

THE EFFECTS OF STRUCTURAL CHANGES ON THE DEMAND FOR LABOUR, WITH SPECIAL REFERENCE TO THE SOUTH AFRICAN TEXTILE AND CLOTHING INDUSTRIES

BY

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Pretoria
May 2006
Nkabo Elias Matsobane (Booty) Molatsana

Declaration

I declare that:

“The effect of structural changes on the demand for labour, with special reference to the South African Textile and Clothing Industries.”

is my own work, that all the sources used or quoted have been indicated and acknowledged by means of complete reference, and I did not previously submit this dissertation for a degree at another University.

N E M MOLATSANA

DATE

ABSTRACT

The textile and clothing industry, one of the oldest industrial sectors in the world, has contributed in important ways to the development of economies and increased the living standards of inhabitants in regions around the globe. Since 1990, production in the South African textile and clothing industry has declined due to many factors like inadequate competitiveness.

The dissertation's main objective relates to the investigation of the factors that were responsible for the structural adjustment in the sector and how it had an impact on the sector, specifically the sector's performance in production and employment. The research considers that any strategy or policy that would improve employment and output in the production will simultaneously have to be a strategy of international competitiveness for the South African textile and clothing industry.

The most important results of the literature review is that evidence suggests a new role for the state in managing business in the current globalisation and liberalisation environment, with the sole purpose of increasing a nation's welfare from international trade. This new role of the state is that of a strategic partner whose aim is to create an enabling environment for business in its country through selective and flexible intervention, some of which may involve the labour market, education and training, multi-and bilateral trade affairs, domestic structural adjustment, competitiveness and research and development issues.

A detailed historic analysis of each of the sectors and sub-sectors in the clothing and textile industry for the period from 1996, at the time projected to the year 2001 and some of the more recent dynamics in the sector are discussed.

Although the dissertation is mainly based on a literature survey, it was decided to investigate the factors that have an impact on the production of clothing and textile industry in South Africa further, using quantitative methods. Using co-integration techniques (Engle Granger approach) test the impact of some of the independent variables in the production function it was possible to show that these factors led to a decrease in production, which explains the decrease in the demand for labour in the sector.

TABLE OF CONTENTS

Description	<u>Page</u>
Acknowledgements	ii
Declaration	iii
Abstract	iv
Table of Contents	v
List of Tables	xii
List of Figures	xiv
Abbreviations	xv
CHAPTER 1: INTRODUCTION AND RESEARCH METHODOLOGY	
1.1 Introduction	1
1.2 Focus of the study	4
1.3 Problem definition	5
1.4 The aim of the research	6
1.5 Hypothesis	6
1.6 Research methodology	6
1.7 Division of chapters	8
<i>CHAPTER 2: OVERVIEW OF DEVELOPMENT AND EMPLOYMENT OF THE SOUTH AFRICAN TEXTILE AND CLOTHING INDUSTRIES</i>	
2.1 Introduction	10
2.2 The textile industry	10
2.2.1 Introduction	10
2.2.2 Historical development	11
2.2.2.1 Knitted clothing	11
2.2.2.2 Woven fabrics mainly for women's wear and men's shirts	12
2.2.2.3 Woven fabrics mainly for men's wear	12
2.2.2.4 Synthetic fibres industry	12
2.2.3 Developments since the eighties	13
2.2.3.1 Growth in production and employment	13
2.2.3.2 Investment and technology	14
2.2.3.3 Value-added productivity	14
2.3 Clothing industry	16
2.3.1 The growth of the industry from 1907 to 1929/32	16
2.3.2 The period from 1929/32 to the Second World War.	18
2.3.3 The period of the Second World War (1939/45) and the post war years to 1948	19
2.3.4 The period 1948 to 1957	21

2.3.4.1	Introduction	21
2.3.4.2	Import control	21
2.3.4.3	Prohibited list	21
2.3.5	The Sixties and Seventies	22
2.3.6	Development of the local industry since 1979	25
2.3.6.1	Number of establishments	25
2.3.6.2	Employment	26
2.3.6.3	Investment	26
2.3.6.4	Financial position	26
2.3.6.5	Cost structure	26
2.3.6.6	Net contribution to the economy	27
2.4	Summary	27

CHAPTER 3: FUNDAMENTAL TRADE THEORY

3.1	Introduction	29
3.2	The role of international trade	29
3.3	The gains from trade	30
3.4	New explanation of trade theory	32
3.5	Explanations for intra-industry trade	33
3.5.1	Industrial classification	33
3.5.2	Transport costs	34
3.5.3	Product differentiation	34
3.5.4	Increasing returns to trade	34
3.6	Innovation	35
3.7	Competitive advantage	35
3.8	Summary	37

CHAPTER 4: INTERNATIONAL TRADE POLICY AND ECONOMIC DEVELOPMENT

4.1	Introduction	39
4.2	A rationale for industrial support	39
4.3	Trade reform and regulations	42
4.3.1	Trade reform and trade liberalisation	43
4.3.2	The government and the new trade regime	47
4.4	The state and labour market regulations	49
4.5	The enabling role of government in industry	50
4.5.1	Sector planning and co-ordination	50
4.5.2	Investment promotion and infrastructure development	51

4.5.3	The role of government in technological development	53
4.6	Economic management and industrial performance in the 1990's	56
4.6.1	Economic reform and industrial performance	58
4.7	Summary	61

CHAPTER 5: STRUCTURAL ADJUSTMENT IN SOUTH AFRICAN TEXTILE AND CLOTHING INDUSTRY

5.1	Introduction	62
5.2	The general agreement on tariffs and trade (GATT)	62
5.3	Structural adjustment assistance for the textile and clothing industry	63
5.4	The structural adjustment programme (SAP)	65
5.4.1	Tariff protection	65
5.4.2	Import control	66
5.4.3	Duty-free imports on the basis of local purchases and withdrawal of rebate facilities	66
5.4.4	Loan scheme	66
5.4.5	Imports on the basis of value exported	66
5.4.6	Value added adjustment assistance	66
5.4.7	Marketing and market development	67
5.4.8	Productivity improvement schemes	67
5.5	Evaluation of the structural adjustment assistance for the textile and clothing industries	68
5.6	Long-term strategic plan for the textile and clothing industries in South Africa	68
5.7	Long-term strategies and action plans	69
5.7.1	Introduction	69
5.7.2	The social dimensions of restructuring	70
5.7.3	Input costs	71
5.7.4	Training and skills development	73
5.7.5	Technology upgrading requirements	74
5.7.5.1	Textile Industry	74
5.7.5.2	Clothing Industry	76
5.7.6	Development of exports	77
5.7.6.1	General	77
5.7.6.2	Export incentives	78
5.7.7	Development strategy for the small and informal sector	79
5.7.7.1	General comments	79
5.7.7.2	Main constraints and recommendations	80

5.7.8	The need for up-to-date industry database	81
5.7.9	Management consultancy assistance to the clothing and textile industries	81
5.7.10	Long-term tariff structure	82
5.7.11	Customs control	84
5.7.12	Anti-dumping and countervailing measures	84
5.7.13	Institutional arrangements	85
5.7.13.1	Clothing and Textile Authority	85
5.7.13.2	Industrial Development Corporation (IDC)	86
5.7.13.3	Small Business Development Corporation (SBDC)	86
5.7.13.4	Texfed and Cloted	86
5.7.13.5	NPI and other consulting firms	87
5.8	Cost implications	87
5.8.1	The social dimension of restructuring	87
5.8.2	Summary of subsidies	88
5.9	Factors that make successful adjustment	89
5.10	Summary	90

CHAPTER 6: DETAILED STRUCTURAL ANALYSES OF CLOTHING AND TEXTILE INDUSTRY

6.1	Introduction	91
6.2	Textiles (SIC: 321)	92
6.2.1	Introduction	92
6.2.2	Performance	93
6.2.3	Demand	94
6.2.4	Supply	97
6.2.5	Prospects	99
6.3	Spinning and weaving of textile (SIC: 3211)	100
6.3.1	Introduction	100
6.3.2	Performance	101
6.3.3	Demand	101
6.3.4	Supply	104
6.3.5	Prospects	105
6.4	Made-up textile goods (SIC: 3212)	106

6.4.1	Introduction	106
6.4.2	Performance	107
6.4.3	Demand	107
6.4.4	Supply	110
6.4.5	Prospects	110
6.5	Garment and hosiery knitting mills (SIC 32130)	112
6.5.1	Introduction	112
6.5.2	Performance	112
6.5.3	Demand	112
6.5.4	Supply	113
6.5.5	Prospects	113
6.6	Other knitting mills (SIC: 32139)	115
6.6.1	Introduction	115
6.6.2	Performance	115
6.6.3	Demand	115
6.6.4	Supply	117
6.6.5	Prospects	118
6.7	Carpets and rugs (SIC: 3214)	119
6.7.1	Introduction	119
6.7.2	Performance	120
6.7.3	Demand	120
6.7.4	Supply	123
6.7.5	Prospects	123
6.8	Cordage, rope and twine (SIC: 323215)	124
6.8.1	Introduction	124
6.8.2	Performance	124
6.8.3	Demand	125
6.8.4	Supply	127
6.8.5	Prospects	128
6.9	Other textiles (SIC: 3219)	129
6.9.1	Introduction	129
6.9.2	Performance	129
6.9.3	Demand	129
6.9.4	Supply	132
6.9.5	Prospects	133

