest.

Figure 6.1
Output, exports, and employment trends in Turkish clothing, 1980–1988



Source: Ansal, 1991. Fig. 3, p.8

Figure 6.2
Output, exports, and employment trends in the Turkish textile industry, 1980–1988



Output, exports and employment in the textile industry (SIC Group 321) also grew over the period from 1980 to 1988 as Figure 6.2 demonstrates. However, a closer inspection of Turkish textile exports during the 1980's and early 1990's reveals three distinct periods. The first, from 1980 to 1984, a period of very rapid expansion with an average compound growth rate of 31 percent per year; the second, from 1984 to 1988, a period of erratic and slower growth with an average rate of increase somewhere between 2,4 and 8,5 percent per year; and the third, from 1988 to 1991, a period of decline with an average annual decrease of 8 percent (Ansal, 1991:6,9, Table 2 and Figure 1; Yasar, 1992:1).¹

1. These calculations are based on export figures from Ansal (from 1980 to 1988) and Yasar (from 1984 to 1991). There is a discrepancy between their statistics for the period in which they overlap (1984–1988). Ansal's data and graph yield an average annual growth rate of 8,5 percent while Yasar's figures give a growth rate of 2,4 percent. This is possibly because Ansal's data is presented in millions of US dollars and Yasar's in constant Turkish Liras.

The trends in output and employment over the period 1980 to 1987 (the only period for which I have year on year data) are quite different. Output increased steadily over the period at an average compound annual increase of 10 percent, while employment increased by 3,1 percent per year from 1980 to 1984, but declined by one percent per year from 1984 to 1987.

Collecting these findings together in tabular form and calculating labour productivity yields the result shown in Table 6.1.

Table 6.1

Turkey: Average annual rate of change of exports, output, employment and labour productivity in the textile industry

	1980-84 %	1984-87/8 %	1988-1991 %
Exports	31	2,4-8,5	-8
Output	10	10	n.a.
Employment	3	-1	n.a.
Labour Productivity	6,7	10,7	n.a.

From Table 6.1 it emerges that the sustained increase of 10 percent per annum in textile output was achieved by increasing labour productivity and not the level of employment. In fact, employment fell by 1 percent per year during the mid-1980's. The high growth rate of 31 percent per year in exports in the early 1980's could however not be sustained and dropped to a *decline* of 8 percent per annum from 1988-1991. In order to try to understand why textile exports could not be sustained it is necessary to examine investment and technology in the textile industry as well as macro-economic developments including state policy over this period.

6.2.3 Investment and technology in the Turkish textile industry

Private investment in the textile and clothing sector grew considerably as a proportion of total private manufacturing investment in the 1980's. As Table 6.2 shows, it almost doubled from 13 percent to 25,3 percent of the share of private manufacturing investment.

Table 6.2**Turkey: Private textile and clothing investment in 1980's**

	1980	1983	1986	1989
Real Investment level (Billion TL, 1988 prices)	317	600	876	721
Share in Private Manufacturing Investment	13,0	24,9	28,4	25,3
Source: Arslan and Celasun, 1992:46				

Private investment in textile and clothing also grew in absolute terms from 1980 to 1986, but declined by 1989 (Table 6.2). Arslan and Celasun conclude that the allocation shifts in the post-1980 period seem to have favoured exporting industries more than import competing industries. They also provide a classification of manufacturing industries on the basis of their high or low growth of capital stock from 1983 to 1988. The industries are then further classified on the basis of their high or low growth of output and exports, and high or low rates of effective protection. Finally, the industries are also marked with respect to their high or low capacity utilisation rates in 1983 (Arslan and Celasun, 1992:25-6).

In their tabulation the textile and clothing sector is classified each time in the high (or above average) category. This makes textile and clothing only one of two sectors in Turkey where high capital growth had taken place with above-average growth of exports and output (Arslan and Celasun, 1992:26, 47, Table 12). According to the criteria developed by Kell and Marchese this should place Turkish textile exports in the category of sustainable exports because their expansion was based on capital accumulation rather than a set of policy constraints. But as has been shown above, the rise in textile exports was not sustained after 1989. To establish why this was the case, the extent of modernisation of textile technology in Turkey is examined first.

A good way of obtaining an indication of how close the Turkish textile industry edged towards the technology frontier in the 1980's is to obtain a measure of the age profile of the technology installed in the industry. By comparing it to the age profile of technology in countries considered to be at the cutting edge in new technology, some measure is provided of the extent to which Turkey is on the frontier.

Although there have been a number of technological and process innovations in the textile industry between 1950 and 1990, (UNIDO, 1990:201) the two that virtually all textile research focus on are the introduction of open-end spinning and shuttleless weaving.² In brief, open-end spinning reduces the required number of pre-spinning steps and the newer frames run at much higher speeds. Shuttleless looms, on the other hand, provide not only higher speeds, but also improve fabric quality (UNIDO, 1990:203-4).

Table 6.3 provides an indication of the investment estimates for short-staple (cotton-type), long-staple (wool-type), and open-end rotor spindles for a number of countries. In addition to Turkey, South Africa and the United Kingdom, countries which are examined in detail in this paper, other countries which have been amongst the best performers in textiles in the 1980's have been included. The Table also provides a measure of the rate of equipment modernization between 1979 and 1988. It provides a measure, based on the estimates of total installed spindles in each country, of the percentage of spindles in 1988 that were installed in the preceding ten years, i.e. from 1979 to 1988. The measure is thus an estimate of the percentage of all spindles in 1988 that were installed over the period 1979-1988.

Table 6.3
Estimated spinning installations and spindles modernisation

Country	1988 Installed Capacities thousands of spindles			Proportion of Capacity Installed since 1979 (%)		
	Short-staple	Long-staple	O-E rotors	Short-staple	Long-staple	O-E rotor
Turkey	3 850	620	105	17,8	30,5	80,1
West Germany	1 826	627	136	20,5	35,3	103,8
Italy	2 340	3 785	113	49,3	20,6	143,4
South Korea	3 558	1 108	46	32,0	18,3	91,6
Taiwan	4 216	154	150	36,5	81,8	83,8
Thailand	2 206	28	31	24,7	77,4	100,6
Indonesia	2 596	25	28	25,2	66,2	85,4
China	26 114	1 836	202	1,4	10,5	98,5
United Kingdom	771	581	49	5,7	6,9	43,7
South Africa	734	79	21	21,8	29,0	67,8
Source: UNIDO, 1990:211-15, Tables IV.50, IV.54, IV.56.						

2. This is probably because they allow for ease of measurement as there have been numerous other technological advances. See UNIDO, 1992:201-5.

It is important to note that Table 6.3 is based on *estimates* of the number of spindles in each country. As a result some of the statistics are incongruous; for instance the finding that more than 100 % of the installed O-E rotors of West Germany, Italy and Thailand were less than ten years old. This unfortunately throws into doubt the validity of the data. However the information comes from institutions with very good reputations. The UNIDO document cites Statistikon Corporation while the Zurich-based International Textile Manufacturers' Association (ITMA) provides similar data (ITMA, 1991b:9-17). Table 6.3 will therefore be taken to provide a reasonable indication of the level of spindle instalments and proportion of machinery ten years old and younger, but is not assumed to be completely accurate.

Some indication of the reliability of the statistics in Table 6.3 is provided by Ansal. According to her, 66 percent of the spindles installed in the Turkish cotton yarn sub-sector were 10-20 years old. Spindles older than 25 years made up 25 percent of the total and less than 10 percent were under 5 years old (Ansal, 1991:20). The age profile of spindles provided by Ansal thus suggests that installed spindles in Turkey are older than Table 6.3's estimates.

Comparing the high performance countries in Table 6.3 with Turkey, and ignoring China for the short- and long-staple spindles because China appears to have concentrated all its effort in expanding its open-end rotor spindle capacity, it appears that the high performance countries invested more extensively than Turkey in new spinning machinery during the 1980's. Whereas, on average, the proportions of machinery ten years and younger among the high performance countries were 31, 50 and 94 percent respectively for short-staple, long-staple, and open-ended spindles, they constituted 18, 31 and 80 percent respectively for Turkey in 1988.

It is interesting to note in passing that, except for short-staple spindles, South Africa's spinning machinery in 1988 was older than Turkey's while the United Kingdom had done very little investment in new spinning machinery during the ten years preceding 1988.

With regards to weaving looms it is more obvious (see Table 6.4) that Turkey has not invested extensively in either shuttle or shuttleless looms in the ten year period from 1979 to 1988. The figures for Turkey in Table 6.4 are probably of the right order as they more or less match information provided by Ansal. According to her 36,2 percent of total looms installed in Turkey was more than 20 years old while another 36,7 percent was 11 to 15 years old. Only about 3 percent of the looms that belonged to a cooperative in Turkey was less than 10 years old (Ansal, 1991:20). The proportion of looms equal to or less than ten years old in 1988 in Turkey therefore lagged considerably behind that of numerous countries in Europe, East Asia and Australia as Table 6.4 indicates.

Table 6.4
Estimated weaving installations and machinery modernisation 1988

Country	Total Shuttle and Shuttle- less looms	Percentage of looms installed between 1979 and 1988	
		Shuttle	Shuttleless
Turkey	5 190	3,60	11,92
Austria	3 204	1,31	68,32
West Germany	29 714	1,32	61,50
Italy	68 701	0,53	55,47
Belgium	12 340	0,35	48,33
Australia	1 559	1,22	59,97
Hong Kong	17 394	2,63	45,09
Taiwan	94 145	11,06	36,49
Korea	209 574	33,02	11,32
Source: UNIDO, 1990:218-20, Tables IV.62 & IV.64.			

The countries selected from Europe, East Asia and Australia in Table 6.4 are the ones with the highest proportion of 'new' shuttles, i.e. shuttles less than and up to ten years old. What they demonstrate is that Turkey's acquisition of new looms during the 1980's was low compared to theirs. As Turkey is predominantly a cotton textile producer, the extent of replacement of shuttleless looms is more important because of their greater speed. In that regard Turkey has lagged well behind the leading European and Asian countries and can therefore not be regarded to be at the technological cutting edge in weaving machinery.

The relatively high level of investment in textiles and clothing in Turkey during the 1980's (Table 6.2) appears to contradict the finding that the spinning and weaving looms are of dated vintage (Tables 6.3 and 6.4). The solution to this apparent contradiction is that even though investment in textiles and clothing have been relatively high compared to investment in other sectors of the manufacturing industry, it has not been high enough to replace all the dated vintage capital stock in the industry. In 1992 it was estimated that a sum of six billion US dollars needed to be invested over a five year period in modernisation of plant equipment to make Turkey's textiles competitive with that of its main rivals ('Textiles: Investment is needed to match rivals,' p.5 in *Turkish Finance, Investment and Industry Survey*, *Financial Times*, 18 November 1992).

6.2.4 Macro-economic issues including state policy

Turkey followed an import-substitution policy from the mid-1950's to late 1970's, but switched to an export-oriented liberalisation in the 1980's following a debt crisis. Four episodes may be differentiated from the mid-1970's to early 1990's: (i) foreign financed boom in mid-1970's; (ii) debt crisis in 1978–1980; (iii) export-oriented adjustment and liberalisation in 1980–1987; and (iv) macroeconomic instability from 1988 onwards.

Turkey's economic recovery was very rapid in the early 1980's which was followed by a well-sustained export-led expansion in the mid-1980's. Its trade-oriented adjustment process yielded a substantial amount of restructuring that was clearly visible in the textile industry (Arslan and Celasun, 1992:1,3).

The process of post-1980 Turkish economic liberalisation proceeded in a gradual manner. Trade reforms commenced with the removal of quantitative restrictions in 1981, elimination of licensing in 1984, and then realigned and reduced tariff rates in 1988. There was also internal financial liberalisation with the underlying objectives of providing greater flexibility to foreign trade financing, especially exports, and to prevent capital flight (Arslan and Celasun, 1992:5–6).

In addition there was a continuous devaluation of the exchange rate from 1980 to 1988, often in excess of the inflation differential between Turkey and its major trading partners. This, coupled with wage repression over the period, resulted in sharply reduced real cost of labour in terms of its trade partners' currencies. Econometric studies provide strong evidence that the real exchange rate policy played a prominent role in Turkey's post-1980 export expansion. Furthermore the real wage reduction moved in tandem with the real exchange rate depreciation to ensure the competitiveness of Turkish exports up to 1988 (Ansal, 1991:12–13; Arslan and Celasun, 1992:12–13).

Other measures were also introduced by the state to stimulate exports in the 1980's. The major ones were the payment of export tax rebates (to compensate for indirect taxes), access to subsidised export credits, and duty-free imports of necessary inputs to manufacture for exporting (Ansal, 1991:13).

The state also adopted policies to encourage investment. The policy instruments have been well summarised by Ansal and included the provision of:

investment incentive certificates varying according to the location, sector and the total value of the investment project; 100 percent custom tax exemption for all the imported machinery and equipment; three months duty-free importation of raw materials and intermediate goods for new investments; and corporate tax exemptions depending on the characteristics of investment including capacity expansions.

A Foreign Investment Department was established within the State Planning Organisation to minimise the bureaucracy involved. In an effort to encourage foreign direct investments, agreements were signed between governments providing guarantees against nationalisation, establishing principles for capital transfers and resolution of possible disputes (Ansal, 1991:13).

The export incentives were however changed in early 1985. Export tax rebates were lowered, and plans for their gradual phasing out were implemented; preferential export credits were abolished, and in February 1985 Turkey signed the GATT Subsidy and Compensation Tax Code which prohibits direct government export subsidies on goods exported to co-signatories of the agreement. In 1987 export tax rebates were further reduced to around two percent and, finally, in 1989 the government totally phased out the export tax rebates (Ansal, 1991:14).

A rough estimate has been made of the budgetary cost of the investment and export incentives in the mid-and-late-1980's. The World Bank estimated that the budgetary cost of the investment incentive regime in the mid-1980's was only slightly lower than 1,9 percent of GNP per year. The share of manufactured exports in GNP was on the average 10–12 percent, while the export subsidy rate varied around 20–25 percent. Thus the overall budgetary cost of investment and export incentives was in the region of 4 to 5 percent of GNP. During this period the tax/GNP ratio was less than 20 percent illustrating the high cost of Turkey's micro-level incentive mechanism, a level that could hardly be sustainable over the long run (Arslan and Celasun, 1992:21).

The constellation of policy measures discussed thus far help explain, at least in part, the rapid growth of Turkish textile exports up to 1984 and their slowdown from 1985 to 1987/8 as the export incentives declined after signing the GATT Code. However, from 1988 onwards a number of further developments took place that help to explain the subsequent decline of textile exports (see Table 1 above).

After the 1987 elections the influence of trade unions increased. In the 1989 wage round they attempted to compensate workers for their losses in the 1980's. In the 1991 wage round they went more on the offensive to secure a maximum real wage increase. As a result, from 1988 to 1991 the index of real wages increased from 100 to 229 in the private sector, and from 100 to 288 in the public sector (Arslan and Celasun, 1992:9). What this meant for the textile industry's hourly labour cost in terms of US dollars was to increase from \$1,27 in 1989 to \$3,1 in 1991 (*Textile Month*, Feb 1991:9; Werner International, 1992). In Turkey's top 500 industrial firms the share of wages (in net value-added) rose significantly while profits, particularly in the public sector, dropped sharply. From 1988 to 1991 the share of wages in private firms increased from 31,8 to 55,8 percent while the share of profits dropped from 29,3 to 12,5 percent. But in public firms the share of wages rose from 35,4 to 130,4 percent thereby causing unsustainably large losses with a very unfavourable impact on public finance (Arslan and Celasun, 1992:9, 37, Table 2).

Another development over this period was a loss of control over the exchange rate as a result of the liberalisation of the financial market. Consequently there was a cumulative appreciation of the real exchange rate of the Turkish Lira by nearly 20 percent in 1989–1990 (Arslan and Celasun, 1992:6–7).

A combination of three factors therefore contributed to the decline of Turkish exports after 1988. They were (i) a reduction in export subsidies as a result of trying to conform to GATT regulations, (ii) an appreciation of the real exchange rate, and (iii) a rapid rise in the level of real wages in the textile industry. These three factors all worked together to reduce the international competitiveness of the textile industry.