6.10	Clothing (SIC: 322)	134
6.10.1	Introduction	134
6.10.2	Performance	134
6.10.3	Demand	135
6.10.4	Supply	138
6.10.5	Prospects	139
6.11	Summary	141
6.12	Micro-economic dynamics of structural adjustments in the clothing and textile industry	
	143	
6.12.1	Introduction	
	143	
6.13	Trade liberalisation and employment in South Africa	143
6.13.1	Trade liberalisation	
	144	
6.13.2	An analysis of formal and informal employment in textile and clothing industry	
	144	
6.14	Industrial development corporation	146
6.15	Industrial council statistics	
	147	
6.16	Industrial federations data	
	147	
6.17	Provincial government department	
	147	
6.18	Regional profiles of the clothing sector employment	148
6.19	Changes in the structural profiles and strategies adopted by firms	
	154	
6.20	The determinants of job losses	155
6.21	Relocation	156
6.22	Policy observations based on the data analysis	
	157	
6.23	The race to the bottom	158
6.24	Employment and wage	159

6.25	Employment and wage implications in textile and clothing sector	
	160	
6.26	Summary	162

CHAPTER 7: SHORT AND LONG RUN FACTORS EFFECTING CHANGE IN THE CLOTHING AND TEXTILE INDUSTRY

7.1	Introduction	164
7.2	Co integration methodology (techniques used)	164
7.2.1	Co integration (Long run equation)	165
7.2.1.1	The Engle Granger approach (single equation approach)	165
7.2.2	Short-run models (Error Correction Models)	166
7.3	Model	166
7.3.1	Theoretical model	166
7.3.2	List of variables	168
7.3.3	Description of variables	169
7.4	Results of empirical model (cfr. Appendix)	169
7.4.1	Model evaluation of the long run equation	169
7.4.2	Model evaluation of the short run equation	169
7.4.2.1	Comments	170
7.5	Summary and conclusions	171
7.6	Model limitations	171

CHAPTER 8: SUMMARY, CONCLUSION AND RECOMMENDATIONS

8.1	Introduction	172
8.2	Summary	172
8.3	Conclusions	180
8.4	Recommendations	182
8.5	Recommendations for further research	183
	Appendix Co integration (Long run equation)	184

	BIBLIOGRAPHY	
	190	

LIST OF TABLES

Table 2.1.	Growth of the clothing industry, 1915/16 – 1935/36	17
Table 2.2	Wholesale and retail clothing establishments	20
Table 2.3	Women's and Girl's sector	23
Table 2.4	Men's and Boy's sector	24
Table 2.5	Employment and remuneration in textile and clothing industry	27
Table 5.1	Net gain to the economy due to the SAP	68
Table 5.2	Textile industry investment needs, 1992/93.	74
Table 5.3	Clothing industry investment needs, 1992/93.	76
Table 5.4	South African GATT offer, 1994.	82
Table: 5.5	Summary of tariff phase down, 1997 - 2002.	83
Table 5.6	Textile and clothing duty phase down, 1992 - 2002.	84
Table 5.7	Estimated costs of the social restructuring, 1994.	87
Table 5.8	Summary of subsidy costs.	88
Table 6.1	Textile's percentage share of total economy, 1996.	93
Table 6.2	Current and expected performance: Textiles.	94
Table 6.3	South African important trading partners: Textiles, 1996	95
Table 6.4	Sectoral percentage traded products: Textile, 1996.	95
Table 6.5	Preferential access: Textiles.	96
Table 6.6	Average import tariff: Textiles	98
Table 6.7	Import tariff phase down schedule: Textiles	98
Table 6.8	Current and expected performance: Spinning and weaving of textiles	101
Table 6.9	South African important trading partners: Spinning and weaving of textiles, 1996	103
Table 6.10	Important traded products: Spinning and weaving of textiles, 1996	103
Table 6.11	Preferential access: Spinning and weaving of textiles.	104
Table 6.12	Average import tariff: Spinning and weaving of textiles	106
Table 6.13	Import tariff phase down schedule: Spinning and weaving of textiles	106
Table 6.14	Current and expected performance: Made-up textile goods	107
Table 6.15	South African important trading partners: Made-up textile goods, 1996	108
Table 6.16	Important traded products: Made-up textile goods, 1996	109
Table 6.17	Preferential access: Made-up textile goods	109
Table 6.18	Average import tariff: Made-up textile goods.	111
Table 6.19	Import tariff phase down schedule: Made-up textile goods.	111
Table 6.20	Current and expected performance: Garment and hosiery knitting mills	112
Table 6.21	South African important trading partners: Garment and hosiery knitting mills, 1996.	113
Table 6.22	Important traded products: Garment and hosiery knitting mills, 1996.	114
Table 6.23	Preferential access: Garment and hosiery knitting mills.	114
Table 6.24	Average import tariff: Garment and hosiery knitting mills	116
Table 6.25	Import tariff phase down schedule: Garment and hosiery knitting mills.	116
Table 6.26	Current and expected performance: Other knitting mills	117
Table 6.27	South African important trading partners: Other knitting mills, 1996.	118
Table 6.28	Important traded products: Other knitting mills, 1996	119
Table 6.29	Preferential access: Other knitting mills	119
Table 6.30	Average import tariff: Other knitting mills	120
Table 6.31	Import tariff phase down schedule: Other knitting mills	121
Table 6.32	Current and expected performance: Carpets and rugs	122

Table 6.33	South African important trading partners: Carpets and rugs, 1996	123
Table 6.34	Important traded products: Carpets and rugs, 1996	124
Table 6.35	Preferential access: Carpets and rugs	124
Table 6.36	Import tariff phase down schedule: Carpets and rugs	126
Table 6.37	Current and expected performance: Cordage, rope and twine	127
Table 6.38	South African important trading partners: Cordage, rope and twine, 1996	128
Table 6.39	Important traded products: Cordage, rope and twine, 1996	128
Table 6.40	Preferential access: Cordage, rope and twine	129
Table 6.41	Average import tariff: Cordage, rope and twine	130
Table 6.42	Import tariff phase down schedule: Cordage, rope and twine	130
Table 6.43	Current and expected performance: Other textiles	131
Table 6.44	South African important trading partners: Other textiles, 1996	134
Table 6.45	Important traded products: Other textiles, 1996	135
Table 6.46	Preferential access: Other textiles	132
Table 6.47	Average import tariff: Other textiles	137
Table 6.48	Import tariff phase down schedule: Other textiles	137
Table 6.49	Clothing's percentage share of the total economy, 1996	139
Table 6.50	Clothing's percentage share of the total economy, 1996	139
Table 6.51	South African important trading partners: Clothing, 1996	140
Table 6.52	Important traded products: Clothing, 1996	141
Table 6.53	Preferential access: Clothing	141
Table 6.54	Average import tariff: Clothing	144
Table 6.55	Import tariff phase down schedule: Clothing	144
Table 6.56	Employment in Textile Industry:	147
Table 6.57	Year-on-Year % change of employment in the Textile Industry:	148
Table 6.58	Employment in the Clothing Industry:	148
Table 6.59	Year-on-Year % change of employment in the Clothing Industry:	148
Table 6.60	Growth in Sub-Sectoral Employment (March 1998 vs. March 1999)	150
Table 6.61	Numbers of Firms and Employees in the Western Cape Clothing Industry.	152
Table 6.62	Average Firm Sizes in the Western Cape Clothing Industry.	153
Table 6.63	Size Distribution of Clothing Firms by Number of Employees in Durban (1996)	155

LIST OF FIGURES

Figure 5.1	Percentage contribution of textile sector investment needs, 1992/93.	75
Figure 5.2	Percentage contribution of clothing sector investment needs, 1992/93.	77
Figure 6.1	Output shares: Textile sub-sectors (percentage contribution to total output), 1996	93
Figure 6.2	Sales structure: Spinning and weaving of textiles	102
Figure 6.3	Sales structure: Spinning and weaving of textiles	105
Figure 6.4	Sales structure: Spinning and weaving of textiles	108
Figure 6.5	Cost structure: Made-up textile goods	110
Figure 6.6	Cost structure: Garment and hosiery knitting mills	113
Figure 6.7	Cost structure: Made-up textile goods	115
Figure 6.8	Cost structure: Other knitting mills	118
Figure 6.9	Cost structure: Other knitting mills	120
Figure 6.10	Cost structure: Carpets and rugs	122
Figure 6.11	Cost structure: Carpets and rugs	125
Figure 6.12	Cost structure: Cordage, rope and twine	127
Figure 6.13	Cost structure: Cordage, rope and twine	129
Figure 6.14	Cost structure: Other textiles	134
Figure 6.15	Cost structure: Other textiles	136
Figure 6.16	Sales structure: Clothing	140
Figure 6.17	Cost structure: Clothing	142
Figure 7.1	Unit labour cost-1980-2004	
	170	
Figure 7.2	Yarn prices 1980-2004	
	170	
Figure 7.3	Fibre prices- 1980-2004	
	170	
Figure 7.4	Employment (Textiles)	
	170	
Figure 7.5	Nominal exchange rates	
	171	
Figure 7.6	Production in textile industry	
	171	