The star performance of Turkish textile exports in the 1980's was not sustainable into the early 1990's. The reasons for its unsustainability appears to be that it was firstly a set of state policies that contributed significantly to the international competitiveness of the industry. Secondly, although investment in the textile industry was high and above average compared to other sectors in the manufacturing industry, it was not high enough to place Turkey at the technological cutting edge in textile machinery. As a result, when the contingent set of factors were reversed after 1988 they seriously undermined the international competitiveness of the Turkish textile industry and its exports started declining.

Other aspects of the Turkish textile and clothing sector are also of relevance to South Africa and are briefly mentioned. Firstly, the recession in Turkey focussed manufacturing investment in the sector on its most competitive market, higher value-added fashion goods, in order to make the most out of quota restrictions in Turkey's main OECD markets, and to stay ahead of Asian and Far Eastern competition. Secondly, in 1989 the Turkish government introduced sweeping liberalisation of textile import tariffs, both on finished goods and raw materials. Yarn spinning, for instance, lost its competitive advantage and imported cotton yarn shot up from 16 million dollars in 1989 to 96 million dollars in 1990 (at constant prices) while imported woollen yarn increased from 3 million to 28 million dollars. There was a strong feeling among manufacturers that the government's objective of joining the EC by 1995 was overambitious and it had gone about the reduction too hastily (Bodgener and Duruiz, 1991:50,51,53, 57).

The liberalisation forced individual textile firms to engage in restructuring as they searched out new competitive and profitable market niches. Some of these were observable in the firms I visited. The restructuring one of them engaged in is instructive for South Africa and considered next.

6.2.5 Turkish company case study: Bozkurt Mensucat³

The company was incorporated in the early 1950's and was initially owned by two prominent families, one of which was the Koc family. The company made quick progress from spinning to weaving to finishing and in the 1960's it had become a fully integrated textile mill.

3. Most of the information of the Bozkurt case study is based on an interview conducted with Dr A. Alptekin, general manager, and Mr L. Ataünal, business strategy manager, and a mill visit on 1 October, 1992, in Istanbul. Where other sources have been used they are referenced.

Of considerable interest to South Africa where such a step is unheard of, the textile company started making clothing in the late 1970's. It made house coats for women on a sub-contracting basis for exports, and in 1981 it added a clothing department to the plant. By 1985 it employed around 540 workers to produce more diversified garments both for local and export markets (Ansal, 1991:30).

In the 1980's the Koc Group decided that textiles should be one of its core businesses and bought out other shareholders. In the mid-1980's the company was totally controlled by the Koc Group which had become an enormous conglomerate in the automotive industry, household appliances, electronic goods, food processing, and trade and distribution. Textiles constituted only a small part of the Koc Group's operations.

The firm realised the necessity to invest in order to improve its export performance and launched an investment programme in 1984. It installed 39 000 new spindles which also included open-end rotors while it expanded its weaving capacity with 40 projectile (shuttleless) Sulzer looms and 296 shuttle looms. The dyeing/printing/finishing capacity was increased to 31 million metres.

After the investment programme Bozkurt's exports almost tripled from 21 to 61 million US dollars while the number of employees was reduced by 37 percent between 1985–1988. Spinning production remained constant over the period while weaving output dropped by 18 percent. The technological change thus has a labour-saving effect (Ansal, 1991:29).

The Koc Group decided that the company had to become a global operator able to compete internationally. It began to search for a suitable international partner and in 1988 it sold 50 percent of Bozkurt shares to a French textile holding company, DMC. The first full year of the 50–50 joint venture was 1989; but by then the economic environment had changed adversely for the company with high inflation – in the order of 60–70 percent, a rapid rise in real wages, the appreciation of the Turkish Lira against the currencies of trading partners, and the complete phasing out of export rebates by 1989. In the same year the government introduced sweeping liberalisation of textile import tariffs on finished goods and raw materials.

The company's profit margins were squeezed. It made a profit of TL 3 billion (US\$700 000) in 1990, but went into a loss in 1991 and 1992 (Bodgener and Duruiz, 1991:54,57,65; Questionnaire, March 1993). DMC lost interest in Bozkurt, but the Koc Group decided to support the company's restructuring program. It accordingly invested in Bozkurt and by 1992 it held 90 percent of the company's shares again.

The restructuring programme of Bozkurt was based on a long-term strategy and its perception that it was no longer competitive in the labour intensive lower value-added part of its operation. It found that South and East Asia could produce cheaper and better yarn and fabric and decided to shrink its spinning and weaving operations. At the same time it found that it had a competitive advantage in higher value-added products and has expanded its dyeing, printing, finishing and garment-making operations. Other strategic advantages That Bozkurt found it has over the Far East was that it was closer to the large

European markets and that it has better communication networks with Europe. It is also in touch with European style tastes and can generate fashion and styles that are marketable in Europe.

The company cut its spinning and weaving operations back by 80 percent to slightly less than 10 000 spindles and 100 looms. The spindles and looms it has kept in operation were all less than ten years old. The remainder of them were mothballed where, during a mill visit, they stood silently and eerily in the dark, like tombstones in a vault. In place thereof the company imports yarn and grey cloth from Indonesia, South Korea, China and Pakistan.

In the wet section of production, namely dyeing, printing and finishing, the company has engaged in an extensive investment programme to renew the technology. The principle advantage of the new technology is the ability to produce better quality while also marginally adding to speed of production.

On the garment side the company installed a Computer Aided Design and Computer Aided Manufacturing system in 1989 with three laying tables for cutting. At that time it was producing men and women's leisure-wear, such as trousers, shirts, skirts, sports jackets, anoraks, and so on. By 1992 the company is doing very little stitching, only for sample-making. It subcontracts the stitching to 50–60 workshops where non-unionised workers are paid lower wages. Then the company does the final inspection, packaging and dispatching of garments. It has the capacity to assemble 2.5 million garments annually.

As a result of the restructuring employment at Bozkurt declined from 2300 in 1990 to 1000 in 1992. At the same time turnover in dollar terms declined by only 15 percent. The restructuring had thus led to greater labour productivity, but to a fall in the level of employment.

The company has a manager in charge of company strategy whose task it is to oversee the company's restructuring plan. The plan involves a strategy as to product groups, process specialisation, investments, markets, and size of the company. To do so, the company prepares a business plan for five years comprising these elements. It is then presented to the company's board and holding companies. The report includes an account of where the company is and where it wants to be in five years' time. As a result the company has a clear idea where it wants to be in five years time.

In five years' time Bozkurt will probably not have any spinning plant, although it may have a very small weaving unit. It will be specialising in dyeing, printing and finishing. It will also have a garment division which will not have a stitching unit, only cutting and finishing of the garment. It will subcontract. The company has already proceeded quite a long way towards that, but has to complete the renewing of its technology.

In terms of its markets, in late 1992 it was 60% domestic and 40% export, but the company expects it to be at least vice versa in five years time, that is 60% export and 40% domestic, or even 70% export and 30% domestic.

In garments Bozkurt was just selling standard items at the end of 1992. The customer brought them the design, and they made a quotation. It is now busy preparing its own collections and joining the fashion shows. In five years time it intends selling only its own collections.

On the printing side the customer also brings her design and asks for preparation of this design, but in five years time the company intends to have a huge design collection and selling it exclusively. At the end of 1992 it was both accepting customers' designs and promoting its own designs.

The company is thus moving from producing standard items to fashion. As a result lot sizes will decrease, but value-added will increase. The decrease in batch sizes will be compensated by the increase in price of the final commodity. In finishing it is not capacity that will be increased, but in value-added and in quality that the company expects increases.

In summary, the response of Bozkurt Mensucat is to develop sustainable textile fabric and clothing production and exports. It intends doing so by moving out of basic commodities where it is internationally uncompetitive and to move into areas where it has competitive advantages, namely higher value-added differentiated products such as fashion garments. It intends doing so on the basis of new technology.

Other companies in Turkey have responded differently to the changes brought on by greater liberalisation in Turkey. For instance, Akin Tekstil, another vertically integrated textile company in Istanbul, places its emphasis on quality and is continuing with its spinning and weaving operations to ensure that its fabric meets its own quality specifications (Interview, M.Cagis, Assistant MD, 1 October 1992). Bozkurt does however provide a potentially relevant example of a creative and constructive way to deal with new challenges.

Another important point to emerge from a study of the Turkish textile industry is the importance of the clothing industry to the textile industry. In fact, clothing was a driving force in the textile industry's expansion, as Alptekin explains:

Most of the growth of textiles was driven by the garment-making industry which tripled its output during the 1980's with a large proportion going into exports. It became the engine of the textile industry because, by expanding the clothing industry, there was a large demand for textiles and also it became insistent on good quality because it was largely export-driven. So it not only pulled the textile industry, but it also disciplined it as far as quality was concerned.

6.2.6 ITKIB

It was however not only at the macro-economic level of state policy or the micro-economic level of the firm that the Turkish textile industry developed and implemented its export strategy. It also did so on the meso- or industry-level. In 1986 it established ITKIB, a Turkish abbreviation for the Istanbul Textile and Apparel Exporters Association, as a non-profit organisation under the auspices of the Undersecretariat of Treasury and Foreign

Trade of Turkey. ITKIB is composed of four different Exporters Associations: Clothing and Readywear Garments, Textile and Raw Materials, Carpet and Leather, and accounts for 80% of Turkey's textile and clothing exports.

The prime reason for the establishment of ITKIB was to negotiate its quota limits with the EC, but it also set itself a number of other objectives. They are:

- 'to assist boosting further the technological renewal and development of the textile and apparel industry';
- 'to assist to increase the competitiveness of the Turkish exporters in international markets with products having high value-added';
- 'to assist the exporters in finding new markets';
- 'to support education programs aiming to meet the qualified labour requirements of the industry.' (ITKIB, 1994)

In order to achieve these objectives ITKIB engages in a number of activities. Amongst others it performs the following tasks:

- organises promotion and state of the art exhibitions;
- sponsors participation in international fairs and exhibitions;
- performs all the legal and documentary work concerning export operations;
- conducts market surveys for exporters about popular markets;
- keeps statistical data about the industry;
- carries out research projects;
- organises seminars and courses for the in-job training of its members.

ITKIB is thus an industry-level association that assists the textile, clothing and leather industries in developing and expanding their capacity to export. They do so by offering assistance across a wide range of services that embraces most of the requirements of exporters. The most likely impact of such an association must have been to benefit and strengthen Turkey's export drive.

6.3 United Kingdom: Case study of Courtaulds Textiles

(a) Context

The 1970's and 1980's were turbulent times for the British textiles and clothing filiere. The economic forces operating on them included demand changes with the rise of casual wear, and the global spread of textile and clothing production aided by multi-national corporations. Together with the buying strategies of the retail chains they led to a dramatic rise in the volume of imports of fabric and garments. Traditional export markets for fabric were also lost. As a result the filiere 'simultaneously contracted and passed through a structural and technological revolution': 300 000 jobs were lost between 1974 and 1991 (Hardill and Wynarczyk, 1991:66).

The political environment in which the textile industry operated in the UK in the 1980's was that of Thatcherism. The basic ingredient thereof was the adoption of a hands-off policy towards the manufacturing industry (Riddell, 1985, 166–69). The economic environment was one of a sharply appreciating currency and declining domestic demand. Thus textile imports could enter the UK more and more cheaply. As a result, the textile industry was left exposed to international competition with very little protection from the state. The companies therefore had to assume full responsibility for their own survival and strategise accordingly. This chapter examines the strategy adopted by Courtaulds Textiles.

(b) Historical evolution of Courtaulds' strategy⁴

Courtaulds' strategy in the 1960's was to try to develop a vertically integrated business which could act as a channel for the fibres to find their way through to the consumer as finished products. It accordingly acquired businesses in spinning, weaving, knitting, dyeing, finishing, and then clothing manufacturing.

In the UK the strategy of big businesses at that time had been very much to invest heavily in the latest manufacturing technology to drive costs down to the lowest level and to adopt a mass market manufacturing approach. This strategy applied through the second half of the 1960's up to 1977. In 1978 it started to be questioned. This was because the UK had a Labour Government in power in the second half of the 1960's which had been quite protectionist. It promised protection for the clothing and textile industry, but this did not actually materialise and imports from the Far East started eroding the market. By 1977–1978 it was becoming quite clear that a lot of the high volume factories, even with the very latest equipment, were having great difficulty in competing with the very basic products that were coming from the Far East. Part of the problem was that all the company's attention had gone on things like weaving and knitting and less investment and strategic resources put behind the dyeing and finishing.

4. This section is mainly based on an interview with Peter Aubusson in London on 22 September 1992. He is responsible for external relations in the company.

A problem with the weaving and knitting processes is that they actually add relatively little value. In the cost breakdown of a finished fabric about 50% is the yarn cost, only about 20% of it is actually in the weaving and 30% is in the dyeing and finishing. As a result Courtaulds started to close some of its larger weaving and knitting businesses in the late 1970's.

To compound the problem at the same time it started to lose market shares to European manufacturers. The Europeans were able to produce a better quality and their design and product development was better in some areas. During that period the company also got hit by the major recession of 1979–1982. By the end of it whole sectors of the UK textile industry were starting to be knocked out.

By then it had become clear to producers that the trend in UK trade policy was going to be towards liberalisation. The only question was how quickly it would come. What protection there was under the GATT and MFA was only going to be of fairly limited benefit.

In the mid 1980's Courtaulds undertook a major strategic review and came up with the following key conclusions. Firstly, that it was operating in a very mature market with moderate or little growth potential because in developed economies clothing and textiles take an ever decreasing share of consumer spending as people get richer. Secondly it assumed that competition from countries with much lower wage costs was likely to increase quite intensively over the next ten years or so. No matter how efficiently factories were going to be operated, there would still be quite a lot of divisions of the company which would remain completely uncompetitive in an open market situation due to very low wage costs in other countries. Thirdly, looking ahead, it predicted that the MFA would still be renewed once or twice more, but by the end of the 1990's there would be no more protection. A fourth fundamental issue was the fact that, in textiles, there is very little benefit from technical leads. Technology for textiles is nearly all available off the shelf. Any machine Courtaulds might have bought that could do something clever could be bought by somebody in Hong Kong or Thailand or China. And very often in those countries when they purchase new technology they put it into a brand new factory in a green-field site and give it the perfect logistical situation, whereas in the UK it gets put into some old building where the layout of the factory is not ideal or the company is fighting against ingrained working practices. The end result is that the company cannot assume to gain any long term effective leads from being ahead technically.

So what was left for the company to do? It had come to realise that quality was vitally important and had done a great deal on improving the quality of its products. It had also done a great deal to improve the design and product development, all of which was trying to concentrate on the differentiation aspects of the product rather than the production of basic commodities. But at the end of the day it could not assume that those things in themselves would be sufficient to give it any great long term protection on the open market because other countries could do those sort of things pretty much as well as Courtaulds could.

The one area where the company decided that it could get an advantage was in the relationship it had with its customers and the closeness to the customer. This applied on two fronts. One was that Courtaulds understood and gave them what they wanted better than other people and secondly, gave it to them faster than anybody through quick response. So the company concentrated – as did a lot of the UK and developed countries' textile industry – on shortening lead times and holding less stock in the system in order to make sure that it had the right product for fashion available at the right time.

The businesses Courtaulds subsequently invested in were required to put as their top priorities service and closeness to the customer and quick response. When the company was looking at capital expenditure in the business, it was far more interested in what it could do to help with solving those sorts of problems than with just bringing costs down. It came to regard lower cost in itself as just useless.

Another conclusion the company came to in its strategic study was that there were quite a lot of areas of its business which would not be defensible manufacturing solely in the UK. So it decided to make the business international. At the time of the strategic study something like 80% of its products were made in the UK and 80% of them were sold in the UK. The company set itself the target of getting that number down to more like 40% over the next ten years or so. The company realised that it would have to start manufacturing products wherever it made most sense in the world to manufacture them and where the products themselves were very differentiated in order to give itself some advantage over the Far East. Lace was an area which Courtaulds was not in at all at the time of the strategic debate. It came to realise that lace was very closely associated with some of the areas where the company did have the necessary skills in knitting as lace is a speciality version of knitting. As a result it acquired three businesses in lace: one in America, the other in France, and the third in the UK. It also acquired a French fashion design house which was a move into an area of clothing which was far more specialised and differentiated. In America it acquired a stretch fabric business which is also highly specialised.