ABBREVIATIONS

ACP	African-Caribbean-Pacific
APTMA	All Pakistan textile Mills Association
BMD	Board for Manufacturing Development
BLNS	Botswana, Lesotho, Namibia and Swaziland
BTI	Board of Trade and Industry
BTT	Board on Tariffs and Trade
c	cent
CAD	computer-aided design
CAM	computer-aided manufacturing
CETRA	China External Trade Development Council
CITB	Clothing Industry Training Board
Clofed	Clothing Federation
CMT	cut-make-trim
CPI	consumer price index
CSIR	Council for Scientific and Industrial Research
DC	developed country
DCC	Duty Credit Certificate
DTI	Department of Trade and Industry
EFTA	European Free Trade Association
et al.	<i>et alii</i> (and others)
etc.	<i>et cetera</i>
EU	European Union
FDI	foreign direct investment
f.o.b.	Free on board
GATS	General Agreement on Trade and Services
GATT	General Agreement on Tariffs and Trade
GEAR	Growth, Employment and Redistribution
GEIS	General Export Incentive Scheme
GDP	gross domestic product
GSP	Generalised System of Preference
h	hour
HDPH	high-density polyethylene
HPAEs	high performing Asian economies
HS	Harmonised System
HSC	Harmonised System Code
IDA	Irish Development Agency
IDC	Industrial Development Corporation
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification

ITO	International Trade Organisation
Kg	kilogram
KSA	Kurt Salmon Associates
KWh	kilowatt-hour
LCR	local content requirement
LDC	least developed country
MFA	Multi-Fibre Arrangements
MFN	Most favored nation
m ²	square meter
MLI	Micro Lending Industry
MITI	Ministry of International Trade and Industry
NAFTA	North American Free Trade Association
NICs	newly industrialized countries
NIEs	newly industrialized economies
NPI	National Productivity Institute
OECD	Organisation for Economic Co-operation and Development
op. cit.	<i>opere citato</i> (in the work quoted)
OPT	outward-processing trade
PBIT	profit before interest and tax
PPI	production price index
R&D	research and development
RDP	Reconstruction Development Programme
REALST	Resource Allocation Strategist
RSA	Republic of South Africa
SACU	South African Customs Union
SACTWU	South African Clothing and Textile Workers' Union
SADC	Southern African Development Community
SAFTO	South African Foreign Trade Organisation
SAP	structural adjustment programme
SBDC	Small Business Development Corporation
SME	small and medium enterprises
SMME	small, medium and micro enterprises
SRI	Stanford Research International
TCA	Textile and Clothing Authority
Texfed	Textile Federation
Textek	Textile Technology
TITB	Textile Industry Training Board
TNC	Trans-national Corporation
TRIMs	Trade Related Investment Measures
TRIPs	Trade Related aspects of Intellectual Property rights
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
USA	United States of America
WEFA	Wharton Economic Forecasting Associates
WTO	World Trade Organisation

CHAPTER 1

INTRODUCTION AND RESEARCH METHODOLOGY

1.1 Introduction

The textile and clothing industry, one of the oldest industrial sectors in the world, has contributed in important ways to the development of economies and increased living standards of inhabitants in regions around the globe.

The making of clothes was carried on under the family or household system for thousands of years. Garment making is essentially a sewing process and until some better methods became available, hand sewing could be done equally well at home as elsewhere.

The sewing machine was not invented until 1790, when a patent was granted to a London cabinet-maker named Saint. The earliest record of the commercial use of such mechanical device is one invented in 1830 by M. Thimmonier, a Paris tailor (Barker, 1962: 1). The introduction of the eye pointed needle was a noteworthy development followed three years later by the invention of both a lock stitch and knotted stitch by combination of shuttle and needle by John Fisher and James Gibbon.

In the United States of America the first sewing machine was produced by Elias Howe in 1846 and improved by I. M. Singer in 1850. Singer's contribution, though preceded by the earlier success of others, is nevertheless credited with the realization of the industrial potential of the sewing machine (Barker, 1962: 1). The transition of clothing production from home to factory basis ensued at this time. According to Barker (1962: 2) ready-made clothing manufacturing is said to have become a thriving business in America as early as 1835. In England the first clothing factory in the modern sense was established at Leeds in 1835, with sewing machines operated by 30 workers.

Since those days, not only has the plain sewing machine undergone great improvement, but numbers of special sewing machines have been developed for the performance of particular operations such as button holing-attaching, fancy stitching, over-locking, blind-stitching, reverse sewing and other processes. The speed and the operation of the ordinary sewing machine have been improved since then.

Mechanical equipment has been introduced on a large scale so that the performance of operations other than sewing can be improved. Pressing by steam or hydro-air machines of various types are particularly universal. However, despite all the mechanical aids that have been introduced, the garment worker remains the most important factor in clothing and textile production. The numerous machines and equipment save time and physical effort and contribute to the consistent attainment of the necessary standard of output and quality. It is however the manipulation of these aids in the hands of the worker, on whom the rate of output rests, which is of such importance to the textile and clothing industry.

Indeed, it is labour that ultimately constitutes the factor (labour) cost that becomes the most difficult and decisive determinant in the competitive position of textile and clothing manufacturers. The other main element of cost in garment manufacture is materials - a factor, which in the light of the stage of development of the South African textile industry poses serious problems for the local manufacturer of clothing.

In South Africa production of the basic textile requirements for garment making (e.g. cotton, worsted) dates from 1950, though a few factories commenced operation two or three years earlier (Barker, 1962: 9). To have a fair chance of survival, the South African clothing and textile industries need at least the opportunity of access, on an equal footing, to materials similar to those not manufactured in South Africa. Here, one finds that the South African clothing and textile industry is in itself unable to develop, or even hold its own, without the assistance of duties. According to Barker (1962: 10) the moderate tariff protection of textile manufacturer originally envisaged by the Board of Trade and Industries (BTI) in 1950 has been raised above the levels regarded by South African standards as the upper limits of moderation.

These circumstances naturally render the local clothing industry and the consumer comparatively disadvantaged compared to their counterparts in other countries, which enjoy duty free access to materials in greater variety and at less cost.

According to Levy (1992: 19) domestic production already accounts for 98 percent of South African demand for clothing and no further opportunities exist for import substitution. It follows that any rapid expansion of South African's clothing industry must be based either on a rapid expansion of domestic demand or expanded participation in export markets. Since 1992, the scenario has changed to the extent that markets have liberalised and large newcomers such as China are upsetting even powerful players in the USA and Europe. Global shifts in the clothing and textiles sector exemplify many of the intractable issues facing

today's world economy, particularly the tensions caused by rapid and sweeping trade liberalization increased international competitiveness, dumping and illegal imports. The domestic household textiles sectors' many years of relative isolation and protectionism ended with South Africa's recent integration into the world economy.

The move to tariff liberalisation and the opening of potential exports markets has been accompanied by a barrage of cheap imports (mainly from China), much of which is illegal. Geographical displacement and spatial reconfiguration of the industry, major restructuring efforts, closures, labour scheduling and innovation are the primary responses of the South African household textile manufacturers to these unrelenting pressures being exerted upon them (DTI: 1999)

Since the establishment of the first clothing factory in South Africa in 1907, various government investigations were conducted and recommendations made to foster the development of the textile and clothing industry (Barker, 1962: 13).

The fundamental challenge facing South Africa is to move its economy onto a labour demanding path of growth that has the potential to reduce poverty and the deep social and racial inequalities still prevalent in society. This can be achieved through the establishment of more textile and clothing industries and also improving the government trade policies which will stimulate more employment. As a middle-income developing country with a relatively large manufacturing share in gross domestic product (GDP) (in 2004 the manufacturing share of GDP was 24,3 percent), the manufacturing sector is certainly playing a central role in the successful economic transformation of South Africa (Statssa, 2005). A report from the Macro Economic Research Group (MERG, 1993: 211) support this view in arguing that industrial development has the capacity to generate employment to produce basic goods for domestic consumption, to ease balance of payments constraints and to raise the general level of productivity in the economy.

In 2004, clothing and textile industries produced 6.4 percent of the GDP and was responsible for 29,1 percent of employment in the formal sector of the economy of South Africa. The clothing and textile industries, currently under threat from cheap Chinese imports and a relatively strong currency, are an important source of employment in the formal sector of the economy and for this reason chosen for the study.

Many distortions, both internal and external, were and continue to be part of the factors faced by clothing and textile manufacturers, locally and abroad. Among them are the issues of relative prices of labour and capital and tariff barriers. The World Bank (Levy, 1992: 44) argues that the relative prices of capital and labour have been artificially distorted in favour of the former, so that capital-intensity of production has been too high at the expense of job creation. The South African Chamber of Business (SACOB) (1993: 14) argues that investment has been discouraged by the high cost of capital.

The role of tariff and protection has been at the heart of the various World Trade Organisation (WTO) rounds of negotiations with clothing and textiles being one of the sensitive sectors. There is a commonly held view that tariffs are excessive, even if supporting the creation and survival of some domestic manufacturers for production of goods for local consumption. At the same time there seems to be un-level playing fields with leading first-world countries escaping their WTO commitments and sometimes even introducing qualitative trade barriers without consultation. Very recent developments in China have led to an outcry and retaliation from even leading industrial countries. It seems that China, even with tariff barriers in place; produce clothing and textiles at such competitive cost that it has a competitive advantage over the rest of the world. It is often heard that it is as a result of low-cost labour in China. The investigation into this however, falls beyond the scope of this study.

1.2 **Focus of the study**

This research focuses on the clothing and textile industries, which form a major part of the consumer goods industry. According to RSA (1994: 12) the clothing and textile industry is seen as one of the main driving forces in the South African industrial sector and must be developed to its fullest potential in terms of international competitiveness and domestic needs. The objectives for South Africa remain to exploit competitive advantage in the clothing and textile industry. In the long-term a sustained export effort and the creation of the maximum number of jobs at relatively low capital investment is strived for.