Courtaulds acquired four or five very key businesses outside the UK in the late 1980's that spread its portfolio so that about 65% of its sales are presently in the UK and 65% of its manufacturing as well. It still sees itself moving further in the direction of 40%.

Another thing Courtaulds did in internationalising its business has been at the upper clothing end where it was quite clear that it could not compete from a developed country manufacturing base. That is because in clothing labour cost disadvantage is highest and there is presently no substitute for human skill in sewing. It was in clothing that the company saw the biggest risks on the labour costs disadvantage and resigned itself to start manufacturing it in places other than developed countries. It now has quite significant manufacturing of clothing in Morocco, Tunisia and Turkey, around the Mediterranean. It still gives the company closeness to the market with the benefit of relatively low labour costs, not as low as China or Thailand, but within one or two days trucking to the markets which it wants to supply.

Some years ago Courtaulds also set up an office in Hong Kong, which acts as a sourcing operation and buys in product from other businesses in the Far East. Consequently the company now has a mixture of strategies from which it can take its pick. When it gets some business, or sees a market opportunity, it can decide what is the most appropriate supply route for it. Either make it in the UK which gives the highest costs, but probably the greatest flexibility and control over it, or to go to its own factories in the Mediterranean area and get some lower costs and still relatively good logistics and service, or to go to the Far East and get the lowest costs, but have a long lead time as it takes six weeks on a boat to get it to the European market. The company is still learning how to orchestrate the different sourcing options and deciding which products are right for which routes. This is something that is happening throughout the European industry.

In brief, Courtaulds strategy has been to make its business more international and less dependent on one market and one economy. It is concentrating its money and resources on product areas that are much more specialised and highly differentiated, either in terms of the product or the service that it can give the client and at the same time to make the portfolio change happen quicker. It actually disposed of a number of the more 'commodity' businesses, i.e. undifferentiated basic fabrics that compete mainly on price, and those that did not have a long term future.

The company's capital expenditure programme is about at the level of its depreciation charge, but it is very spiky and there are some businesses such as the lace businesses that are getting three or four times their depreciation charge in capital expenditure while others are getting none in order to make this switch in the portfolio. And what Courtaulds is doing as a group is almost what the UK textile industry as a whole is doing in a less organised way. The ones that are in the more undifferentiated basic commodity area are getting squeezed out, while those in areas that have some differentiation built in are doing quite well and are investing and going forward.

(c) The restructured Courtaulds Textiles

While some of the restructuring which Courtaulds undertook has already been outlined, it is instructive to highlight some other aspects of its restructuring. Firstly, there was some corporate restructuring. While Courtaulds was going through the exercise of rethinking its textile and clothing strategy, the parent company was developing a variety of other sectors outside of textiles and clothing. These were in packaging, paint, speciality chemicals, adhesives, and a range of other products. It became increasingly clear that the textile clothing parts were quite different from a lot of the other parts and in March 1990 the company demerged into two quite separate businesses, Courtaulds and Courtaulds Textiles, with the latter becoming an independent company listed on the London Stock Exchange.

By 1992 Courtaulds Textiles had five main business areas: spinning, fabrics, home furnishings, own-label clothing and branded clothing.

In spinning the idea that a vertically integrated company could force particular products down a pipeline to a consumer did not work because it was a production-driven approach. It went out in the late 1970's. The demand for textiles has rather been found to be pulled by clothing fashion changes and the need to respond quickly and be close to the customer with the ability to buy and sell wherever it is needed.

Another important feature of the restructuring is that Courtaulds Textiles operates through some 50 management teams, each operating as a profit responsible business, i.e. as a profit centre. Each profit centre operates fairly autonomously in the market as is evidenced by the fact that only about 5 percent of sales are within the group. Hence Courtaulds Textiles had restructured itself from a full vertically integrated company driven by production demands, to a company with semi-autonomous profit centres responding quickly to market demands.

These trends have not been unique to Courtaulds, but also happened to other groups in the United Kingdom as Peter Kilduff has pointed out in writing about structural changes in the textile industry in the UK:

As their competitive position deteriorated rapidly during the late 1970's, therefore, many groups were forced to abandon vertical integration and undertake extensive closures in textile processing. However, groups usually retained a vertical element but established business units at each of the major processing stages as clearly-defined profit centres, with each given a greater level of autonomy, including freedom to buy and sell in the best markets. Furthermore, firms have tended to place greater emphasis on smaller business units which are able to create strong competitive positions by specialising in meeting the requirements of specific markets or market segments. In this way, the large firms have been able to combine the flexibility of small, specialised firms in serving dynamic and fragmented markets with the strength of a large diversified group which has a broadly-based expertise in textiles and clothing and is able to respond rapidly to market changes by transferring corporate resources into or out of specific sectors (Kilduff, 1989, pp.109-110).

Another key feature to note about Courtaulds Textiles is that it is not exclusively a textile company, but also a clothing manufacturer. The division between textile and clothing companies that exists in South Africa, is partially obliterated by Courtaulds which treats them as an integrated whole in the textile-clothing pipeline.

The spinning part of Courtaulds contracted enormously due to competition from low cost countries. In less than four years its spinning mills were reduced from 28 in the UK and France to only 4 in the UK by 1991 with the remaining mills being geared towards making more complex yarns and products (Courtaulds Textiles, 1991, pp.3,8).

Courtaulds Textiles had been contracting as a whole as a result of the restructuring with nearly 40 factories closing and a decline of 25 percent in the number of employees worldwide in the two years following the demerger. In 1991 alone the group's workforce fell by almost 20 percent from 28 200 to 22 700, largely as a result of the closure of 23 factories and the sale of five businesses (Courtaulds Textiles, 1991, pp.2,18).

Even so Courtaulds Textiles was doing quite well under adverse economic circumstances in the UK. Its operating profit in 1991 was £53,2 million on a turnover of £922 million. Operationally it claimed continuing improvement in the key ratios covering added value

per employee, productivity and efficient use of capital. In terms of customer service it claimed that its lead times had been steadily reduced and that over 95 percent of orders were delivered on time in 1991 (Courtaulds Textiles, 1991, pp.2,13,22). A mill case study of a Courtaulds subsidiary confirms the trend in the improvement of efficiency of the company.

(d) Mill case study of a Courtaulds subsidiary

At the textile mill which does weaving, dyeing and finishing, management took a major step to change the company culture in 1990. The first component thereof was a quality initiative in which American consultants were called in to undertake extensive training of the whole workforce. One of the consequences of the training was that the company tried to create a climate so that employees could be involved in trying to get continuous improvement. The other component was a realisation that costs had to be monitored and attacked constantly. The company also invested to make productivity improvements (Interview, Managing Director, September 1992).

The result of the initiative were quite dramatic:

Stock turns rose significantly between 1990 and 1992:

	1990	1992
Stock turns per year	2	5-6

Matching this improvement in the turnover of stock was a decline in stock on hand:

	1990	1992
Stock: Units	12 000	4 500
Raw materials (weeks)	8-12	4
Finished goods (weeks)	18	6

Throughput time also improved markedly over this period:

	1990	1992
Throughput time (weeks)	4-12*	2,5

* The average throughput time in 1990 was 7 weeks.

The proportion of deliveries made on time corresponded with the impressive improvements made in the efficiency of production:

	1990	1992
Deliveries on time (%)	50	90

(e) Implications of Courtaulds for South African companies

The performance of the Courtaulds subsidiary textile mill demonstrates amply the improvements that can be achieved once a company puts its mind to it and makes a concerted effort to drive through the initiatives.

Like Bozkurt Mensucat it is likely that Courtaulds Textiles also provides South African textile companies with a glimpse of the potential future they may face. Courtaulds adopted a strategy that would enable it to survive and grow in the long run. The strategy was both defensive and offensive at the same time. It was defensive in that the company searched for opportunities and relationships where it would be very hard for their major competitors to emulate or oust them. It was offensive in that the company expanded its operations into new product areas which are more specialised and where it is able to remain internationally competitive.

6.4 Lessons for South Africa

The comparative study of the textile industries in Turkey and the United Kingdom holds some valuable lessons for both the South African state and textile industry if South Africa is to build a long term viable and internationally competitive textile industry.

From Turkey the lesson to be learnt for the creation of sustainable exports in textiles is that it has to be built on the foundation of high productivity in the textile industry itself and a crucial component in maintaining a competitive level of productivity is in the continuous modernisation of capital equipment through high levels of investment. To do so on the basis which Turkey did in the 1980's is not sustainable. The three pillars on which the Turkish export performance rested in the 1980's were subsidisation of the industry, continuous depreciation of the exchange rate, and keeping wage levels low. But these pillars crumbled in the face of liberalisation in order to integrate itself into the world economy and so gain entry to the EC market, as well as trade union strength that pushed up minimum wages in the industry.

The second important lesson from Turkey and the UK is that both industries restructured in order to remain competitive in a rapidly changing world environment. Both industries (with UK far more advanced than Turkey) concentrated on their areas of profitability and let go of uncompetitive segments of the industry. In both countries there has been a movement from the commodity end of the market to the more specialised and differentiated end with greater responsiveness to the needs of niche markets.

A third valuable lesson from Turkey is the creation of industry-level assistance in order to promote exports. Turkey did so by establishing ITKIB, the Istanbul Textile and Apparel Exporters Association, which performed a wide range of valuable functions for firms in the industry.

The fourth lesson to be learned from Turkey and the UK is the need for ongoing improvement in the production performances of mills, not only by means of investment in new technology, but also through the adoption of new and improved production and organisational techniques. This lesson can best be demonstrated by comparing the improvements in production performance of the Courtaulds Subsidiary in the UK and Texco One in South Africa (Table 6.5).

Table 6.5
Production Performance: Comparison of UK and SA Mills

	UK Mill		1988	South African Mill			
	1990	1992		1989	1990	1991	1992
Stock turns	2	5-6	2,3	2,0	1,9	1,7	2,0
Weeks of Stock							
Raw Material	8-12	4	22	20	18	15	10
Work-in-progress	3	3	4	4	4
Finished Goods	18	6	5	6	7	9	8,5
Throughput time (weeks)	4-12	2,5	15	14	13	13	12
% Deliveries on time	50	90	50	60	65	75	88

Table 6.5 shows that over a shorter two-year period the improvements in performance at the UK mill were better in every single category than the improvements achieved over a longer four-year period by the South African mill. For the UK mill improvements in stock turns and weeks of stock of finished goods improved two- to three-fold while the SA mill's performance in these categories actually deteriorated. It is only in the improvement in proportion of deliveries on time that the two mills show almost the same degree of improvement, although the SA mill took two years longer to attain it. There is thus much that the SA mills can learn about continuous improvement of their performance, a key ingredient for remaining internationally competitive.

Chapter Seven: The textile-clothing pipeline

7.1 Introduction

Thus far the study has concentrated almost exclusively on the textile industry, but the industry represents only one distinct production process in a long chain of transformations and services before the commodity is sold to the final consumer. It is therefore important to adopt a filiere approach and study the textile-clothing pipeline.

Amongst all the advantages of adopting a filiere approach to the industry there are two that warrant highlighting. The first is that, in terms of developing an industrial strategy, it is important to bear in mind the whole filiere. For instance, for a garment woven from a chemical fibre, it is important to bear in mind the whole filiere which includes the chemical fibre manufacturing, spinning and weaving the fibre, finishing the fabric, making-up the garment, and retailing it. Unless there is co-operation between all the stages of processing it is possible that even the most carefully devised strategy for the textile industry alone can go awry.

Secondly, the major union in the industry, SACTWU, organises workers in almost all stages of the filiere. In particular, the union is strongly represented in the textile and clothing industries, and is therefore very well placed to play a key role in the development of an industrial strategy for the textile filiere as a whole. Before considering the role of the union in developing an industrial strategy in the next chapter it is therefore useful to gain an insight into the problems and challenges presented by the textile filiere.

7.2 Length of the Textile-Clothing Pipeline

The textile-clothing-retailing pipeline is one of the longest, if not the longest, pipelines transforming raw materials into consumer goods. Not only are there a large number of distinct stages in the transformation process, but the pipeline cycle, i.e. the duration from the time a fibre reaches the first stage of production until it is finally sold to a consumer, is also extremely long. Kurt Salmon Associates established in 1986 that the pipeline cycle for woven textile goods in the USA had a duration of 66 weeks.

Of this total, only 11 weeks are spent as work-in-process – when something is actually being done to turn fibre into a finished garment ready for sale. The balance of 55 weeks – 83 percent of the total cycle time – is spent in inventory (Kurt Salmon Associates, 1986:2).

A closer examination of the flow of material through the pipeline is provided in Table 7.1.

Table 7.1
Textile-clothing pipeline: Duration at different stages of production (weeks)

	Inventory	WIP
<i>Fibre</i>		
Raw Material	1,6	
WIP		0,9
Finished Fibre at Fibre	4,6	
Fibre at Textile	1,0	
	7,2	0,9
<i>Fabric</i>		
WIP - Greige		3,9
Greige Goods at Greige	1,2	
Greige Goods at Finish	1,4	
Finishing		1,2
Finished Fabric at Textile	7,4	
Fabric at Apparel	6,8	
	16,8	5,1
<i>Apparel</i>		
WIP		5,0
Finished Apparel at Apparel	12,0	
Ship to Retail	2,7	
Apparel at Retail Distribution Centre	6,3	
Apparel at Store	10,0	
	31,0	5,0
Totals	55,0	11,0
Note: WIP = Work in Process or Work in Progress		
Source: Hunter, 1990:20.		

According to Hunter the term 'work in process' is itself misleading in that a large proportion of WIP time is spent by the product between process steps. 'It has been estimated that less than 1% of WIP time is spent on actual conversion of a product.' (Hunter, 1990:21). But the obvious area in which improvements in the duration of the pipeline cycle can be made, is in shortening the inventory times. Substantial changes have already been made by major companies in the USA (Hunter, 1990:42). Before discussing how improvements can be made, it is necessary first to consider the South African textile-clothing pipeline.

7.3 Analysis of textile-clothing pipeline performance in SA

No comparable study of the length of the textile apparel pipeline in South Africa exists, but it is probably longer. Instead, research has tended to focus on problems in the textile-clothing interface. Although complaints abound about poor service, inconsistent quality and lack of reliability of the textile industry, much of it probably based on bitter experience, comprehensive evidence that is scientifically sound is actually hard to come by. Some such studies do exist though and are briefly summarised below.

Emby (1987:116) cites the case of a clothing company that kept thorough records in 1986 of all problems related to the delivery of cloth. It calculated that, on average, supplying mills requested five extensions per order before the cloth was finally delivered.

Colman (1990) has done a gap analysis of the discrepancies between textile buyers' expectations and textile suppliers' perceptions with regards to the quality of textiles. She measured three discrepancies: firstly, the difference between what buyers of textiles expect and what they perceive of actual product and service quality; secondly, the difference between customers' expectations and suppliers' perceptions of those expectations; and thirdly the gap between the standards suppliers set and the degree to which they achieve those standards (Colman, 1990:1-2). Her analysis was based on questionnaire responses from 76 managing directors of clothing manufacturers and retailers and 20 questionnaire responses from managing directors of textile manufacturers. (Colman, 1990:18,22) As a measure of quality she took eight dimensions. They were performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. After using sophisticated research methods she comes to the following conclusions.

The perception of the buyer of South African textile products is that the quality they receive does not meet their expectations, over a range of criteria or dimensions. This perception of quality is related to an overall dissatisfaction with the products and services.

Although generally the textile suppliers have a good understanding of what their customers expect, some suppliers underestimate their customer requirements. The textile suppliers are overstating the extent to which they are satisfying their customers' expectations. This tendency to overstate brings into doubt whether they are in fact meeting standards as they state they are. Because the suppliers and customers' perceptions of quality are very different, it hinders the suppliers' ability to see that they are not in fact delivering what the customer wants.

Suppliers appear to determine the level of quality standards rather than set them according to an external measure such as customer requirements or competitive levels. Management's focus appears to be on conformance to their own standards rather than continuous improvement through an external means of assessment.

The costs of quality assurance are underestimated and the costs of lost business due to customer dissatisfaction are not taken into account by the suppliers (Colman, 1990:51-2).

Colman's study is at the level of subjective expectations and perceptions, but does not study the actual performance of textile deliveries in the pipeline. Such a study was carried out by the National Productivity Institute which surveyed the retail-clothing-textile pipeline's delivery of orders for the 1986 summer season (Fairhurst, Totten and Boer, 1987). The study was conducted in depth, but with a small number of companies, namely two major retailers, ten clothing suppliers and four major textile suppliers.

Findings of the study were: (i) that buying procedures left a lot to be desired and the absence of firm or assured contracts between buyers and suppliers created loopholes for cancellation of orders placed. (ii) Communication between the textile and clothing manufacturers as well as the retail trade seemed to be informal and of an unacceptably low standard. This led to late deliveries and arbitrary cancellations of orders between the parties. (iii) Co-operation between the textile and clothing and the retail sector was poor, e.g. there was no feedback or reporting on how sales were progressing so that orders could be TIMEOUSLY placed or be amended to take account of changes in the market (BTI, 1988:50).

The total delivery performance for the four textile mills was analysed for August 1986. It was found that, out of 3 058 orders, 64,5% were on time, 89,5% were delivered within two weeks and 95% within four weeks of the specified delivery date. In addition the deliveries for summer 1986 to the clothing manufacturers who participated in the pipeline study was also analysed. The delivery performance was found to be weaker: out of 222 orders analysed 55% were on time, 73% within two weeks and 89% within four weeks of the specified delivery date (Fairhurst, Totten and Boer, 1987:6-8).

The NPI study of 1986 thus demonstrated that, in the case of the four textile mills, the quality of service with regards to delivery left much to be desired. Deliveries actually reaching purchasers on time ranged from only slightly more than half (55%) to less than two-thirds (64,5%).

These performances were generally much weaker than the deliveries of the competitive companies surveyed in this study. For instance, three of the companies surveyed claimed that their proportion of deliveries on time were 88%, 93% and 95% respectively. Although the companies' orders were not scrutinised, it does suggest that one of the factors contributing to their competitiveness is a higher quality delivery performance than exists in the textile industry on average.

Turning from delivery performance to product quality, a survey comparing the quality of South African fabric with imported fabric provides useful information. Unfortunately it is not clear in what year the survey was carried out. The results of the survey are summarised in Table 2. It shows that on average the local fabric has more faults per 100 metres than the imported fabric: 7,6 as opposed to 6,3 faults per 100 metres. The percentage of rolls with more than 9 faults per 100 metres was also higher in the local than in the imported fabric: 31,3% as opposed to 22,1%.

On the other hand the South African manufacturers strung the faults more diligently than did the foreigners. On average there were strings on 5,8 faults per 100 metres of the local fabric whereas imported cloth had only 1,4 strings per 100 metres. This meant that there was a considerably larger proportion of unstrung damages in imported fabrics (4,8 as opposed to 1,8 on the local fabric). This meant that, even though South African fabric is inferior in quality, clothing manufacturers stood a better chance of not using damaged local fabric than they did with imported fabric.

Table 7.2

Frequency of fabric damage: Local and imported fabric

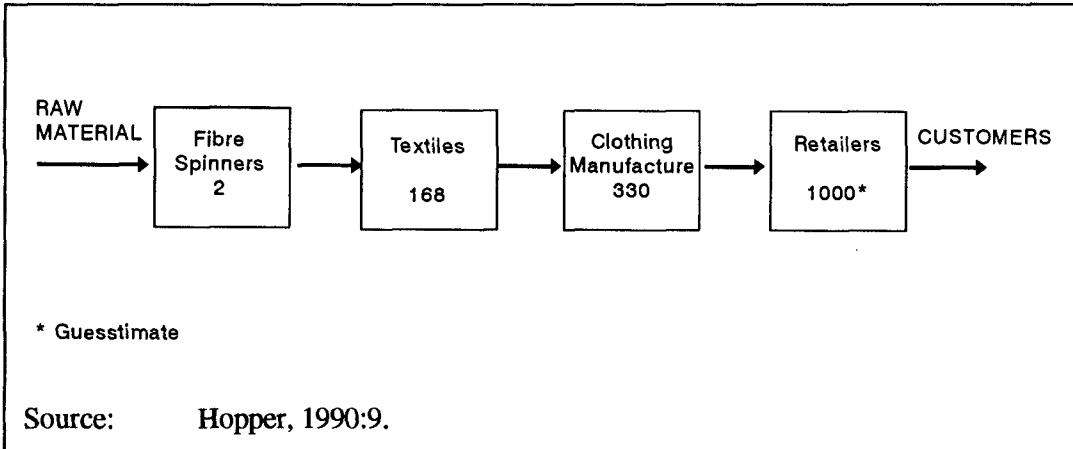
	Local Fabric	Imported Fabric
No. of Fabric Rolls	742	177
Total Length (M)	55 209	13 187
Average Roll Length (M/Roll)	74	75
Strung Damages (1)	3 214	190
Unstrung Damages (1)	986	637
Total Damages	4 200	827
Average No. of Damages per Roll	5,6	4,7
Average No. of Damages per 100M	7,6	6,3
Average No. of Strung Damages per 100M	5,8	1,4
Average No. of Unstrung Damages per 100M	1,8	4,8
% of Rolls with 0-9 Faults per 100M	68,7	77,9
% of Rolls with more than 9 faults per 100M	31,3	22,1
Notes:		
(1) The fabric manufacturer is meant to put a string as a marker by damages in the fabric so that the purchaser can readily find them.		
Source: Miriam Altman, 1993:207.		

7.4 Pipeline volatility and amplification

While it is clear that there is scope in the textile industry for improving its delivery service to customers and the quality of its fabric, there is another, deeper problem connected with the textile pipeline. The problem is one of volatility in demand due to the amplification of changes in consumer, and hence retailers', demand for textile apparel. This is most dramatically illustrated in the case of SANS where a fluctuation of 10% in consumer spending at the retail end leads to a fluctuation of 40% in the demand for SANS products (Interview, J.Hofmeyr, 1992). The higher up the pipeline the higher the volatility of demand for the product and SANS, as a producer of continuous synthetic filament, is a considerable way upstream from the garment retailer.

Graham Hopper (1990) has studied the textile-clothing pipeline in the Western Cape and developed a strategic model that explains the volatility and upstream amplification in the pipeline. The following exposition draws directly from his useful and insightful work. The configuration of the pipeline and the number of participants per sector is shown in Figure 7.1.

Figure 7.1
Western Cape pipeline configuration

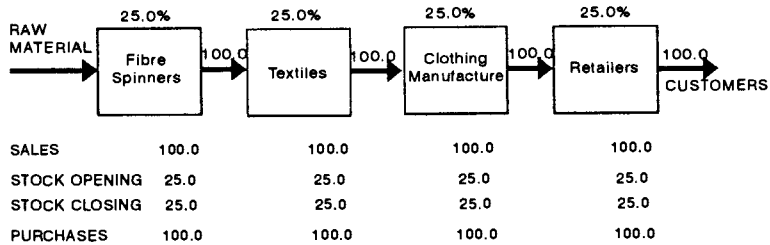


The reasons for the volatility of demand in the textile pipeline are due to two inherent characteristics of the pipeline. They are, firstly, the length of the pipeline characterised by a relatively large number of distinct stages in the transformation of raw materials into saleable goods. The stages of transformation are sufficiently distinct from each other to be regarded as industries in their own right. They differ vastly from each other in terms of capital intensity, technology applied and management imperatives.

Figure 7.2
Pipeline stock effects

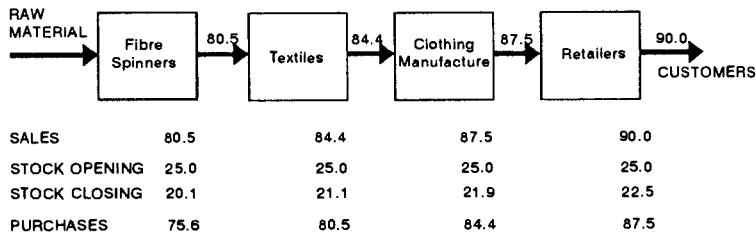
STEADY STATE

Initial Sales = 100.0
O/S as % of Sales = 25.0 %
New Retail Sales = 100.0
C/S as % of Sales = 25.0%



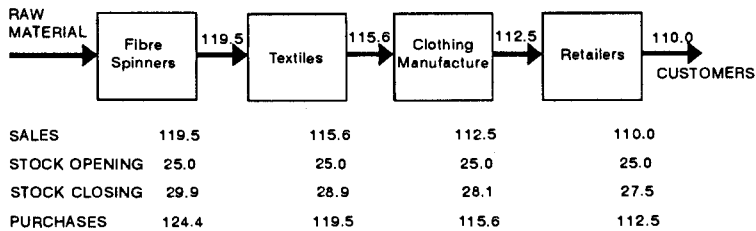
OPTION 1: SALES DROP AT THE RETAIL LEVEL

New Retail Sales = 90.0



OPTION 2: SALES RISE AT THE RETAIL LEVEL

New Retail Sales = 110.0



Source: Hopper, 1990:18

Secondly, the stocks held by each of the stages of production directly cause and determine the extent of upstream amplification in the pipeline. Thus the mechanism which drives the amplitude effect is the stock holding decisions of the participants in the pipeline.

This can best be illustrated by means of an example. Figure 7.2 demonstrates the effect on the pipeline of a change in demand by customers for the pipeline's goods.

It assumes, initially, a steady state in the industry with each component sector holding, on average, 25% of its sales as stock. Option 1 illustrates the effect of a drop in sales at the retail level. As the 10% drop in sales from 100 to 90 works its way upstream, each sector dips into its current stockholdings to meet the lower closing stock requirements. For example, the retailers will hold 25% of their new sales, i.e. 25% of 90. This translates into a closing stock (C/S) of 22,5 units. Thus 2,5 units of the opening stock are consumed and the net amount purchased from the clothing manufacturers is $90 - 2,5 = 87,5$ units. The clothing manufacturers thus experience a 12,5% drop in sales. The same process occurs at each stage upstream. By the time the initial 10% drop reaches the fibre spinning sector, the drop in sales has almost doubled to 19,5%. The more stages there are in the pipeline, the worse this gets.

Figure 7.2 also illustrates in option 2 how an increase in retail sales has exactly the opposite effect. Driven this time by a desire to build up stocks in each sector, an initial 10% rise in sales results in a 19,5% rise in sales for the upstream fibre producers.

Thus the configuration of the pipeline magnifies initially mild changes in consumer demand and amplifies the effect the further upstream one goes.

The pipeline increases the volatility of upstream demand even more if the participants change their stock holding policies in response to unanticipated booms or slumps. For instance, Figure 7.3 indicates the effect if participants reduce their stock holdings from 25% to 20% of sales in response to an unanticipated recession. An initial fall of 10% in retailers' sales is amplified to a drop of no less than 35,5% for upstream fibre holders. Conversely, if, during a boom, participants increase their stocks as a proportion of sales, demand will shoot up the further upstream one goes (Hopper, 1990:17–21).

The question arises how the volatility of the pipeline can be reduced for the upstream textile and fibre producers. The answer lies in improving the efficiency of all sectors of the pipeline by cutting stock levels. Figure 7.4 explains, by means of an example, how it works.

Figure 7.3
Pipeline reaction to an unanticipated economic downturn

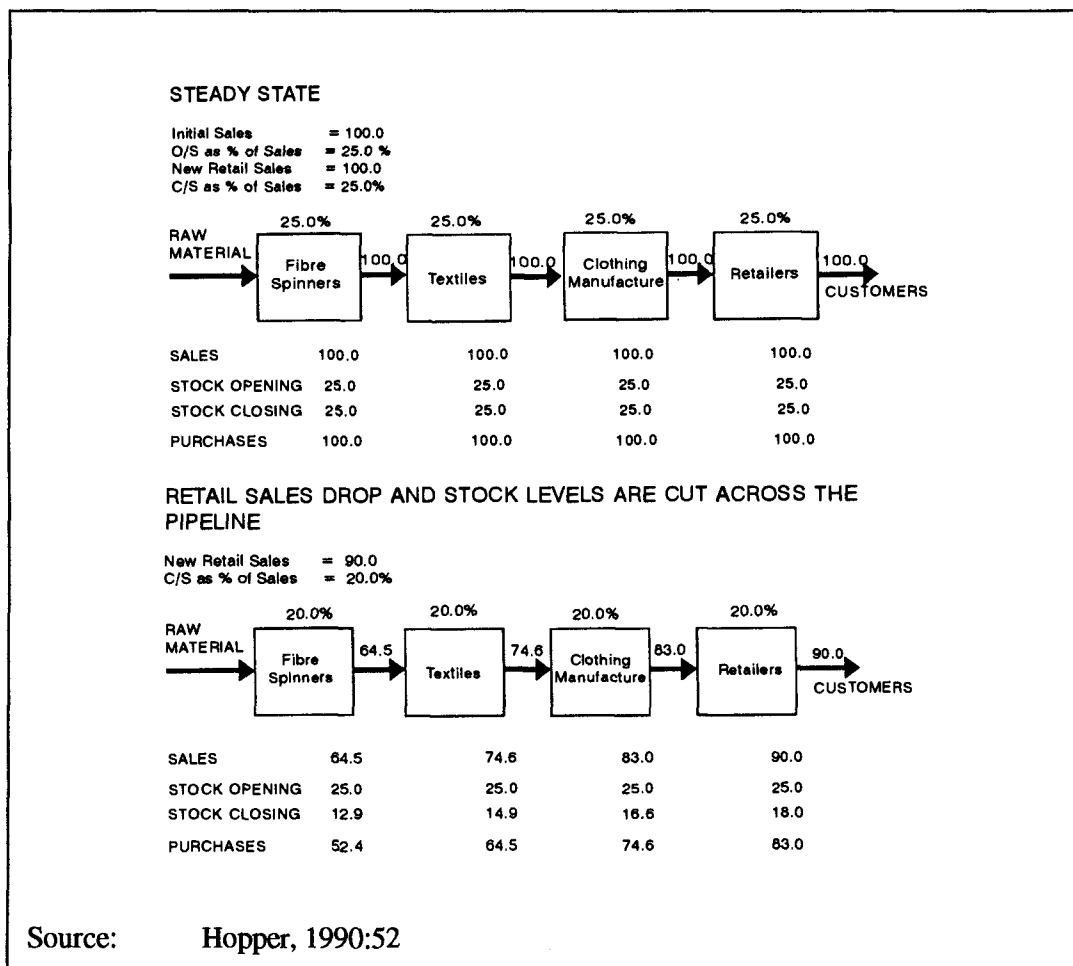
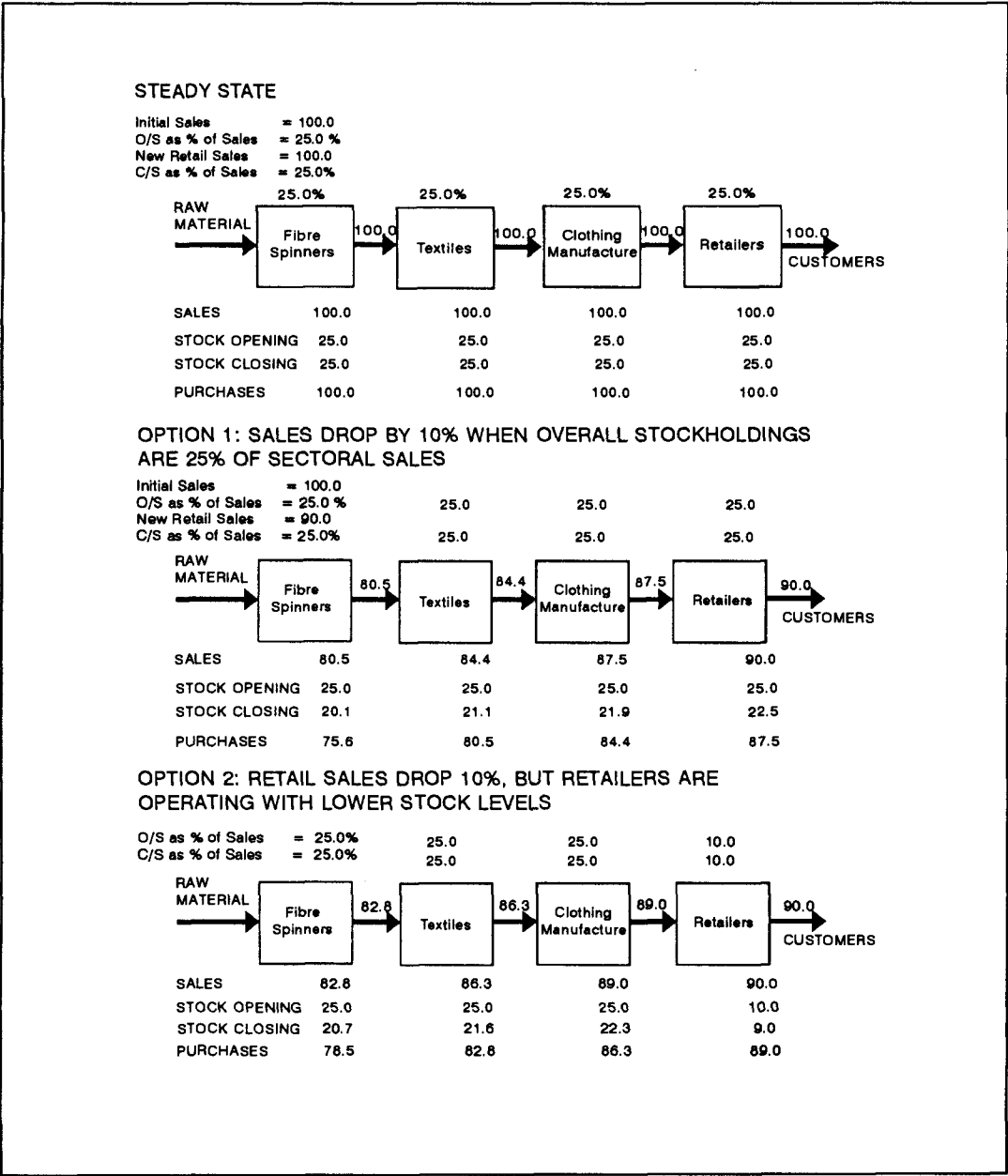