For the reasons set out in the above paragraph, policies that are appropriate to the clothing and textile pipeline and that shift the balance in the composition of output are investigated. The study further investigates structural adjustment in the sector and its effect on the demand for labour and the economy of South Africa.

Strategically, the textile industry should be looked at as a separate entity. While only 30 percent of textile production is used for clothing industry, significant proportions of its production are supplied into the domestic textile, rubber products, motor vehicle and parts, and other markets (WEFA, 1996: B32).

The dissertation should not be seen as being applicable to the South African situation only. The dissertation is undertaken for the South African textile and clothing industries. However, the investigation in the South African clothing and textile industry serves as a case study to all clothing and textile manufacturing countries of the world.

1.3 **Problem definition**

Employment in South Africa has generally been on a downward path since 1996. In the textile and clothing industries in particular, substantial job losses had been experienced in the formal sector since 1996. The decline in employment in the textile, clothing, footwear and leather industry from 261 480 workers in 1996 to 188 290 in 2003 necessitates an inquiry.

The effect of structural adjustment on the demand for labour in general makes it necessary to look at the South African trade and investment policies with the aim of improving productivity and competitiveness. By the same token however, it is necessary to know what structural adjustments have contributed in the clothing and textile industry and for what reason. Only once this enquiry is successfully concluded would it be possible to evaluate industrial, trade and investment policy for the sector.

The problem statement can therefore be summarised as providing new information on the structural adjustments that took place in the clothing and textile industries over the last few decades as a result of globalisation, liberalisation of trade, international shifts in clothing demand and supply, exchange rates and government intervention and how it impacts on the sectors ability to sustain its position as top employer.

The problem statement has to be extended to pertinently include the dynamic nature of world markets for clothing and textiles and acknowledge that the South African clothing and textile industries do not function in a vacuum but is part of a highly integrated world market.

1.4 **The aim of the research**

The aim of the research is to analyse how structural adjustment in the clothing and textile industries has affected the demand for labour in South Africa. Once this is done, solutions are offered in the form of recommendations for trade and investment policies.

Secondary objectives relate to the investigation of all the factors that may have been responsible for structural adjustment in the sector and how it has had an impact on the sector, specifically the sector's performance in production and employment. The research considers as a point of departure that any strategy or policy that would improve employment and output in production will simultaneously have to be a strategy of international competitiveness for the South African clothing and textile industry.

1.5 **Hypothesis**

The hypothesis is that structural adjustment in the clothing and textile industry impact on the demand for labour in South Africa. Cognisance will be taken of international trends and developments, as well as the various options available to develop these industries to become competitive.

1.6 **Research methodology**

There are various avenues through which trade liberalisation affect labour demands. The standard model used for the analysis of trade and labour is the two-sector factor two-country factor. Heckscher-Ohlin-Samuelson (HOS) model. From this model theoretically consistent relationships are drawn between product price movements and factor returns.

Empirical methodology is used to estimate the impact of trade liberalization on the demand for labour, with special reference to the South African textile and clothing industries. First, we use the national enterprise (NE) survey to estimate labour demand functions for manufacturing firms in South Africa. The objective is to identify how technology and trade affect the employment decisions within firms. Different factors, which have impact on the production of textile and clothing industries, are considered in the long run and short run.

We will estimate both co integration and error correlation model (ECM). The choice of this procedure is dictated by the need of capturing both the short and long-term factors that affect the production in the textile and clothing industries, in order to propose short and long run policies.

The knowledge of basic economic theory coupled with the ability to apply it is undoubtedly the main tool used to gain insight into the numerous factors affecting the clothing and textile industries and manufacturing in general. Such knowledge of tools and of analysis are also important in forecasting what is likely to happen in the textile and clothing industries in any given period of time.

For these reason a literature study forms the basis of the background chapters. Sources of information include reports, journals, articles and textbooks. Gathering of information is very important in determining the *status quo* within the research field (Botha and Engelbrecht, 1992: 50). Furthermore, primary sources to allocate data for quantitative analysis include institutions such as Statistics South Africa (SSA), Department of Trade and Industry (DTI), Industrial Development Corporation of South Africa (IDC) and National Productivity Institute (NPI). According to the observations, some data is more reliable than others. Due to the uncertainty about the reliability of some data, the utilisation of references, which are more reliable, is acknowledged in full in the Bibliography.

A local search engine on the Internet, e.g. Sabinet, is used due to its likelihood of reducing agency and transaction costs when gathering information. A search engine can be defined as a program that search for documents using specified keywords and returns the list of the documents when found. Basically, it enables searches for documents on the World Wide Web (www). The results obtained through these methods of data collection, are analysed and conclusions and recommendations pertaining to textile and clothing industries made. Visits to the South African Clothing and Textile Union (SACTU) and the Federation of Clothing and Textile Workers of South Africa provide a testing ground for the ideas developed during the research programme.

During 1992 the South African government appointed a panel and task group to undertake an investigation into the clothing and textile industry in South Africa. The results obtained from it is used as part of the evidence of the need to restructure the South African clothing and textile industry in order to become internationally competitive to create more jobs, increase exports and increase production and productivity.

1.7 Division of chapters

Chapter 1 gives the background to the research, the problem definition and aim of the study. It refers to the research methodology; secondary aims of the research and outlines how the dissertation will be presented.

Chapter 2 gives an overview of development of and employment in the South African clothing and textile industries. This is important because it shows the historical background of the clothing and textile industries and reflects the development in the sub-sectors of knitted fabrics, woven fabric mainly for women's wear and men's shirts and synthetic fibres.

Chapter 3 shows the fundamentals of trade theory. It gives explanations of the role of international trade and the gains from trade. The new explanation of trade theory and the intra-industry trade are also outlined.

Chapter 4 deals with international trade policy and economic development. It shows the rationale for industrial support and trade reforms and regulations. The role of the government and the new trade regime is discussed. The state and labour market regulations and investment promotion and infrastructure development are discussed.

Chapter 5 examines the structural adjustment in South African clothing and industries. Discussion of the General Agreement on Tariffs and Trade (GATT), structural adjustment assistance and the structural adjustment programmes for the textile and clothing industries are discussed.

Chapter 6 strives to provide a detailed better perspective and understanding of the South African clothing and textile industry; the structure and composition of the sectors are discussed. This chapter is divided in two main components, viz. a detailed historic analysis of each of the sectors and sub-sectors in the clothing and textile industry for the period from 1993, at the time projected to the year 2001 (Part I) and Part II, which considers some of the more recent dynamics of the clothing and textile industry.

Chapter 7 is used to test the impact of some of the independent variables in the production functions, using quantitative techniques. This chapter identifies factors that have an impact on the production of clothing and textile in South Africa, using co-integration techniques.

Chapter 8 provides a summary of the dissertation with a number of concluding remarks and some recommendations that flows from the study together with recommendations for further research.

CHAPTER 2

OVERVIEW OF DEVELOPMENTS AND EMPLOYMENT IN THE SOUTH AFRICAN CLOTHING AND TEXTILE INDUSTRIES.

2.1 Introduction

This chapter starts with a brief historical overview of the developments that shaped the South African clothing and textile industries up to the eighties and a more detailed description of developments in the industry over the last two decades. The earlier development of the textile industry is discussed at the hand of developments in the sub-sectors knitted fabrics and woven fabric mainly for women's and men's wear and synthetic fibres. The developments since the eighties are then discussed by indicating the growth in production and employment, investment and technology and the value added through productivity changes.

It should be noted that with respect to the limitations of historical information of the sector, figures were in certain cases not available for periods after 1995. This does not however, lessen the value of the historical developments that help shape the industry.

2.2 The textile industry

2.2.1 Introduction

The textile industry in South Africa has its origin in the middle of the last century, when a Yorkshire man, Samuel Bradshaw, began weaving woollen blankets and coarse cloth at Bathurst in the Eastern Cape (Cook, 1979:9). Others started to develop weaving in the Free State and Cape Town. By 1925 the customs duties on blankets, rugs, shawls and heavy sheeting were increased. By 1933 there were twelve factories producing woollen and cotton blankets, rugs, heavy sheeting canvas and webbing, and by 1944 there were sixteen factories employing 3 711 people and producing 90 percent of the country's needs in the line of blankets, rugs and sheeting (Maree, 1995: 22)

Production of the basic textile requirements for garment making (e.g. cotton, worsted, woollen and man made fibres) can be said to date only from 1950 (Barker, 1962: 9). Barker asserts that for various reasons,

like the use of relatively unskilled labour, the textile industry is usually among the first to develop when predominantly agricultural countries take their first steps toward industrialisation (Barker, 1962: 10). With the exception of the production of blankets, unbleached sheeting, canvas and a few knitting mills, which were established prior to and during the Second World War, the South African textile industry is formally recognised as an industry from 1946/47.

2.2.2 Historical development

The apparel and furnishing fabrics industry only developed after the Second World War, when the first mills producing cotton and worsted fabrics for apparel, were established. For the purpose of this section, the textile industry will be divided into the following subsections:

- Knitted fabrics
- Fabrics of cotton and man made fibres mainly for women and men's shirts
- Fabrics of wool and man made fibres mainly for men's wear.
- Synthetic fibres.

2.2.2.1 Knitted clothing

The first knitting factories were established in the thirties. The majority of them produced socks and stockings. Rapid development followed in the 1950's and there were four factories producing socks and stockings, thirteen manufacturing underwear and outerwear and one producing fully-fashioned nylon stockings (RSA, 1983: 8). The 1960/61 census of manufacturing (RSA, 1964: M-28) records that there were 74 factories employing 15 741 workers. 55 were mainly producing hosiery and knitted clothing while 19 were making other knitted clothing, mainly from knitted fabrics.