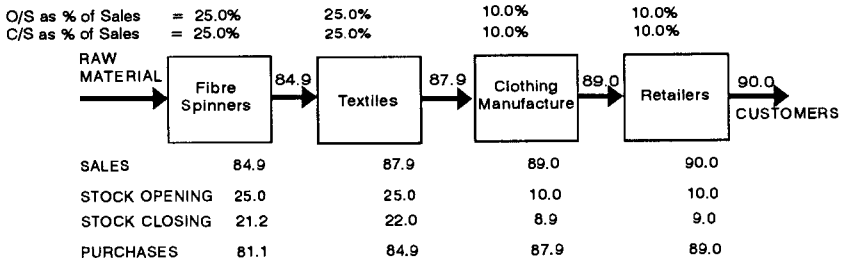
Figure 7.4 shows the effect that the increase of efficiency in various stages of the pipeline has on the volatility of demand. Option 2 shows that, if the retail sector alone cuts stock levels from 25% of sectoral sales to 10% of sectoral sales, then a drop in final retail sales of 10% will lead to a drop in fibre spinners' sales of 17,2%. This is an improvement on the 19,5% reduction (option 1) that would have been experienced if all participants held 25% of sectoral sales as stock.

As more sectors drain the pipeline of stock, so the variability upstream falls. Once all sectors have drained the pipeline of excessive stock by reducing their stock levels from 25% to 10% of sales (option 5), the effect of a 10% drop in retail sales is only a 13,3% drop in sales for the upstream fibre producers.

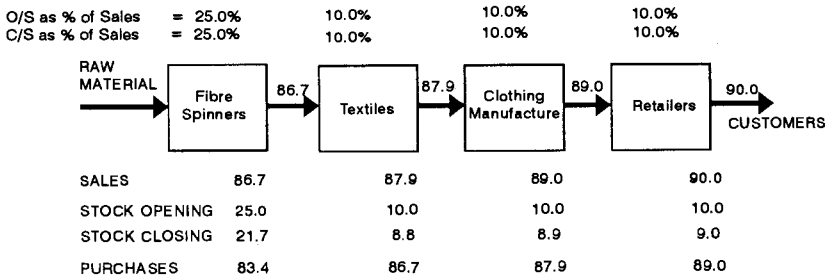
Figure 7.4
Effects of pipeline efficiencies achieved by draining each stage of stock



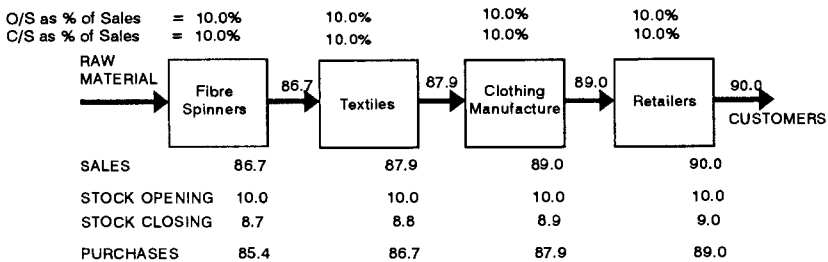
OPTION 3: RETAIL SALES DROP 10%, BUT CLOTHING MANUFACTURERS GET EFFICIENT TOO



OPTION 4: RETAIL SALES DROP 10%, BUT THE TEXTILE SECTOR GETS EFFICIENT TOO



OPTION 5: RETAIL SALES DROP 10%, BUT THE WHOLE PIPELINE IS EFFICIENT



Source: Hopper, 1990:53-54

The example thus demonstrates the necessity for all sectors in the pipeline to improve their efficiency by reducing their stock levels. It also shows that it lies within the power of downstream participants to help improve efficiency by reducing volatility in the overall pipeline (Hopper, 1990:30).

How this increased efficiency can be achieved is of great importance to the South African textile-clothing pipeline. The way it can be achieved is discussed next.

7.5 Increasing efficiency and reducing the pipeline cycle: Quick Response

The exposition on the textile-clothing pipeline commenced by examining the long duration of 66 weeks of the pipeline cycle and the fact that for 55 weeks or 83% of the time the material is not being transformed during which time no value is being added to the material. Even worse, only a small proportion of the 17% work in progress time is spent on actual conversion of the production. In addition, for 83% of the time the stock is adding to cost as storage cost and opportunity cost of the capital tied up in the stock holdings. The study of volatility in the pipeline has also demonstrated that the higher the level of stock is, the greater the volatility in the textile-clothing pipeline due to the amplification effect.

It is therefore important for the survival of all the sectors in the pipeline to increase their organisational efficiency by reducing stock levels and work in progress time throughout the pipeline. Ways in which this can be achieved have been put forward by Alan Hunter who has drawn on five years' experience in helping the USA textile and apparel industries become internationally competitive (Hunter, 1990:i). The following collectivity of techniques which is required and known as Quick Response, is drawn directly from Hunter and Derek van der Riet, a South African engineering management consultant..

Hunter maintains that a firm commitment to change by top management is the single most important step to be taken by any company intent on introducing new procedures, operating philosophies or strategies. Then the obvious point of attack on inventories is duplicate stocks, i.e., finished goods held by the supplier and raw materials held by the customer. There are two parts to this problem: how to manufacture in a more flexible manner so that the supplier can get rid of inventories associated with long runs of individual products and how to persuade the customer not to hold safety stocks, i.e. to adopt a Just In Time supplier relationship (Hunter, 1990:43).

In order to manufacture in a way that enables the supplier to reduce inventories and work in progress, more sophisticated principles and techniques of production management need to be applied. Techniques that have been developed include, for instance, Operations Research, Materials Requirement Planning (MRP), Kanban, and Manufacturing Resource Planning (MRP2) (Hunter, 1990:44).

Hunter also considers an all-embracing change in corporate culture to be necessary. He regards the broader based Quality Management philosophy developed by Deming and marketed as a structured program by Crosby, to be the most successful, but this is disputed. Techniques and mechanics of the Quality process include Statistical Quality Control, systematic Error Cause Removal procedures, formal Problem Solving training, Interruption Free Processing and, above all, a Zero Defect mentality at every level in the organisation (Hunter, 1990:44–45).

Hunter regards certification as central to the operation of Quality Management. It means that suppliers and customers, through partnership programs, draw up agreed on product specifications which allow for certification of the product. Derek van der Riet regards it as essential for the customer to gain satisfactory answers to the following three questions

from the supplier: (1) Do you know my conformance requirements? (2) Can you show that you have the necessary process capability to meet my requirements? (3) If your process capability is less than one, are you getting it up to one? (a process capability of equal to one means getting the conformance requirement wrong only ten times in a million) (D van der Riet, Consultation, March 1993).

Milliken and Company in the USA has quantified the savings to its customers of implementing product certification. It has calculated that, for a customer using a million yards of fabric per year, certification can increase profits by up to \$200 000 and contribute to the contraction of the pipeline at the same time (Hunter, 1990:46).

Furthermore, Quality Management is, of necessity, accompanied by a change to a more participative management style and an increase in employee involvement which results in marked improvement in employee commitment (Hunter, 1990:45).

By employing only the techniques of Quality Management and production management mentioned above, Hunter demonstrates that the pipeline cycle can be brought down from 66 to 46 weeks. To take it a step further down to 21 weeks is more difficult. It requires the full use of available technology, rapid and open information exchange up and down the pipeline, and close, trusting partnerships between suppliers and customers. Hunter also maintains that it needs substantial investment by the retailer and his suppliers in Electronic Data Interchange (EDI) and bar coding equipment as well as in point-of-sale tracking at the Stock Keeping Unit (SKU) level, so that buyers and their suppliers can be kept informed of consumer demand (Hunter, 1990:51).

Focusing only on the textile inventories of textile mills Hunter argues that Quick Response techniques can reduce stocks to two-thirds of their existing level by means of production management techniques and Quality Management alone, and even further down to only one-third of the level if all the other steps are taken (see Table 7.3). Once again the biggest reductions in textile inventories can come from avoidance of duplicate stocks of finished fabric at the apparel customer's plant. The essential ingredient in reducing duplicate stock is information. This includes electronic order and invoicing procedures, shipping status, defect mapping, width and shade data, and playback of the finished apparel sales information. The last-mentioned is of critical importance for the correct scheduling of both greige manufacture and finishing operations (Hunter, 1990:48).

According to Hunter an even greater potential for inventory reductions at the apparel manufacturer/retailer interface exists than is the case for the textile fabrics (see Table 7.3). With the use of sophisticated Unit Production Systems, modular manufacturing, optimal sub-assembly operations, highly engineered manufacturing flow systems with 'intelligent' sewing machines and computer shopfloor controls, what used to take weeks has been brought down to only days or hours to manufacture (Hunter, 1990:49).

It appears that Hunter has omitted two factors from his account. The first is the importance of commitment to Quick Response, and the second is the value of good planning. In a Pilot Project carried out in South Africa it was possible to obtain a 45 percent reduction in the duration of the pipeline without the use of any of the additional technology outlined by

Hunter (van der Riet, 1989:Table 4).

Table 7.3

Quick and potential very Quick Response reductions in pipeline inventories and WIP

Textile Fabric Inventories (Working Weeks)			
	Traditional	Quick	Potential Very Quick
WIP Greige	3,9	2,7	2,0
Greige at Greige	1,2	1,0	0,8
Greige at Finishing	1,4	1,2	0,8
WIP Finish	1,2	1,0	0,8
Fin.Fabric at Textile	7,4	5,0	2,5
Fin.Fabric at Apparel	6,8	3,4	0,5
Total	21,9	14,3	7,4
Apparel & Retail Inventories (Working Weeks)			
Post Cut WIP	5,0	2,5	1,0
Fin.App. at Apparel	12,0	11,1	1,0
Transport to Retail	2,7	1,4	1,0
App. at Retail Distrib. Centre	6,3	1,1	—
App. at Retail Store	10,0	10,0	8,0
Total	36,0	26,1	11,1
Source:	Hunter, 1990:48, 49		

The Pilot Project was carried out by a retailer, garment manufacturer and textile mill. The retailer was totally committed to the project. The managing director gave it his backing in front of about 100 senior and middle management members. A number of people underwent formal training in the techniques of Quick Response, and all involved were very enthusiastic and motivated.

The garment manufacturer that was selected for the Pilot Project had developed short cycle manufacturing capability using the Just In Time philosophy and techniques. The textile mill selected had a reputation for high quality work and had introduced SABS Code 0157, thereby showing evidence of process control ability.

The products selected for the Project were a T shirt and leggings.

In order to determine the pipeline flow rates and capacity commitments a stock model was developed. It was based on four weeks sales by size and colour for the T shirt and leggings. Indexes were calculated to allow for seasonal and promotional influences on the

model, and the model was then made operational.¹ This involved careful timing of the pipeline activities and generation of a style diary. The importance of the style diary was to establish the latest dates for colouring up of each fabric drop (van der Riet, 1989:A3–9 to A3–15).

In addition to the reduction in stock flow times, the Pilot Project also had financial benefits. For the retail company the increase in sales over sales the previous summer for the Quick Response line was 120 percent while a comparable product increased by only 40 percent. The number of stock turns for the traditional line was 6,3, but for the Quick Response it went up to 11,8 thereby increasing the gross margin on return considerably (van der Riet, 1989, untitled mimeograph).

7.6 Economic benefits of Quick Response

While it is clear that the textile-clothing pipeline as a whole will benefit from Quick Response, what are the economic benefits for individual companies in different sectors of the pipeline if they adopt Quick Response techniques?

Table 7.4

Estimated financial improvements from Quick Response (% change)

	Seasonal	Fashion
Reduction Wholesale Price	7	15
Reduction 1st Retail Price	9	13
Reduction Ave. Retail Price	2	6
Increase Pre-Tax Profit		
) Manufacturer	40	40
) Retailer	80	80
Reduction in Assets		
) Manufacturer	0	0
) Retailer	18	18
Increase % Return on Assets		
) Manufacturer	40	40
) Retailer	120	120
Net Cost Improvement (% Ave. Retail)	8	12
Source:	Hunter, 1990:89.	

1. This is a highly simplified account of a far more complex and detailed set of operations.

Hunter has addressed the question of economic returns of Quick Response. In his first set of calculations he omits the costs associated with adding specific technologies on the one hand, and the increases in business volume that stem from the adoption of Quick Response on the other hand. He maintains that neither of these factors is large enough to affect the main thrust of the findings (Hunter, 1990:78).

After extensive calculations using weighted average benefits for the mixes of seasonalities involved, Hunter presents the achievable financial improvements for the manufacturer, retailer and consumer (Table 7.4). It is important to note that the savings that accrue from Quick Response need to be passed on to the consumer if the domestic industry is to become more competitive with imports.

In his second round of calculations Hunter includes investment costs as well as the outcome of higher volume sales. It is based on Quick Response trials by Crafted With Pride in the USA. The trials raised a number of questions including, 'What is the investment pay-off for Basic, Seasonal and Fashion Merchandise?' To provide information to the industry Kurt Salmon Associates and du Pont undertook a series of cost/benefit studies on behalf of Crafted With Pride. Hunter presents their analysis and findings for the economics of a poplin fabric.

Table 7.5

Quick Response investment and returns at higher volumes for a vertically integrated textile mill

	Basic QR II	Seasonal QR I	Seasonal QR II	Fashion QR II
<i>Investments (\$000's)</i>				
Systems	576	1040	1040	1620
Inspect, pack, ship	336	423	423	486
Greater flexibility etc.	—	283	1843	6510
Consulting	340	525	525	690
Total	1252	2271	3831	9306
<i>Returns</i>				
Increased profit (\$/yard)	0,018	0,017	0,020	0,034
Increased profit/yr (\$000's)	2316	2856	3090	4539
Payback (months)	7	10	15	25
Source:	Hunter, 1990:135			

In the first presentation (Table 7.5) it was assumed that the greige mills could expand existing capacity to meet the additional demand. However, in the second presentation (Table 7.6) of the expansion of wet processing capacity, it was assumed that additional investment in equipment was required. (The numerous assumptions which the calculations are based are stipulated in the book and too exhaustive to present here.)

Table 7.6
Investment for QR and additional capacity dyeing and finishing

	Basic QR II	Seasonal QR I	Seasonal QR II	Fashion QR II
Net Sales (\$ millions)	123	137	141	155
Annual Yards	72	78	78	81
<i>Investments (\$000's)</i>				
Additional capacity	—	3007	3007	5520
QR Investment	—	1746	3306	8616
Training, consulting etc.	—	525	525	690
Total	—	5278	6838	14826
<i>Returns (\$000's)</i>				
Increased profit/year	—	2544	2700	3891
Payback (months)	—	25	30	46
Source:	Hunter, 1990:137			

The significance of Tables 7.5 and 7.6 lie in the fact that they demonstrate the greatly enhanced financial performance and increased profit for the textile-clothing supply pipeline. They also demonstrate the acceptability of paybacks on investment. The payback periods range from as short as 7 months in Basic Merchandise up to 46 months in the very capital intensive dyeing and finishing section.

7.7 Quick Response in South Africa

The first concerted effort to apply Quick Response in South Africa took place in 1988 when a Textile Pipeline Workshop was organised and attended by representatives of the textile, clothing and retail sectors. The Workshop demonstrated a willingness by the different sectors to cooperate with each other. No less than six potential pipeline projects were suggested with two of them even specifying targets they wished to achieve in reducing the pipeline cycle. There was also a general consensus that the success of QR in

the South African textile pipeline would be dependant on a retail-driven program.²

However, not much progress has been made in the projects between the pipeline partners even though considerable effort has been made by individual retailers and manufacturers to undertake Quick Response pilot schemes such as the Pilot Project outlined above. The reason why Quick Response in the textile pipeline in South Africa has not succeeded to date has been attributed to retailers by Dr Boer of the NPI without mincing his words.

In the USA the Quick Response programme was initiated and driven by some of the most highly respected textile and clothing manufacturers such as Milliken, Levi Strauss and Haggar Apparel. Retailers are sophisticated and were quick to co-operate in order to gain the financial benefit. In South Africa, the clothing and textile industry leaders have not taken the challenge and clothing retail is controlled by approximately six leading retailers who have on the whole failed to honour the co-operative Quick Response agreements with their suppliers. Quick Response means a partnership and a partnership can only succeed if there is no duplicity. Regretfully, local retailers have not played the game, and as they hold a position of power over the other partners in the textile pipeline, Quick Response has not succeeded in South Africa to date (Boer, 1992b:8).

Although there are notable exceptions amongst retailers (as pointed out above), MPCs consultant, Mr Joop de Voest, has pointed out other problems with garment retailing in South Africa. In his experience as consultant to clothing and textile companies, the retail chains engage in such high mark-ups that they stifle demand for the products of textile and garment producers. He cites as an example two clothing factories that sold certain garments for R120 to R180 to chain retailers which marketed them for between R700 and R800. Upon his recommendation the factories found alternative retail outlets where the garments marketed for between R300 to R400. Once the prices fell the factory demand for the garments rose again. He also maintains that cost savings made by textile and garment factories are not passed on by major retailers to the customers (de Voest, telephonic discussion, 2 April, 1993).

The observations of messrs de Boer and de Voest stress the immense importance of a filiere approach in developing a strategy for the textile industry as well as the immense significance of retailers in the filiere. The scope of this study is unfortunately limited to the textile industry, but there clearly is a need, when developing an actual industrial policy, to adopt a filiere approach that includes retailing.

Another very important factor in adopting a Quick Response in the textile industry in South Africa is the need for industrial stability. An industry that is characterised by frequent or unpredictable strikes and work stoppages would have difficulty adopting Just In Time methods of production in view of the uncertainty the instability creates. It then makes more sense to adopt a Just In Case approach with large amounts of stock. In all this the roles of the union, company management, and the industrial relations system are all crucial.

SACTWU, as the dominant union, has an approach to honour agreements reached with management and not to engage in wild-cat strikes. The industry and union's record in

2. Recommendations made by the Work Groups at the Close of the Textile Pipeline Workshop, undated mimeograph.

industrial conflict reflects this approach. The union does however seek to ensure good wages and working conditions for its members and where these do not exist it uses its full bargaining strength to try and achieve them. This does mean that the union could enter into strikes if all attempts at resolving the conflict through negotiation and mediation fail. But the build up to a strike takes place over a long time period and would give employers ample opportunity to build up stocks that may be required during the strike.

On management's side a commitment to sound industrial relations, good wages and working conditions would help to ensure stability in their companies and the industry as a whole. To the extent that they are achieved, Quick Response becomes a viable option within the textile industry and the filiere.

However, the role of SACTWU, workers, and the industrial relations system in the formulation and implementation of an industrial strategy goes beyond Just In Time and Quick Response. The next chapter examines this wider role.

Chapter Eight: The role of SACTWU in Industrial Strategy and Training

8.1 Outline of the chapter

The role of labour in the development as well as implementation of an industrial strategy in the textile industry is of crucial importance. Without the participation of labour, especially organised labour, it does not stand a chance of succeeding. On the other hand labour has an immensely important and constructive contribution to make to the whole process. This chapter therefore commences by focussing on the approach of organised labour towards the formulation and implementation of an industrial strategy in the textile-clothing pipeline.

SACTWU, through a process of mergers starting in 1987, has grown into the dominant union in both the textile and clothing industries. As such it has a concern for the welfare of both the clothing and textile industries because its members' livelihoods depend on the continued economic viability of both industries.

This chapter accordingly focuses exclusively on examining SACTWU's approach towards industrial policy formulation and implementation. From this it emerges that the union has placed priority on attaining the centralisation of collective bargaining in the textile industry although it strongly supports worker participation and democracy as well.

The union also has a concern about the attainment of skills by its members because better skills enable them to earn higher wages. To this end the union appears to be adopting COSATU's approach towards worker training and its linking of skills and wages. The approach is known as the wage-skill nexus.

The chapter therefore moves its focus on to training in the textile industry. It commences by presenting the findings of efforts to assess the training needs in the industry and describes the competency-based training of apprentices which was introduced by the Textile Industry Training Board (TITB). Thereupon COSATU's approach towards the training and education of workers is presented and found to be very similar to that of the TITB in that they are both competency-based. What appears to emerge from the wage-skill nexus is that it does not link the workers' remuneration to their actual performance in the workplace.

This observation, plus the risk that centralisation of collective bargaining can lead to the bureaucratisation of the union, leads to a suggestion for the union to give priority of place to worker participation to which it is already committed. By so doing the union would help empower workers to make their enterprises internationally competitive. In the process workers will improve their own and the companies' performance thereby laying the foundations for higher wages for themselves.

Finally, in support of the argument the results of a survey amongst a sample of textile workers in the Western Cape is presented. The survey shows that workers are prepared to share responsibility for improving the economic performance of their firms provided they are adequately rewarded and trained for it.

Having presented a summary of the chapter and the link between the various sections in it, the full details are presented next.

8.2 SACTWU's approach to Industrial Strategy Formulation¹

(a) Basis of SACTWU's involvement in Industrial Strategy

SACTWU's involvement in the formulation of industrial policy has arisen primarily from their concern with their members' interests. For them it is a logical extension of their struggle to secure better wages, working conditions and job security for workers in the textile industry. These aims underpin their proposed strategy for the textile industry, namely to create a long-term growth path for the clothing and textile industries that will lead to job creation, improved wages, and greater skills, and which will also allow for the development of competitive, dynamic enterprises. For the union the key to this strategy is that it is both long-term and industry-wide. They argue that these perspectives have been absent from employers' strategies, which have tended to focus on sporadic lobbying by first textile manufacturers and then clothing manufacturers (or vice versa) around the issue of tariffs.

As a national industrial trade union that spans both the clothing and textile industries, in both of which it has extremely high levels of membership, it believes that it is critical to intervene in order to correct the limitations of capital's vision for the future of the industry, and as far as possible supplant that vision with one of its own.

1. This section is almost entirely based on an interview conducted on 8 March 1993 with Ebrahim Patel, Assistant General Secretary of SACTWU, by Shane Godfrey and myself. I am extremely grateful to Shane for all the assistance he has given me in my research and in the drafting of this section.

However, its mode of intervention, says Patel, is as a democratic trade union. This means that industrial strategy will be debated within union structures and the trade union representatives will be accountable to those structures when they participate in the forums that have been set up to devise a development programme for the industry. It also means that the union can revert to its membership for industrial action or industry-wide campaigns to support its proposals and arguments at these forums.

For SACTWU thus, by its very nature as a trade union, industrial relations and industrial strategy are inextricably bound together in the process of participation in the development of an industrial policy for the clothing and textile industries.

(b) The establishment of forums to plan long-term strategy

In September 1992 the Department of Trade and Industry established two forums, a Panel and a Task Group, to advise the government on long-term strategy for the textile and clothing industries after the recommendations of a previous forum (The Hatty Committee) had run aground. The smaller of the two, the Task Group, was given the responsibility of meeting regularly and drafting a report containing recommendations. It has to consult with the Panel, which has broad representation from the textile-clothing pipeline. The main task of the two forums was 'to formulate a strategy with achievable recommendations based on sound economic principles, for the restructuring required to develop clothing and textile industries that are *viable and competitive*' (NCF, 1992:29).

SACTWU, as a key stakeholder, was represented and active in the forums. Their key task, according to Patel, was to concentrate on the fundamental restructuring of the industry rather than to focus on the tariff issue. The grounds on which the union opposed focusing on the tariff issue gets to the heart of the union's perception of an industrial policy. Patel articulated it as follows:

The real debate in the industry is not whether to promote the clothing industry at the expense of the textile industry, or to protect the textile industry with a loss to the clothing industry. That is not the real debate and only comes about when the starting point is tariffs. The real debate is how to restructure both the clothing and textile industries in a manner that provides for strong enterprises, sustainable growth, and highly competitive industries with the maximum labour-absorbing capacity. So how the issue is posed defines the debate.

The union is aware that restructuring will have differing implications for different parts of the clothing-textile pipeline. In certain parts of the textile industry it could mean a high tech industry with a relatively low labour-absorbing capacity, but in other parts, like the clothing industry and sections of the textile industry, it could mean a strategy generating large-scale employment.

(c) Levels of engagement

Right from the start of the union's involvement in the formulation of a development plan for the industry it has brought shop stewards into the debate within the union. Patel explains what the union's thinking is on this point as follows:

Sometimes the debate is posed that national accords are for the union leadership and that shopfloor restructuring is for the shop stewards. We think that is the most dangerous formulation that one can have because on the one hand for national accords to stick requires the support of workers as a whole, and hence you have got to make the worker leadership at the factory-level part of that and they have got to understand the issues. And secondly, for factory restructuring to take place on terms that will favour workers requires that the union's national leadership must take an active interest in plant issues, and not only concentrate on the macro picture and leave shop stewards who have had less opportunity of thinking through the challenges and the dangers of restructuring to manage the plant ones.

The above quote raises the issue of the level at which the trade union engages in industrial strategy and improving the performance of the industry, and the effect that traditional industrial relations issues will have on that engagement. Patel believes that engagement must take place at both the national level and at plant-level. Both are seen as equally important, but he argues that the national level has to take precedence at this point in time:

We have got to reach the national agreement that sets the terms and the framework for what is permissible and what are the parameters and what are the rewards of shopfloor transformation. Then the detail of what needs to be done at factory X can only be done at factory X. . . One wouldn't see it as two rigid stages that you first fix up the national and then you go to the shopfloor, but in emphasis and direction the union is seeking first to reach the broad accord at national level, on the understanding that if that is not going to be reached there is going to be no purpose or value in seeking shopfloor transformation because you won't have the infrastructure in place that will allow the shopfloor to feed into it and to draw from it.

Patel goes on to emphasise the importance of plant-level engagement by stating that he thinks 'that an incredibly large measure of the productivity gain in our industry is going to come about through shop floor transformation, rather than only through the macro picture'.

By engaging at both levels the union believes that it will be able to influence the particular form that the development of the industry takes, and that it will thereby achieve two things. Firstly, it will contribute to the growth of the industry, which will create jobs; and secondly, workers at plant-level will be empowered by their engagement in performance issues:

We would want a growth strategy that systematically empowers and assists workers. Empowers them through re-defining shop floor relations – its not just about getting workers to be multi-skilled as an example – its about re-defining power relations on the shop floor. . . So the broad framework is the prerequisite for shop floor transformation, but shop floor transformation remains an important engine of productivity gains and worker empowerment.

(d) The process of involvement and the implications for industrial relations

Patel argues that the union must build on its organisational strengths when it begins with the process of involving workers at plant-level in industrial policy issues. He identifies two strengths that will form the basis of this process. The first of these strengths is campaigning, which the union has in the past successfully directed at distributive and consumption issues, e.g. the Living Wage Campaigns. Patel believes that in future campaigns will have to focus crisply on specific industrial strategy issues to bring the mass of workers into the arena.

The second strength identified by the union is its shop stewards who, Patel argues, have high legitimacy on the shopfloor, and who have gained valuable skills over time. The union believes that shop stewards are going to play a critical role in shopfloor transformation. However, this will mean a considerably expanded role for shop stewards beyond their existing focus on disciplinary concerns, and it will require a concerted training programme to equip them with the necessary skills. To this end the union is introducing a two day training course on industrial policy that it envisages for all its 3000 shop stewards. The course will focus on both macro policy issues and plant-level issues.

In addition, the union aims to introduce industrial policy issues into its programme of action. This means that these issues will be put onto the agenda of regional congresses of the union for discussion and debate. Following on from this is the need to project the issue of industrial policy as a legitimate worker concern. This will involve using the union's newspaper to inform and educate workers. Patel is aware of the challenge that this poses but argues that:

... we must not have the attitude that industrial policy issues are too complex for workers and in that way chase it off the pages of our newspaper. The challenge is to find a way to put it so simply without losing its subtleties, that people can read it and understand and be interested.

The union's aim is to 'constantly raise industrial policy issues so that the broad lesson that the future of our industry is also the responsibility of workers starts to become part of the daily discourse, part of the psychology of every SACTWU member'.

Finally, the union aims to restructure the existing collective bargaining arrangements and agreements. For the union this means a national centralised bargaining structure and a revision of certain aspects of the collective agreements. However, Patel argues that this collective bargaining strategy needs to be complemented by a union-driven industrial strategy:

There is a fallacy that says that through restructuring your collective bargaining you can get growth in your economy. That is nonsense – you can't have a growth strategy that is determined by collective bargaining. You need an industrial policy to get growth, but your collective bargaining is an element that can contribute or retard growth. So we must see all the time how do we enhance the economic growth elements of your collective bargaining agreements.

He cites the grading structure in a collective agreement as one factor that 'can either be one that promotes complacency and inertia and a lack of dynamism' or it can be one that rewards competence, training and skills. A particular type of job grading structure can therefore provide workers with an incentive to use their skills. This is one way in which collective bargaining can contribute to a skills-driven growth path for the industry. But to have skills in the industry there is also a need for training.

8.3 Training needs in the textile industry.

What are the training needs in the textile industry? Two surveys were conducted to establish what the needs are, one by the National Productivity Institute (NPI) and the other by the Textile Industry Training Board (TITB). The former tended to concentrate on the training needs of management, supervisors, artisans and technicians while the latter looked at the training needs across the industry as a whole.

The TITB conducted a Training Needs Survey Questionnaire and received responses from 31 companies representing almost 32 000 employees in the industry. The companies ranged in size from 216 to 2686 employees and covered a wide range of textile products. The Survey can therefore be regarded as fairly representative of the textile industry as a whole. Although the date is not specified, the survey was probably conducted in 1990.

Table 8.1
Formal training – highest qualification

Training	% of Total labour force
Miscellaneous	38,5
No formal training	24,9
Std 8/matric	18,5
In-service	14,7
Technical college	1,4
Technikon	0,9
Overseas	0,8
University	0,4

Source: TITB, 1991.