According to the Steenkamp Report, there were 116 mills producing hosiery and knitted clothing and 33 other knitting mills by the census year 1979. The knitted goods sector employed 21 427 workers. However, the number of employees reached a peak of 31 392 in 1963/64 and declined sharply to 21 427 in 1979. This is a drop in employment by 32 percent for the period 1963 to 1979 (RSA, 1983: 9).

2.2.2.2 **Woven fabrics mainly for women's wear and men's shirts**

There were eight cotton mills in operation in 1950, and the first started to operate in 1947 (RSA, 1969:16). There was one spinning mill, four integrated plants with facilities for spinning and weaving and three that were equipped for spinning only. It is estimated that 3 000 employees were employed in this sector, with 15 percent of South Africa's demand for cotton goods produced locally. The number of factories increased to 18 in 1952 and this included one spinning mill, six integrated plants and eleven weaving plants. These factories employed 5 500 workers and they provided in 60 percent of the local demand for drill, twill and sateen, 40 percent of calicoes, 70 percent of cotton duck fabrics and 30 percent of towels and towelling demand (RSA: 17). By 1961/62 the number of factories increased to 46 of which 16 were spinning and 30 weaving mills (RSA, 1964: M-28).

The employment rate increased from 5 500 workers in 1952 to 15 000 workers by the 1961/ 62 period. The spinning mills were in a position to supply 90 percent of the demand for cotton and rayon yarn. The weaving industry supplied almost 50 percent of the total local consumption of all types of cotton and man-made fabrics (RSA, 1969: 16).

2.2.2.3 **Woven fabrics mainly for men's wear**

The first mill in South Africa came into operation in 1946. By 1951 the number of factories had increased to seven of which four were fully integrated, two engaged only in spinning and one in weaving. During this period 2 200 workers were employed in this sector (RSA, 1983: 9). The number of employees increased to 4 000 despite the fact that from 1951 to 1961 no new factories were established (RSA: 9).

The number of firms increased from 16 to 18 between 1961 and 1979 and employment rose to 6 560. This sector became highly capital intensive and the value of land, building and machinery increased from R7, 8 M in 1960/61 to R26, 1 M in 1979.

2.2.2.4 **Synthetic fibres industry**

The first factory for texturing and dyeing of imported polyamide (nylon) yarn was started in 1959 by British Nylon Spinners, a subsidiary of Courtaulds and ICL. In 1964 the company changed its name to South

African Nylon Spinners (SANS) and in 1965 started to produce apparel nylon yarns and industrial yarns (mainly for the manufacture of tyre cord) (Maree, 1995: 24). During 1968 Hoechst, another international chemical and pharmaceutical firm (RSA, 1983: 3; Maree, 1995: 24) commissioned the production of polyester staple fibre in South Africa.

By 1974 there were 17 companies that processed filament and fibre yarns into stretch and bulked yarns in the intermediate industry (RSA, 1983: 13). During this period a technological change took place, with the advent of an integrated draw texturing process that combined processes previously carried out separately by fibre producers and yarn processors. This led to rationalisation in the market and SANS took over a number of manufacturers, with the result that by the end of 1976 the number of independent processors reduced to three (Maree, 1995: 25).

In 1978 the Frame Group started to produce staple fibre for its own use. The plant capacity of 6 million kilogram of yarn was doubled in 1981 when it also started to manufacture yarn of polyester fibre. Maree asserts that this caught the existing industry by surprise and led to an over supply of polymer and staple fibres, so much so, that the capacity utilisation at South African Nylon Spinners was less than 50 percent at the time.

The Steenkamp report stated that “the synthetic 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. After 1974, the custom tariff had to be revised several times. Meanwhile, quantitative import control, which had already assisted in the sixties, had come to the industry’s rescue” (RSA, 1983:14).

2.2.3 Developments since the eighties

2.2.3.1 Growth in production and employment

Maree (1995: 25) identifies two distinct phases in the development in the textile industry over the last few decades:

The first phase, 1972 to 1981, was one of sound growth. The average growth rate over this period was 5,7percent. Production reached a peak of R12 147 million in 1981 (at 1993 prices).

Employment peaked in 1976 with 14 590 and again in 1981 when 118 340 workers were employed in the textile industry. Export prosperity, that is, export as a percentage of gross domestic production, reached a peak of 14 percent during 1979/80, before declining marginally to 13 percent in 1981. Imports as a percentage of domestic demand, declined from 23 percent in 1972 to 16 percent during 1978/79 before increasing to 19 percent in 1981 (IDC, 1995: Textile, 2).

The second phase, from 1981 to 1993, is characterised by a decline in the industry. Production peaked in 1981 at R12 147 million (at 1993 prices) and declined constantly until 1985; thereafter it stabilised around R10 000 million until 1989. In 1993 it declined sharply to R6 800 million. As a result, employment in the textile industry, between 1981 and 1993, declined from 118 340 to 86 490. This is a loss in jobs of nearly 32 000. The export prosperity of textile industry improved from 13 percent to 23 percent over the period 1981 to 1993. However, import penetration increased proportionately more, from 19 to 29 percent over the same period. Capacity utilisation fell to 79 percent in 1990, reaching a low in May 1992, when it fell to 74 percent (Maree, 1995: 25-26).

2.2.3.2 Investment and technology

Capital investment in the textile industry has lagged behind capital investment in the manufacturing industry since 1972. Capital investment in the textile industry contributed 5 percent of total capital investment in the manufacturing industry in 1972. By 1983 it had declined to 2,4 percent of total investment in manufacturing. It remained in that range for a number of years but by 1992 it had declined to 2,2 percent (Maree, 1995: 26)

The low level of investment meant that the average age of textile machinery in South Africa increased and became dated (Maree, 1995: 27). The relatively low level of investment in textile machinery in South Africa over this period undermined its ability to compete globally. It should however be noted that the low level of investment in the industry was also the result of low export demand over the period, which will be illustrated later in the dissertation.

2.2.3.3 Value-added productivity

Value added productivity is a term used for the increment added by each person or organisation involved in the manufacture of a particular item, becoming part of its price. The increase in value of goods produced by a

person or organisation in the manufacture of a particular item. (Greener, 1984). If value is added, it could either mean that profit is increased or that there is more downstream activity, i.e. a higher degree of manufacturing (beneficiation). Value added productivity means that the profit margins are getting smaller or that the product gets taken one stage further in the beneficiation process, but that the ratio between the additional units of input to the additional units of output is getting smaller so that the products manufactured is more cost efficient. The process that is described here, i.e. improved value added productivity, will indeed make firms more competitive at the expense of (probably) more job losses.

Value added productivity measures the value created by production and may be calculated either before (gross) or after (net) deducting, the consumption of fixed capital on fixed assets used. It is important to note that value added does not cover all transactions linked to the production process, but only the result of production, i.e. output and the utilisation of goods and services when producing the output, i.e. intermediate consumption. In other words it includes output as a resource and intermediate consumption as a use (SSA).

Value added as a proportion of production in the South African textile industry has remained virtually unchanged over the period 1972 to 1993 (Maree, 1995: 29). The ratio of value added to total production was 29,7 percent in 1972 and 33,6 percent in 1985 before declining to 26,6 percent in 1990. It increased to 33 percent in 1993 (IDC, 1995: Textile Federation, 1998: 4). It is highly desirable for the textile industry to substantially increase the value added contribution in order to become more internationally competitive, but this has not been the case during the overview period from 1972 to 1993.

The level of labour and capital productivity fluctuated during the period 1972 to 1981 and reached a peak of 1,28 percent for labour and 1,37 percent for capital (Index 1972 =1,00). However, since then it declined to reach a low in 1990 in both cases, before labour productivity starting to improve again to reach 0,97 percent and capital productivity only marginally improved to 0,75 percent in 1993 (IDC, 1995: 4). Maree (1995: 32) compares South Africa's labour productivity on a global level as well as with the developed and developing market economies.

The striking difference in labour productivity between South Africa and the rest of the world is that South Africa performed comparatively well over the period 1973 to 1980/81 by substantially improving productivity levels, but slumped back over the period that followed, until 1988. Maree (1995: 34) asserts that production declined in South Africa during the latter period while it expanded in the rest of the world. In

contrast to South Africa's 13 percent decrease in production and 15 percent decrease in employment, the Asian market economies in particular, almost doubled their production and increased employment by 18 percent. The capital labour ratio for 1995 was R 48 362 and the changes in labour productivity for 1985-1995 was 1.8 percent while the changes in capital productivity for the same period was 2.9 percent.

2.3 Clothing industry

2.3.1 The growth of the industry from 1907 to 1929/32

Credit for establishing the first clothing factory in South Africa has generally been attributed to the Middlemass brothers who sold a factory in Scotland to open up a factory manufacturing men's suits in Cape Town early in 1907 (Barker, 1962: 13). Between 1908 and 1910, several other small men's clothing and shirt factories were opened in Cape Town. A trade union journal records that a Johannesburg firm obtained the first government contract for locally made railway uniforms in 1914 (Barker, 1962: 14). The first record of a clothing factory in Natal is of one started in Durban during 1915. In Port Elizabeth, two small factories commenced with the manufacture of trousers at about the same time, but after a year or two closed down as a result of severe overseas competition (Barker, 1962: 14).