Table 8.1 represents the formal training and highest qualifications attained by employees in the survey. The largest section (miscellaneous, 38,5%) refers to employees for whom no records of their skill level were kept. It is probably not wrong to surmise that this group constituted largely unskilled and untrained workers. The second largest section (24,9%) had received no formal training. Hence 63% or almost two-thirds of the labour force were probably unskilled and untrained. On the other hand less than one-fifth of employees had std 8 or matric while 15% had received in-service training. But the proportion of employees who had received technical or tertiary education and training were extremely small. All told they added up to only 3,3% of the labour force (TITB, 1991:5).

The education and training profile of employees in the textile industry thus reveals a largely untrained labour force with a very small proportion possessing specialised technical training or education received outside the workplace.

The Survey also revealed that there was a shortage in the availability of trainers. Of the 31 companies surveyed there was one personnel manager for every 1000 workers and one training manager for every 1800 workers. Anyone available who could offer training would have to cater for about 400 people and the load for available training supervisors was 2000 trainees per supervisor. Training provision in terms of human resources available inside companies was thus also found to be inadequate. Most companies also appeared not to evaluate the effectiveness of the training they provided (TITB, 1991:8-9).

With the aid of the NIPR the TITB grouped the training needs from 1988 to 1994 as reported by the companies into an order of relative importance (TITB, 1991:13). It is reproduced in Table 8.2.

Table 8.2
Relative importance of training needs

Training needs	Relative importance
Operator Skills	100,00
Various on-the-job operator skills	89,45
Tex machine-specific skills (Picanol, Airjet, Ruti, Sulzer)	5,72
Tex task-specific skills	4,83
Production Management Skills	31,97
Process managers	9,86
Dye chemical technologists	8,01
Spinning technicians	4,86
Weaving technicians	4,53
Finishing technicians	3,13
Cloth designers	1,58
Supervisory skills	16,52
Production supervisors	9,82
Industrial relations	3,43
Inter-personal relationships	3,01
Cultural understanding	0,26
Production decision skills	14,40
Quality improvement	6,13
Productivity understanding	3,69
Production planning	3,55
Performance appraisal	0,89
Costing and estimating	0,14
Management decision skills	8,98
Financial control system analysis	3,39
Strategic planning	2,95
Marketing programs	2,33
Sales promotion	0,31
Engineering Skills	7,40
Electronic technologist	5,13
Artisan fitters	1,07
Mechanical technologists	0,80
Artisan electricians	0,40
Source:	TITB, 1991.

It thus appears that the overwhelming training need as observed by management in the industry was for short courses providing various on-the-job operator skills.

The National Productivity Institute (NPI) was commissioned to undertake a study of human resources in the textile industry on issues affecting the industry's ability to be globally competitive. Its terms of reference included the identification of key skills within the industry, the current and future areas of skill shortages, and an evaluation of different options available to satisfy the industry's demand for appropriate human resources. While the NPI's subsequent report (Riley and Cillié, 1990) did not fulfill its terms of reference, it does contain useful and insightful information about the human resources in the textile industry. Once again the date of the data was unspecified, but it was probably 1989.

Table 8.3
Racial composition of labour force

Management	White	86%
	Asian	8%
	Coloured	4%
	African	2%
Artisans	White	65%
	Asian	20%
	Coloured	12%
	African	2%
Technicians	White	52%
	Asian	24%
	Coloured	16%
	African	8%
Supervisors	White	33%
	Asian	17%
	Coloured	24%
	African	26%
All workers	White	3%
	Asian	13%
	Coloured	17%
	African	67%
	Male workers	49%
	Female workers	51%
Total number of companies in sample		17
Total employees		13876

Table 8.4
Formal training and course attendance:

Percentage with:	Management	Supervisors	Artisans	Technicians
Degree	22%	2%	0%	1%
Technikon Diploma	17%	6%	18%	1%
Higher National Diploma	15%	6%	20%	1%
City and Guilds Certificate	12%	2%	2%	2%
Institute Membership, e.g. ATI, LTI	20%	2%	0%	2%
Other recognised qualification	11%	16%	21%	18%
Percentage having attended:				
Machine maker's courses	14%	6%	11%	41%
NPI	6%	0%	0%	0%
PMI	7%	1%	0%	0%
CSIR (SAWTRI)	1%	1%	0%	7%
SABS	7%	2%	0%	0%
Consultants	15%	1%	0%	0%
NOSA	30%	27%	8%	26%
Others	19%	13%	1%	28%
In-house certified courses	21%	36%	11%	56%
Companies in sample	13	13	13	13
Average years in job	5	7	8	9
Average years in company	10	13	7	15
Average number of subordinates	37	19	2	5
Source: NPI, 1990				

Tables 8.3 and 8.4, taken from the report, present the characteristics of the human resources in the textile industry. Table 8.3 presents the racial composition of the labour force by occupational level. It shows that the textile industry has a racial composition typical of South African manufacturing industry as a whole: Whites dominate the managerial, artisanal and technical posts while Blacks dominate the unskilled occupations in the industry. Table 8.4 shows that no less than 97% of management had some formal training, but it is unclear what proportion of it constituted specific training in textile management and textile manufacturing processes. It also shows that while 61% of artisans had undergone formal training only 34% of supervisors and 25% of technicians had one or other recognised qualification (Riley and Cillié, (1990:34–39).

In pulling together its findings the NPI Survey found shopfloor and supervisory staff to have relatively low educational attainments. It also gained the impression that top management of companies in the textile industry consisted mainly of immigrants with high technical and managerial skill. They were however retiring over the next 5 to 10 years and the companies did not appear to have personnel with the appropriate skills to replace these top managers when they were due to retire.

The NPI Survey concluded that the primary and basic needs in human resource training were:

- to improve substantially the number of technologists and technicians;
- to improve the basic literacy and numeracy of the work-force;
- to improve the effectiveness of supervisors and managers to enable productivity improvements to be sustained;
- to upgrade the effectiveness and skills of middle managers to enable them to fill the posts of top managers who were due to retire in 5 to 10 years;
- to shift managerial thinking beyond the requirements of the South African market to those of both a South African and global market (Riley and Cillié, 1990:3).

8.4 The provision of training in the textile industry

There are a variety of ways and institutions through which training is provided for employees in the textile industry in South Africa. The forms it takes include:

- in-house training by companies;
- apprenticeship training by companies accredited by the TITB;
- textile design training by several Technikons;
- training of textile technicians by Natal Technikon;
- a course provided by the South African Dyers and Finishers' Association (SADFA) at the Natal Technikon;
- a course provided by SAFTO;
- courses provided by the Division of Textile Technology (Textek) of the Council for Scientific and Industrial Research (CSIR) in Port Elizabeth;

In addition there are informative monthly meetings held by SADFA and the Textile Institute (TI) in various regions in the country.

In spite of the variety of forms, education and training provision in the textile industry is in fact very thin on the ground. The most ambitious and latest training to be introduced is the apprentice training scheme of the Textile Industry Training Board (TITB). It is also the first ever artisan training provided for textile workers in South Africa. The scheme is examined next.

(a) The TITB's competency-based apprentice training scheme

The TITB is the governing body of the Textile Industry Training Scheme and is constituted in terms of the Manpower Training Act. The Training Scheme was officially published in the Government Gazette in December 1989 (Nagel, 1990:18,21). It is based on competency-based modular training (CBMT). The characteristics of its principle components are as follows:

- Competencies which are descriptions of job tasks that produce results that can be observed in the form of a product, service or change in the working environment.
- The job tasks are one that employers are prepared to pay.
- Each competency has a number of clearly definable procedural steps which require knowledge and skills to perform.
- The focus of the system is on the mastery of competencies against pre-set performance standards (Nagel, 1990:1).

Tests are primarily performance based. Theoretical tests are only designed to assess knowledge that is difficult to incorporate in the performance test. An important feature of the CBMT system is that an apprentice is not permitted to proceed until he or she has mastered the module on which he/she is currently being trained (Nagel, 1990:2).

Minimum age and educational qualifications have been laid down for commencing an apprenticeship. The minimum age is 16 and education is a Standard 8 with passes in mathematics and science or a National Technical Certificate, Part II (N2).

The Training Scheme is still developing trades. By August 1992 it had succeeded in having six trades declared designated trades in the textile industry; four of them were for weaving machine mechanics (on shuttle, rapier, projectile, and airjet looms), one for long staple spinning machine and another for weft knitting machine mechanics (TITB, 1992). Accredited companies could formally apply to the Training Board to indenture apprentices in these trades. Companies become accredited once they meet the required standards as evaluated by the accreditation committee appointed by the Training Board.

In August 1992 the accredited companies and the designated trades in which they could train apprentices were the following:

Gelvenor Textiles	weaving
David Whiteheads	weaving
Industex	weaving
SA Fine Worsted	weaving and long staple spinning
Frame Textile Corp.	weaving
Mooi River Textiles	weaving
Da Gama Textiles	weaving

(TITB, 1992)

8.5 COSATU's approach to training and skills formation: the Skills-Wage Nexus

Since SACTWU's approach to training is taking place within the broad policy framework laid down by COSATU, it is relevant to discuss and clarify COSATU's approach to worker training. There are many ways in which COSATU's approach to training coincides with that adopted by the TITB, but there are also some significant differences.

The area in which there is remarkable overlap between COSATU and the TITB is in competency-based training. COSATU's approach has been well expressed in a summary written for SACTWU.

Training should be competency based in the sense that the training must focus on outcomes (the ability to do the job effectively) rather than traditional methods of training which focus on inputs.

A competency based training system comprises two components:

instruction which is characterised by the precise definition of skills to be achieved both on and off the job to specific standards and under specified conditions which becomes the performance objectives for the skill formation process; and assessment and certification of competency, related to both on and off the job components of skill formation with performance as the basic criterion (Machin, 1993:3).

The above quote makes it clear that there is a remarkably high degree of overlap between the TITB and COSATU's approaches towards skills training. They both support competency based training which requires certain skills to perform certain tasks to previously specified standards, and the competencies are to be certified by an accredited body.

There are however also some important differences between COSATU's approach and the TITB's policy. The most important differences are the following:

- (1) the TITB training is specifically *industrial* training for apprentices in order to qualify as artisans, whereas COSATU advocates a broad based training, from language and communication skills to scientific/technological understanding, in order to 'enable

individuals to develop skills which are required for all types of work' (Machin, 1993:4-5). In short, COSATU wants the Industrial Training Boards to provide education as well, especially Adult Basic Education, and that they should become known as *Industrial and Education Training Boards* (COSATU, 1992:para.1.3).

- (2) The TITB system of accreditation of companies means that only employees from those companies and with the necessary education qualify for artisanal training, whereas COSATU wants the training to be available to all workers.
- (3) Whereas the end-goal for the TITB is qualification as an artisan, COSATU proposes that the competencies be linked to a new skills-based occupational grading system which promotes career path advancement for employees.

There are also differences between COSATU and the TITB over the question of representation on the Training Board. COSATU's approach is for the union(s) in the industry to have equal representation with management on the Training Board. The TITB however only offered the unions in the textile industry one representative on the Board (Interview, R Alexander and W van der Rheede, SACTWU, 6 April 1993).

The close link that COSATU draws between training and occupational grading has wider ramifications in that it also links skills to wages. The way this is to be done is, firstly, to develop a skills competency grading system. A wage level is then determined for each of the new grading levels. Each employee is then placed in one of the grading levels to which a specific wage is attached. Hence there is a direct link between the skill of the employee and his or her wage level. This system of tying wages to skills is called the skills-wage nexus.

The aim of the skill-wage nexus is to help workers improve their standard of living:

The objective then is to improve the skills of workers so that they can get increased wages and improve their standard of living. . . .

It is possible then not only for workers to get an across the board wage increase annually which is negotiated by their union, but they can also have access to a second wage increase by being regraded on the basis of their higher skills (Machin, 1993:2-3).

COSATU's skills-wage nexus ties the level of wages exclusively to skill competency:

Provided you can demonstrate that you can competently perform the job to the required standard within specified conditions you will be regraded at a higher level (Machin, 1993:2).

A limitation of COSATU's wage-skills nexus approach is that it does not directly address the relationship between wages and skills on the one hand and productivity and economic performance on the other hand. It is true that the wage-skill nexus links the wage to a skill level which is based on attaining specific levels of performance. But the assessment takes place by an accredited body outside the workplace. Thereafter this approach appears to leave the responsibility for achieving the same level of performance from the employee

entirely up to management. At the very least, the COSATU documents are completely silent about the performance of employees in the workplace.

There is a danger that the wage-skills nexus approach can become a very formalistic and static approach. Skills, and hence wages, will become dominated by certification as the attainment of a certificate showing that the employee has reached the next level of skill will immediately bring about a rise in the employee's wage regardless of whether that employee's contribution in adding value to the enterprise has changed or not. Such an approach is bound to work to the detriment of the economic performance of the enterprise and undermine efforts to survive not to mention becoming internationally competitive.

There is another reason why it is important for COSATU to be concerned about the productivity of labour. Greater productivity is often seen by labour as only enhancing company profits, which it does do. However greater labour productivity also increases workers' wages. In fact, it is only highly productive enterprises that can sustain the payment of high wages to their workers. Enterprises with low levels of productivity can only afford to pay workers low wages over the long run. It is therefore in the interest of both management and labour to ensure that enterprises have high levels of productivity.

It is therefore necessary for COSATU to take its approach to wages, skills and training a step further to include the economic performance of the enterprise as well. The next section argues that the best way this can be achieved is to incorporate worker participation into the approach.

8.6 The case for worker participation

The starting point of my argument is the study done by Blinder and others in which they tried to determine the form of wage payment (the 'compensation scheme') that would contribute most to enhancing productivity, and hence to economic performance of enterprises. Their finding is so important that it is worth quoting:

A major finding of all the papers in the book – one that was not expected when the book was initially planned – is that whatever compensation scheme is used, meaningful worker participation, beyond labour representation in boards of directors, enhances productivity (Blinder, 1990:vii).

Blinder is not alone in coming to this conclusion. In fact there is a vast body of literature that comes to the same conclusion, namely that meaningful worker participation in the workplace and beyond enhances productivity and the economic performance of the enterprise. It also reduces worker alienation which generally has a beneficial effect on workplace performance. Numerous examples and references – too many to go into here – are cited in the book by Hodgson (1984:135–46). He demonstrates however that:

There is overwhelming evidence that increased worker participation reduces work alienation and raises productivity (Hodgson, 1984:135).

On the macro-economic level worker participation has also proven itself. The Federal Republic of Germany's system of co-determination is effectively a system of co-management by labour. Since the early 1950's the German economy has become one of the world's strongest economies, an achievement it has sustained for four decades (See Maree, 1992).

Closer to home, a company operating in Atlantis in the Western Cape, Cape Cabinets, which produces wooden TV and music centre cabinets, started being threatened in 1983 by imported plastic components. In response it switched from autocratic management to a participative management style. The result was an increase in labour productivity of 26 percent while its annual stock turnover increased from 4,2 to 7,8 over the period 1985–1987. As a result it won a National Productivity Award in 1988 (Cape Cabinets, 1988:2–7; Jones and Maree, 1989:10–14).

The implications of these findings are that *all* the stakeholders in the textile industry stand to gain from the introduction of worker participation systems in textile companies. Workers could find themselves more fulfilled, working conditions could improve, productivity and the quality of the products could increase, heightened productivity could potentially lead to higher profits, higher wages and lower prices.

In order to introduce meaningful worker participation both management and SACTWU would have to support it as either of them has the power to block its development on the shopfloor and much more would be achieved if they both gave it their strong support.

In view of the importance of achieving international competitiveness as soon as possible, the introduction of worker participation schemes in the textile industry should commence sooner rather than later. It is my contention that the union should commit itself to worker participation in the industry at the enterprise level as soon as possible. It should then provide organisers and shop stewards with comprehensive training on all aspects of worker participation including its potential and pitfalls. Management of textile companies should also familiarise themselves with the principles and techniques of worker participation and enter into consultation and negotiation with SACTWU about the introduction of worker participation schemes in their enterprises. Although there are bound to be hitches in the process of introducing worker participation systems, the outcome would most likely be to the benefit of all the parties in the textile pipeline.

8.7 Survey of Western Cape textile worker attitudes

A survey conducted among textile workers in the Western Cape provides an indication of worker attitudes towards participation in the workplace. It was conducted in the last quarter of 1992 from a random stratified sample of fourteen companies in four districts in the Western Cape: Cape Town, Bellville, Atlantis and Paarl. The companies range from small (less than 200 employees) to large (more than 400 employees) and were engaged in

spinning, weaving, knitting, dyeing and finishing of apparel, household and industrial products.²

One hundred employees were interviewed. Of these 93 percent were Coloured and 7 percent African; 59 percent male and 41 percent female; 60 percent were workers, 29 percent shop stewards, and the remaining 11 percent supervisors. Fifty one percent of all interviewees were operators. The educational level of the respondents was quite high in that 82 percent had received at least a high school education. Ninety percent of the employees interviewed belonged to a union. The overwhelming majority (87 out of 90) belonged to SACTWU. Hence 87 percent of employees interviewed were SACTWU members.

In response to the statement, 'to be able to export and remain competitive with other manufacturers many textile manufacturers think that overall efficiency in the textile industry needs to improve', all the employees interviewed (100 percent) said they would support improving the economic performance of their firms. Sixty one percent said their support would be very strong while a further 37 percent would give strong support. Only 2 percent indicated a weak support. Furthermore, 91 percent were prepared to assume responsibility for their firm's economic performance. This includes sharing responsibility for reaching production targets and implementing quality production. What workers expected in return for their commitment to improving quality and productivity were, in order of importance, more money, training and a better relationship with management based on consultation and communication.

Sixty nine percent of employees interviewed considered the level of quality of their company's products to range from high to very high. The six factors (in descending order of frequency) which they considered to account for the high level of quality were: (1) workers' performance has improved; (2) high yarn quality; (3) reliability of machines; (4) workers are quality conscious; (5) high co-operation between workers and management; and (6) new machines. The five most frequently mentioned areas where they thought the greatest improvement could be made to the level of quality were: (1) training of workers; (2) improving raw material quality; (3) management's attitude to workers; (4) quality control and checking; and (5) machine reliability and maintenance.

Of the employees interviewed 81 percent had their wages and working conditions bargained at the plant or firm level and 17 percent on an industrial council. On the issue of where productivity issues should be bargained, 66 percent preferred the plant, 15 percent industrial councils, and 18 percent did not know. The main reasons advanced for preferring plant level were that conditions were different at each company and that workers and management know what is happening at the plant.

2. The survey was conducted by Nalin Nair, research trainee of the Industrial Relations Project in the Department of Sociology. It was designed to supplement the research work on textiles for the Industrial Strategy Project.

Little consultation of employees on investment in new technology takes place. Out of 33 respondents, 22 were not consulted about the purchase of new machines, only 1 was consulted about its implications for the production process, while no-one was told what the implications were for existing or new jobs.

In response to the question whether the union has discussed issues of participation and responsibility before, 28 out of 38 respondents said 'no', while 22 out of 28 thought that workers and union officials should begin such discussions.

In conclusion, although the survey is focused on SACTWU members in the Western Cape, the findings nevertheless suggest that the union's members are prepared to take up worker participation in the workplace in order to improve the economic efficiency and performance of the companies they work in. The experience of SACTWU in running the Zenzeleni Clothing co-operative has most probably also given the union experience in running an enterprise that can be put to good use in training and preparing its members to participate in production issues in companies. It is therefore recommended that SACTWU should strive to introduce worker participation in production issues on the shopfloor without delay.

Chapter Nine: Conclusions: Striving towards international competitiveness

The aim of this chapter is to summarise the paper's major recommendations and to discuss the implications of the restructuring proposals in terms of their job-loss and job-creation potential. It is important to note that the recommendations focus on the spinning, weaving and finishing subsectors of the textile industry, but could also have relevance for other subsectors.

9.1 Recommendations directed mainly at companies

(a) Restructure by moving into higher value-added products

The major finding of the study, based on an examination of seven successful South African textile companies, is that their advantage is based on the production of differentiated, higher value-added goods. Their products are either:

specialised (such as fabric decoration), or

fill a particular market niche, or

excel in quality.

The study has also shown that the South African textile industry is not competitive in basic commodities because the local cost of production far exceeds that in South and East Asian countries.

South African textile companies will therefore have to restructure over the next decade in order to move away from basic commodities production, into higher value-added and differentiated products for niche markets. But that alone will not suffice to ensure international competitiveness or retain current markets. South African textile producers must also become customer-focused, striving to meet exact specifications and develop good relations with customers. The strategy adopted by Courtaulds UK (outlined in Chapter Five) and by South African Nylon Spinners (SANS), should be emulated by South African textile companies.

(b) Become internationally competitive by attaining organisational efficiency and investing in new technology.

There are two ways in which textile companies can strive to become internationally competitive:

improving their organisational efficiency

investing in new technology

Improving Organisational Efficiency

This requires the implementation of organisational management techniques appropriate to each company. These include, amongst others, Total Quality Management with kaizen (continuous improvement), Computer Aided Production Management, and the Just In Time approach.¹ These techniques enhance important aspects of production such as flexibility and the reduction of lead times in order to respond rapidly to market demand. Such techniques also save costs by reducing stock and work in progress. Such reductions have become crucial in the face of competition from the Far East where these techniques are well applied.

Investment in New Technology

Research by the Textile Federation has demonstrated that spinning and weaving machinery in South Africa is very old in comparison with other countries. In South Africa, 67 percent of spindles and 66 percent of shuttleless looms are more than ten years old. These figures compare adversely with international standards: in Austria only 32 percent of shuttleless looms were more than ten years old in 1988, and in Australia, the comparable figure was 40 percent. Because new technology results in productivity and quality improvements, it is extremely important for South African textile companies to move closer to state-of-the-art technology through new investments. Significantly, the successful internationally-competitive companies examined in this paper had a considerably higher proportion of new technology than the South African average.

Updated technology is necessary not only to achieve international competitiveness, but to sustain exports. The chapter on Turkey's textile industry demonstrated that companies capable of sustaining exports must invest in new technology so that the industry remains near the technological frontier. Without such investment, the state has to adopt unsustainable measures to assist companies to export. Such measures led to a collapse in the rapid growth of textile exports in Turkey in the late 1980's.

1. See Bessant, 1991, for a good discussion on the application of these techniques.

(c) The textile industry must prepare to become fully integrated into GATT

The pending integration into GATT could represent a potential threat for which the textile industry should be prepared.

The integration into GATT will result in the reduction of all forms of protection, especially the high tariff protection on specific textile items. An export incentive such as GEIS is also likely to be phased out because it is not in keeping with GATT requirements and because of its high cost. South African textile producers, like the Turkish and British, will then start sensing that they are 'on their own' and should use the opportunities of the intervening period to restructure their enterprises in order to make them internationally competitive in the long term.

One such opportunity is the fact that South Africa is not a party to Multi-Fibre Arrangement, and therefore not subject to the quotas applied to the developing countries that belong to the MFA. As the MFA is to be phased out over ten years from the date of commencement of the Uruguay Round, South African textile companies have a once-off opportunity for a decade to penetrate or expand their exports into markets from which many developing countries are barred due to their MFA quotas.

(d) There is a clear need to adopt a textile filiere (pipeline) approach in developing an industrial strategy

The textile industry should adopt a filiere approach in the development of an industrial strategy for the industry. As the chapter on the textile-clothing pipeline showed, the length of the pipeline and the large levels of stock held within it, lead to significant volatility in demand for textiles. In order to resolve this problem there must be a high level of co-operation between companies in different stages of the production process, that is, between fibre producers, textile mills, clothing companies and retailers. Such co-operation is essential if Quick Response techniques are to be applied along the whole pipeline. Quick Response has the potential of reducing stocks held in the pipeline and, at the same time, introducing large cost savings and improving profits of companies in the pipeline.

In the South African experience the retailing sector (with some notable exceptions) appears to present problems in the pipeline on two grounds:

It seems that retail chains have not been making an effort to co-operate in efforts to implement Quick Response in the pipeline.

Retailers, particularly retail chains, appear to engage in high mark-ups and do not pass cost savings made by textile and clothing firms on to the customers.

Without the active commitment of the retailing sector to Quick Response techniques in the textile-clothing pipeline, even the most carefully crafted industrial strategy for the textile industry faces the risk of running aground on the rock of unresponsive retailing chains. Apart from finding alternative retailing outlets, producers in the textile and clothing

industries should strive to gain the commitment of major retailers in the development of an industrial strategy for the textile filiere.

9.2 Recommendations directed mainly at the state and labour

The role of the state and labour (including organised labour) are no less important than the role of textile companies in achieving international competitiveness.

(a) Tripartism should become a permanent feature of the textile-clothing filiere

The establishment of two long-term planning forums, the *Panel* and the *Task Force*, which include all the major stakeholders in the textile filiere, is a welcome development. These forums include the state, all industries in the textile pipeline, and organised labour. The forums have an opportunity of developing long-term policy that does not seek to favour one sectional interest above another, but tries to ensure the long-term survival and growth of the whole filiere. This approach is also the best way of maximising potential employment creation on a sustainable basis across the whole filiere.

In addition, there is a need for stability in the government's trade policy towards the filiere and for the adaptability of the policy in relation to changing circumstances and developments. In order to prevent a return to the conflicts and instability generated by the promotion of sectional interests, a permanent tripartite body should be established to regulate state policy in relation to all the industries in the textile filiere. Such a structure would be in the best position to ensure that the interests of the filiere as a whole are always kept in mind.

(b) The state should remove the anti-export bias in the textile industry

Research by Pedro Belli and others of the World Bank has demonstrated conclusively that there is an anti-export bias in the trade regime applicable to the textile industry. In order to promote international competitiveness that includes a strong export component, it is important that the anti-export bias be eradicated as soon as possible.

One method commonly applied in many other countries is to ensure that exporters have easy access to duty-free imports. The challenge is to develop a policy that will ensure the easy access without leading to extensive corruption of the policy. The state must also identify other methods that are within GATT's constitutional framework to assist textile producers to invest in new technology and facilitate the export of textiles.

One potential model that should be explored is the Istanbul Textile and Clothing Exporters' Association, ITKIB, in Turkey. ITKIB conducts research into international market trends and conditions with a view to promoting Turkish textile and clothing

exports. In addition to disseminating its research findings, it runs courses for management on modern production techniques aimed at enhancing the economic performance of their companies. In South Africa the role of the Textile Federation could be extended, or a new parastatal body could be established with similar objectives and functions to that of ITKIB.

(c) SACTWU should extend the wage-skill nexus approach to incorporate an ongoing concern with productivity

SACTWU, as part of COSATU, is in the process of adopting a wage-skill nexus approach as the basis on which workers should be rewarded for their skills. While there is much to recommend this approach, which corresponds quite closely to the Textile Industry Training Board's competence-based training, the wage-nexus approach risks placing the responsibility for achieving higher productivity entirely on management's shoulders. SACTWU should modify the wage-nexus approach in order to link workers' level of payment to their own production performance as well. Through negotiations they should ensure that the economic gains of greater productivity and efficiency are fairly distributed between the company and its employees. In the long term, high wages can only be sustained by high productivity and hence it is important for the union to become involved in the economic performance of the enterprise as well.

(d) SACTWU should adopt a policy of worker participation in production issues

According to Blinder (1990) extensive research indicates that meaningful worker participation enhances productivity regardless of the compensation scheme used. Such a finding constitutes strong economic grounds for SACTWU to place a priority on preparing workers for participation in production-related issues in the workplace. The union, which was built on a tradition of worker participation, would thereby continue and expand its democratic tradition.

SACTWU should also advocate worker participation schemes in the workplace. Such schemes need equally strong support and commitment from management in order to succeed, and it is necessary for the union and management to co-operate in such ventures. These will not emerge without conflict, but problems should be resolvable through negotiation.

The introduction and support of worker participation schemes by SACTWU and management constitutes an important component in the strategy to achieve international competitiveness.

9.3 Implications of industrial restructuring for employment

A major objective of the industrial strategy is to achieve labour-absorbing economic growth in the textile industry. The restructuring strategy suggested in this study does however entail the destruction of jobs as well. It is important to grasp this unpleasant aspect of industrial restructuring and deal with it.

In order to take cognisance of this crucial factor, an industrial restructuring policy in the textile industry should:

commence with developing the textile industry's capacity to expand in the production of higher value-added goods. If there is overall growth in the industry it will be easier to re-employ workers who could lose their jobs due to the shut-down of basic commodity plants.

strive to minimise the number of retrenched workers by developing an adjustment policy that provides for the retraining of workers for placement in alternative jobs.

During a period of recession and high unemployment, existing jobs should not be destroyed unless there is no alternative. There should thus not be a rush to liberalise the South African trade regime as this could have a devastating effect on employment in the textile industry. However, as South Africa re-enters the international arena, its policy-makers may have no other option but to start abolishing protection. In Turkey the state also started losing control over policy regulation in order to try to ensure that the European markets remained open to it in the long run. The South African state may also have very little room to manoeuvre in the years ahead. It is therefore important to implement a strategy aimed at becoming internationally competitive as soon as possible.

It is important to try and estimate the impact of such restructuring on the number of jobs that will be lost and created. Doing so reliably is extremely difficult. It is clear, however, that in order to undertake such an exercise properly, the employment effect along the whole textile filiere must be assessed. An intervention at any point in the filiere could have an impact throughout. For instance, the closure of spinning and weaving mills would impact on the cotton growing industry, amongst others. The provision of cheaper and better fabric to the clothing industry could, on the other hand, lead to an increase in employment in clothing manufacturing.

It seems likely that more jobs will be created in the clothing industry than will be destroyed in the textile industry as a result of restructuring. This is because of the inherently more labour intensive nature of clothing production.

The industrial restructuring proposed in this paper does entail the eventual demise of the more labour-intensive spinning and weaving mills and the expansion of more capital-intensive dyeing, printing and finishing processes. It is thus likely that more jobs will be lost than created in the short-term in the textile industry. It is however most likely that

more jobs will be created in the clothing industry than will be lost in the textile industry. There are however imponderables such as the effects on employment in the cotton growing industry. The answer to this depends on whether it is possible to grow cotton at internationally competitive prices in South Africa.

In conclusion it is worth bearing in mind the observation of the general manager of the Turkish textile firm, Bozkurt Mensucat, that in Turkey 'the engine of the textile industry has been and still is the garment industry'. It is a salutary reminder that the fate of at least the apparel textile industry is inextricably bound up with the fate of the clothing industry in South Africa. Far from being in competition with each other, the two industries are symbiotically dependent on each other. It is therefore in the interest of each to ensure the survival and growth of the other.

The restructuring proposed for the textile industry in this study therefore also impacts on the clothing industry. To the extent that it succeeds in lowering the cost and improving the quality of textile products, it will not only ensure the survival and growth of the textile industry, but the clothing industry as well. Together, the two industries have a potential for creating more jobs than will be lost in the textile industry alone due to the proposed restructuring.

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A Trade Policy for Industrial Growth

A Policy for Regional Industrial Development

There is widespread agreement that if post-apartheid South Africa is to succeed economically, there will have to be a sustained improvement in industrial performance. Thus far, there have been no major policy oriented studies of South Africa's principal industrial sectors. This series of reports, published under the umbrella of the "Contemporary Policy Issues" series, seeks to fill this gap.

Although the South African textile industry forms a vital link in the local textile-clothing pipeline, it has been in decline since the early 1980s. Current production and employment levels are well below 1981 levels. In addition, the industry will face increased international competition over the next decade as tariffs start declining due to the successful conclusion of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT).

What can the textile industry do to enhance its international competitiveness? Can it compete successfully against imports, and establish export markets? In which markets should it compete? Should it let go of certain types of products and concentrate on others?

Johann Maree answers these questions through a comprehensive analysis of the industry. By means of in-depth case studies of successful companies in the spinning, weaving and finishing sectors, he formulates a strategy for the industry: in essence to concentrate production on differentiated, higher value-added products in niche markets.

The study also examines the human resource needs of the industry, and the vital role that the South African Clothing and Textile Workers' Union can play in improving productivity.

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