Accurate information about the initial stages of the industry's development tends to be scarce. Nevertheless, according to Barker (1962: 14), a Wage Board Report of 1929 records that in that year there were 40 clothing factories in existence in the Gauteng area (previously known as the Pretoria-Witwatersrand-Vaal Triangle), employing 2 835 workers. According to the report, these employers and employees had become sufficiently organised by 1925 to secure the registration of the Transvaal Clothing Manufacturer's Association and the Garment Workers' Union under the Industrial Coalition Act of 1924 and to negotiate an industrial council agreement under the Act by September 1925 (RSA, 1983: 4).

The majority of other workers were in the Cape Peninsula where there were 2 023 workers were employed in February 1929 (Barker, 1962: 15). The industrial census figures for clothing factories, tailoring and dressmaking establishments show marked and fairly consistent increases in the industry's growth from 1918/19 when the official data collection by the Bureau of Census and Statistics started in 1932/33, under practically all headings (Barker, 1962: 15). The growth of the clothing industry during the period from 1915/16 to 1932/33 is presented in Table 2.1.

Table 2.1. Growth of the clothing industry, 1915/16 – 1935/36

(Wholesale factories and retail establishments combined)

Year	Number of establishments	Value of land and buildings £000	Value of machinery, plant & tools £000	Number of employees	Amount of salaries & wages paid £000	Value of materials used £000	Value of output £000	Value added to materials £000
1915/6	358	348	24	3 995	330	454	1 003	549
1918/9	784	845	199	10 701	836	2 453	4 021	1 550
1920/1	781	1 007	325	9 218	1 003	2 479	4 152	1 648
1925/6	791	1 262	436	12 998	1 202	2 612	4 840	2 193
1929/30	821	1 515	569	16 744	1 755	3 445	6 615	3 126
1932/3	824	1 595	668	21 616	1 947	3 383	6 775	3 348
1935/6	1 113	2 287	940	31 404	3 035	5 348	10498	5 088

Sources:

- Barker, H.A.F 1962
- Bureau of Census and Statistics, 1963.

When analysing the period from 1918/19 to 1932/33 when the official statistics were available, it is apparent from Table 2.1 that the average value of total assets (fixed assets plus machinery) per factory increased from £ 1 330' to £ 2 740', the average number of employees per factory increased by almost the same ratio, from 13,6 to 26,2. Over the eighteen-year period, the capital/labour ratio thus shows a slight deterioration from 97:1 to 104:1. The average wage per employee in 1932/33 (£ 90) was marginally higher than in 1918/19 (£ 78), though the value of output per employee declined by 20 percent. Note should be taken that the years

1918/19 and 1932/33 might not be suitable for comparison, the former being during the First World War and the latter at the end of the great depression.

The diversification of the industry's products had not progressed very far at that stage. Men's and boys outerwear in the form of ready made suits, flannel trousers, jackets and overcoats constituted the largest section, in which the Witwatersrand was easily the most important producing centre, followed by Cape Town, Port Elizabeth, East London, King Williams Town and Durban (Barker, 1962: 137). Shirt and sleepwear manufacture was well advanced, with Cape Town being the largest centre. The making of both men's and women's underwear was developing fairly rapidly in Cape Town and Johannesburg, and ties, hats, caps and hosiery were all being produced in large quantity. Knitwear was made in Johannesburg, Cape Town, Port Elizabeth, East London and Durban, though not on a large scale. The first important dress factory commenced operations in Johannesburg in 1931 (Barker, 1962: 138).

2.3.2 **The period from 1929/32 to the Second World War.**

It seems probable that the clothing industry, in common with other industries both in South Africa and elsewhere, managed to derive some benefits from enforced economies and higher productivity standards achieved during the depression. At the end of 1932 costs of production in this industry were extremely low, competition very keen and efficiency high in mining, agriculture, secondary industry and economic activity generally. Although there was considerable unemployment, conditions had compelled attention to factors tending to reduce costs and increase efficiency, thus preparing the ground for taking full advantage of the abandonment of the gold standard on 28 December 1932 (Barker, 1962: 20). The circumstances of the great depression and the succeeding few years appear to afford interesting corroboration of the economic concept that conditions of depression tend to maximise industrial efficiencies.

With reference to Table 2.1, over the period of three years (1929/30 to 1931/2), the number of factories increased by 0,4 percent, wages and salaries by 10,9 percent, the value of gross output by 2,4 percent, the value of machinery and plant by 17,4 percent and the number of workers by 29,1 percent (Barker, 1962: 21).

It is enlightening to compare these results with the corresponding one for the succeeding three-year period, 1932/3 to 1936/7. During this period the number of factories increased by 35 percent, wages and salaries by 56 percent, the value of gross output by 55 percent, the value of machinery and plant by 41 percent and the

number of workers by 45 percent (RSA, 1964: M-29). The 1930's saw an increase in the size of the clothing industry and its volume of output and the expansion of the range of its products. The horizontal spreading of products of the industry in this period was no doubt a result of the growth in demand due to an increase in the population and some improvements in standards of living during the period 1932 to 1940, coupled with the effects of the 1925 introduction of a policy of tariff protection to safeguard the competitive position of the industry (Barker, 1962: 22).

2.3.3 The period of the Second World War (1939/45) and the post war years to 1948

The impact of war and immediate post-war conditions on the clothing industry was felt mainly in the related spheres of equipment and material supplies, increased demand for defence and lowered demand for civil clothing and price regulation (Van Eck, 1951: 59). Although the government assumed very wide powers immediately after the outbreak of the war, it was used very sparingly for the first few years. On the side of material supplies, even after the war, the control measures were conditioned as much by the need for ensuring that important commodities were used for essential purposes, as by any other factor. The subject of the industry's material requirements to control and the obligation to obtain certificates for virtually all needed importation could hardly be anything but burdensome to manufacturers. New difficulties and anxieties were constantly cropping up and production planning in the ordinary sense was virtually ruled out (Van Eck, 1951: 58). The wartime actions resulted in the loss of shipments through enemy actions that could not be foreseen. However, Barker (1962: 35) states, "*in all circumstances the government's system for controlling supplies was highly successful in keeping the industry going throughout the war and at an increasing tempo*". During the five year period between 1939/40 to 1944/45 the number of clothing factories increased by 66 percent and the number of employees by 45 percent. At constant prices, wages and salaries increased by 108 percent, the gross value of output by 76 percent and the value added by 91 percent (Barker, 1962: 35).

Table 2.2. Wholesale and retail clothing establishments

Year	Establishment No.	Value of machinery, plant & tools £000	Employees No.	Salaries & wages paid £000	Gross value of output £000	Value added to materials £000
1932/33	824	668	21 616	1 947	6 775	3 348
1938/39	1 154	1 115	34 405	3 640	12 950	6 263
1944/45	1 310	1 497	48 825	9 666	36 108	17 264
1948/49	1 450	3 756	62 745	15296	58 564	26 988

Source: Bureau of Census and Statistics, 1963.

Despite the overall growth in production, the increases were not evenly spread over the range of products. Considerable development took place in women's and girls' outerwear production and in both women's and men's underwear. It seems that the uneven development of the industry at this stage was induced by the distortions of the wartime economy, partly on the side of demand and partly on account of difficulties in obtaining supplies. An important factor was the many men and women in uniform and another was those not in uniform that tended to lean towards utility type clothing and maintain smaller wardrobes (Barker, 1962: 44).

As has generally been the case in other countries, South Africa's clothing factories were initially attracted to the main centres of consumption in Johannesburg, Cape Town, Durban and Port Elizabeth. The pattern remained the same for some 30 years, from 1910 to 1947, until the first significant movement towards diversification occurred with the establishment of branch factories in Kimberly and Kroonstad. The next decade saw appreciable delocalisation of the industry with the establishment of 14 factories - mostly independent undertakings in rural areas at Umtata, Standerton, Charlestown, George, Port Shepstone, Ladysmith, Villiers and Hammarsdale (Barker, 1962: 137 -138).

2.3.4 The period 1948 to 1957

2.3.4.1 Introduction

During the period 1947/48 to 1953/54, after allowance for price changes, the value of output of clothing factories increased by 25 percent. Employment increased by 48 percent over the same period. The profits were on average 15 percent lower in 1953 than in 1948. A considerable volume of clothing was still imported, although the import volume in 1954 was about 32 percent below the abnormally high levels of 1947 and 1948 (Barker, 1962: 49).

In order to maintain turnover and ensure the optimal use of capacity, several large factories extended their production lines to produce items they had not previously made. This led to the making of women's coats and costumes, sport dresses, blouses and skirts, swimwear, children's clothing and ties, by manufacturers of men's suits, shirts and lingerie (Barker, 1962: 78).

2.3.4.2 Import control

While the purpose of the wartime government action was to ensure the procurement, optimal use and distribution of essential commodities in the face of the limited foreign supplies and shipping facilities, the post-war control was to reduce the imports of unnecessary items. In 1948 the government published a list of unessential and luxury items, which were prohibited from being imported. According to Barker (1962: 50) this list was the forerunner of the prohibited or restricted list.

2.3.4.3 Prohibited list

The prohibited list was published in 1949 and included several clothing items such as suits, dresses, shirts, pyjamas, ties and shawls (Barker, 1962: 50). However, a number of items were not included, such as underwear, knitted outerwear and ladies' coats and costumes. The government soon realised that the introduction of import control might lead to unrealised price increases and several price control measures were introduced. The intention of the prohibition list was to promote the underlying purpose of conserving foreign exchange and not to protect local industries, *per se* (Barker, 1962: 53).

2.3.5 The Sixties and Seventies

The Bureau of Statistics published the information for the period of the sixties and seventies separately for men's and boy's sector and for the women and girl's sector (RSA, 1964: M-30). The number of establishments for the first group increased by 74, from 244 in 1960/61 to 318 in 1979, while the number of establishments in the latter group expanded by a remarkable 213 new factories from 301 to 514 factories (RSA, 1983: 5). The Steenkamp Report states that the men and boys' sector passed through a period of consolidation between 1952/53 and 1960/61 and therefore the limited expansion during the next period was understandable (RSA, 1983: 6). However, the report went on to refer to the steady development in the women's and girl's sector during the 1950's and its rapid development thereafter.

Employment in the men and boy's sector expanded by 30 525 or 102,9 percent from 29 673 in 1960/61 to 60 198 in 1979. Although the women and girl's sector employed less than the men and boy's sector, their employment expanded by 148,1 percent from 19 202 in the former period to 47 645 in the latter period (RSA, 1983: 8).

The Central Statistics Services published the information for women and girls' and men and boys' separately for the period 1952/3 to 1993. This is summarised in Table 2.3 and 2.4.

Table 2.3. Women's and Girl's sector

Census year	Establishments No.	Employees No.	Salaries & wages paid £000	Gross output £000	Net output £000	Value of land, buildings & machines £000
1952/53	42	16 294	10 563	39 803	29 095	8 154
1955/56	297	17 775	12 395	49 798	22 007	3 252
1960/61	301	19 202	13 625	54 429	24 986	4 324
1965/66	-	28 662	22 478	93 458	41 598	7 191
1970	395	35 306	32 333	127 658	58 059	9 890
1976	499	45 441	66 811	280 682	116 973	16 373
1979	514	47 645	87 839	357 088	155 255	26 280
1982	534	60 897	171 181	656 241	296 427	48 552
1985	543	59 133	271 823	919 427	456 115	82 303
1988	629	62 094	378 263	1447452	661 892	97 765
1991 (a)	800	67 265	717 430	2446052	1228647	179752
1993 (b)	699	60 161	885 092	2904088	1389630	515595

- (a) Including furriers and millinery
- (b) Including other wearing apparel.

Sources: Bureau of Census and Statistics, 1963.

Republic of South Africa, 1988 (c)

Republic of South Africa, 1988 (d)

Republic of South Africa, 1994 (e)

Republic of South Africa, 1995 (a)

Republic of South Africa, 1997 (e)

Table 2.4 Men's and Boy's sector

Census year	Establishments No	Employees No	Salaries and wages paid R000	Gross output £000	Net output £000	Value of land, buildings & machines £000
1952/53(a)	275	30 597	18 013	72 714	34 408	13 915
1955/56(a)	255	29 942	18 498	75 017	31 960	8 772
1960/61(a)	244	29 673	19 219	78 899	32 505	9 383
1965/66	-	31 171	26 557	112002	45 244	12 366
1970	215	45 238	34 776	139 565	59 445	14 300
1976	298	61 386	82 029	340 336	149 370	28 250
1979	318	60 198	95 874	357 088	155 255	30 260
1982	375	69 324	187 765	185 635	328 796	61 926
1985	365	60 195	264 081	931 351	413 585	92 277
1988	497	72 560	378 255	1 499 812	624 715	131 947
1991(c)	830	74 323	704 059	2 645 630	1 224 932	216 157
1993(d)	693	58 326	767 995	2 612 755	1 203 885	217 458

Note: (a) Including hat, cap and tie factories

(b) Including tie factories and bespoke tailoring

(c) Including bespoke tailoring

Sources: Bureau of Census and Statistics, 1963.

Republic of South Africa, 1988 (c).

Republic of South Africa, 1988 (d).

Republic of South Africa, 1994 (e).

Republic of South Africa. 1995 (a).

Republic of South Africa. 1997 (e).

2.3.6 Development of the local industry since 1979

South Africa is the main producer of clothing and the leading clothing sector employer in Africa (RSA, 1988(a): 39). For the period 1979 to 1982, South Africa's clothing production represented about 74 percent of total African output, but only about 1,6 percent of total world clothing production.

After the 1979 census year, the industry expanded continuously up to 1981/82. Thereafter the volume of clothing manufactured declined. However, there was a surge in production activity during the first half of 1987 (RSA, 1988(a): 39). Employment also decreased after 1982, when it reached its highest ever employment figures of 141 700 before increasing again to 143 250 in 1988 (ICD, 1995: 2). The reason for the poor performance of the clothing industry in the eighties can be attributed to the poor performance of the South African economy since 1981. The development of the industry is largely dependent upon growth in domestic demand, which thus makes it highly sensitive to the prevailing local economic conditions.

2.3.6.1 Number of establishments

According to the 1988 census of manufacturing (RSA, 1994 (e): 1), the industry consists of 1 416 manufacturers. According to the 1993 census of manufacturing (RSA, 1997 (a): 3) the industry consists of 1 392 manufacturers, which represents 6,2 percent of all manufacturers in South Africa. This compares unfavourably with the 1991 figures of 1 630 establishments representing 6,9 percent of all manufacturers (RSA, 1995(a): 2). Tough competition exists in the labour-intensive clothing industry in comparison to the capital-intensive textile industry that has an oligopolistic nature. The Heyns Report (RSA, 1988(a): 39) asserts that the clothing industry finds itself faced with the first-world cost structure on the one hand, and with a partly third-world demand situation on the other hand.

2.3.6.2 **Employment**

According to the 1993 census of manufacturing (RSA, 1997(a): 3) the number of workers employed by the industry was 11 876. This was more than 22 000 less than the 141 588-job opportunities that was recorded in 1991. However, between 1985 and 1995, the workforce in the clothing industry expanded by 10 389 against the 18 498 job losses in total manufacturing (WEFA, 1996 (c): 38). According to WEFA (1996: 40), more than 80 percent of people employed in the clothing industry are semi skilled.

2.3.6.3 **Investment**

The 1993 census of manufacturing (1997(a): 3) indicates that the industry invested R733 million in fixed assets, which represents 1 percent of the total investment in manufacturing. In comparison with 1991, figure came to R396 million, which was only 0,74 percent of the total book value of fixed assets in the manufacturing industry (RSA, 1995(a): 2). Calculations based on the 1993 census data indicate that the clothing industry is one of the least capital-intensive industries (R6 171), second only to the footwear industry (R5 851) (RSA, 1997(a): 2).

2.3.6.4 **Financial position**

According to the 1993 census of manufacturing, the net profit margin (before tax and dividends), relative to the gross output of the clothing industry, was considerably lower than the figure for 1991 (2,3 percent vs. 3,9 percent in 1991) (RSA, 1997: 36).

2.3.6.5 **Cost structure**

Labour and raw material costs in 1993 represented a major part of the ex-factory selling prices of the clothing industry, namely 29,5 percent and 53 percent respectively (RSA, 1977: 314 & 334). This position has not changed substantially from the 1985 census information of 29,2 percent and 52,8 percent respectively.

2.3.6.6 Net contribution to the economy

The clothing industry's net contribution to the manufacturing sector was marginally lower in 1993 than in 1991. According to the 1991 and 1993 census information the contribution to total manufacturing declined from 3,0 percent in 1991 to 2,9 percent in 1993 (RSA, 1995 (a): 2; RSA, 1997 (a): 3).

2.4 Summary

The purpose of this chapter is to give a historical perspective of the conditions that helped to shape the textile and clothing industry. The chapter also describes the development and employment of the South African textile and clothing industry from the turn of the century up to the current level of activities and performance. Tough competition exists in the labour-intensive clothing industry in comparison to the capital-intensive textile industry that has an oligopolistic nature. The clothing industry finds itself faced with the first-world cost structure on the one hand, and with a partly third-world demand situation on the other hand. The number of firms in the textile clothing industry has declined between 1993 and 2004 and this has led to the drop in the employment level of the industry.

Table 2.5 Employment and remuneration in textile and clothing industry

YEAR	AVERAGE EMPLOYMENT	AVERAGE REMUNERATION (R)
1993	225773	9920815
1994	229515	1071264
1995	236354	1207141
1996	260112	1386819
1997	246612	1404720
1998	215264	1587741
1999	220003	1710979
2000	216839	1656011
2001	2070414	1593671
2002	204367	1642980
2003	195864	1751355
2004	186882	1728971

Source: SSA 2005

The above table shows how employment has been changing from 1993 to 2004. The decline in employment for the period 2003 and 2004 is 4,6 percent while the average remuneration has been increasing for the same period. The restructuring process has been a painful one for the textile and clothing industry. For the ten-year period from 1994 to 2004 there has been a decline in the number of firms in this industry and this had a negative effect on the production and employment. The modernization of capital equipment is also important but has an effect on labour although it allows the country to build a competitive and modern textile and clothing industry.

CHAPTER 3

FUNDAMENTAL TRADE THEORY

3.1 Introduction

Economists have developed numerous models to explain why international trade takes place. The models make assumptions, which to a large extent embody strong abstractions from reality in order to isolate the particular influence of some important variable on the pattern and volume of trade. This chapter concentrates on why some nations succeed and others fail in international competition. Another question to ask is why a nation becomes the home base for successful international competitors in an industry. A large body of literature exists in which economists attempt to test various aspects of the theory of comparative advantage. In this chapter an attempt is made to review a small subset of the most important studies.

The principal economic goal of a nation is to produce a high and rising standard of living for its citizens. The ability to do so depends not only on the amorphous notion of “competitiveness” but also on the productivity with which a nation’s resources are employed.

The role of international trade and the gains from trade discussion is followed by the new trade theories that played a big part in providing the rationale for intra-industry trade and the implementation of strategic trade policy. This chapter examines whether South Africa is able to apply lessons from the new growth theory, particularly in the clothing and textile industry.

3.2 The role of international trade

It is important to demonstrate the economic importance of international trade to the overall economic activity of nations. The importance of world trade is demonstrated by the fact that international trade is growing faster than the world production (IDC, 1993: 3). During the period 1963 to 1979 international trade (real exports) expanded by an average of 11,8 percent per year, while global growth in real output averaged 6,1 percent per year. This trend continued after 1979, although economic activity grew at markedly slower rates. This gives a strong indication of the tendency towards increased international trade and the international integration of economies (Markusen, et.al. 1995: 7).

Thirlwall (1979: 331) underscores this tendency, in that growth rates of developing countries since 1950 correlated better with international trade performance than with any other single economic indicator. However, the export performance of the developing countries has continued to lag behind that of the developed industrialised countries. Throughout the 1950's and 1960's the volume of exports from developing countries grew at a rate of 5 percent compared with 8 percent per year for developed countries. The discrepancy in the rate of growth was even wider in value terms, causing the developing countries' share of the total value of world trade to fall from 28 percent in 1950 to 16 percent in 1972 (Thirlwall, 1979: 331).

The volume of international trade that exists, and its rapid growth, must be founded upon tangible economic benefit it must hold for the world's community of nations. For the firm of country to produce goods in large quantities, the individual producing entity should apply division of labour and specialisation should be encouraged. The maximisation of output, and therefore the optimisation of economic well being in terms of real income per capita, is based on inter-dependence and specialisation (Walter, 1968: 45).

A fundamental concept in international trade theory is comparative advantage. Competitive advantage is created and sustained through a highly localised process. Differences in national economic structures, values, cultures, institutions and histories contribute profoundly to competitive success. As will be made clearer at a later stage, the economic characteristics of nations and commodities combine to explain the patterns of international trade. For example, clothing represents a strong net-export good for nearly all the developing economies and a strong net-import good for all the developed economies. Clothing is the best example of a good that is produced cheaply with a relatively abundant supply of lower-skilled labour. Thus, it appears that the technological characteristics of production functions interact with factor supplies to help determine comparative advantage (Markusen, et. al., 1995: 12).

3.3 **The gains from trade**

With few exceptions, most models point strongly to the conclusion that a country in a state of free trade likely enjoys substantially higher welfare than it would in isolation (Markusen, et.al., 1995: 217). This view is shown in the classical and Heckscher-Ohlin models, in which the ability to trade at world prices allow nations to specialise their resources along the lines of comparative advantage and allow consumers to benefit from cheaper import prices in those goods in which comparative advantage is absent. Additional gains from trade come from rationalisation of industry, greater economies of scale, improved quality, and enhanced

competition.

In practical terms, it is not difficult to see the wisdom in the view that free trade is superior to self-sufficiency. International trade allows a nation to raise its productivity by eliminating the need to produce all goods and services within the nation itself (Porter, 1990: 7). A nation can therefore specialise in those industries and segments in which its firms are relatively more productive and import those products and services where its firms are less productive than foreign rivals, in this way raising the average productivity level in the economy. Imports and exports are integral to productivity growth.

Numerous studies show that developing economies that are more open to trade undergo economic transformation and growth more rapidly than those developing countries that are relatively inward-looking and protectionist (Holden, 1993). Since the 1960's, the export-orientated economies of Asia, such as Korea, Hong Kong, Taiwan and Singapore, have performed markedly better than countries in Latin America and Africa (Markusen, et.al., 1995: 218). The key difference is that the former countries have generally exposed their industries to competition at world relative price levels, while the latter nations sustained relative prices above world relative price levels through tariff protection.

Balassa (1977) employ a technique to investigate the extent to which countries maintain comparative advantage in manufactured goods in general. He calculates indices by dividing a country's share in the exports of a given good category by its share in the combined exports of manufactured goods. However, Balassa's procedure in determining goods for which a country has a comparative advantage is simplistic because the mere fact that a country exports a particular commodity, it cannot be taken as proof that this is where its advantage lies.

According to Thirlwall (1979: 333) gains from trade are divided into static and dynamic gains. The static gains are those, which accrue from international specialisation according to the doctrine of comparative advantage. The dynamic gains are those, which result from the impact of trade on production possibilities at large. Economies of scale, international investment and the transmission of technical knowledge would be examples of dynamic gains. In addition, trade can provide an outlet for surplus commodities, which brings otherwise unemployed resources into employment and also enables countries to purchase goods from abroad, which can be imported for two reasons. The first is that if there are no domestic substitutes, the ability to

import can relieve domestic bottlenecks in production. The second is that imports may simply be a more productive alternative than using domestic resources to produce the same good.

3.4 New explanation of trade theory

While the insufficiency of factor advantage in explaining trade is widely accepted, what should replace or supplement it is far from clear. Since the 1970's substantial development has taken place in the theory of international trade. The neo-classical theory has not been totally discarded, but theorising has been modified to take into account such factors as increasing return to scale, and important market and product differentiation (Porter, 1990: 16). The new trade theory offers a different view of the causes of international trade and is able to explain why it is profitable for countries with similar factor endowments to trade with each other. These theories are not rooted in *ex ante* differences in comparative costs as the sole vehicle for mutually beneficial trade.

Paul Krugman (1981) has very elegantly demonstrated that trade in similar commodities can arise because of increasing returns. He has elaborated his models to include a “home market effect” i.e. a tendency for countries to export those goods for which there is a large domestic market. He also shows that oligopolistic firms, when faced with competition from each other in their home markets, could generate trade, which could benefit both their countries (Krugman, 1981). Much of the new trade theory is used to explain the existence of what is termed intra-industry trade, while traditional theories explain inter-industry trade. This is not to say that differences in both factor endowments and increasing return to scale have not interacted in models of trade where the amount of intra-industry trade is determined by the degree of similarity between the factor endowments of countries (Krugman, 1981).

The introduction of imperfect competition into these new models can also be explained by increasing returns to scale at the firm level. For example, unit costs in industries, which initially require large outlays of buildings and equipment, may fail to such an extent that new entrants to the industry are severely limited. In addition, as technology is given a great role in these new models (Grossman, 1990), Research and Development expenditures, which require being initially large, operate in a similar fashion in reducing unit costs. Furthermore, learning by doing also reduces the marginal costs of production. The new trade theories have also stressed the importance of external economies, especially in the form of spillover in knowledge

from the high technology industries. Empirical evidence indicates that these knowledge spillovers are far more significant than traditional trade theories thought possible (Baldwin, 1992).

The South African trade pattern can be described by both the traditional and new trade theories. The Heckscher-Ohlin-Vanek theorem in terms of the factors of production embodied in exports and competitive imports has been shown to hold for South Africa if the country is considered to be relatively well endowed with labour rather than capital *vis-à-vis* its trading partners. Using a Leontief test it is calculated that in 1967 the capital-labour ratio in competitive imports was R3 607 per man, and R3 042 per man in exports (Holden, 1983). These results have to be carefully interpreted particularly in the light of findings that South African export manufactured goods are capital intensive. This dilemma can be resolved by bearing in mind that an appropriate test of the theorem is to compare factor intensities between total exports on one hand and import substituting activities on the other hand, rather than export manufactured goods alone.

Whilst Heckscher-Ohlin trade is occurring in South Africa, particularly if natural resources are included as an additional factor of production, intra-industry trade also occurs. Simson (1987) calculated that 54 percent of South African trade in 1977 took the form of intra-industry trade, with above average intra-industry trade occurring in oil and fats, prepared meats, tanning and dyeing extracts, clothing, furniture and base metals.

Elsewhere, as well as in South Africa, it has proved difficult to quantify the role played by economies of scale in intra-industry trade (Tybout, 1993 and Simson, 1987), and the degree of aggregation in the R & D statistics makes it difficult to ascertain the role of R & D in intra-industry trade generation. The statistics show that R & D expenditure has been concentrated in machinery where intra-industry trade has been low, and in the chemical industries where intra-industry trade was found to be moderate. Clothing, on the other hand, with a higher than average index of intra-industry trade, had very low levels of R & D expenditure.

3.5 Explanations for intra-industry trade

The following are the most important explanations of intra-industry trade.

3.5.1 Industrial classification

Some trade flows are misleadingly measured as intra-industry trade because of the industrial classification system. For example, the United States exports fruits and vegetables during summer, when they ripen and

imports fruits and vegetables produced in the winter from countries in the southern hemisphere. This trade, based on seasonal growing variations, could easily be explained in a Heckscher-Ohlin framework by considering climate as a factor of production. However, trade flows are typically reported on a calendar-year basis, so both imports and exports of identical goods exist within these trade categories. A second, and more significant example lies in the common phenomenon of high-wage nations producing sophisticated components of electronic products, exporting them to low-wage nations for assembly into final goods, and then importing the final products. The point here is that such trade is largely based on differences in wage costs, suggesting that it is generated by Ricardian or Heckscher-Ohlin factors. However, both the export of components and the import of final goods tend to be counted in the same trade categories, resulting in intra-industry trade (Markusen, 1995: 204).

3.5.2 **Transport costs**

For many products, transport costs are high in relation to their market value. High transport costs imply that markets for such goods are limited geographically. It is quite possible that localised markets exist across national borders, generating two-way trade. Intra-industry trade can be a result of political and geographical decisions on where to draw national borders (Markusen, 1995: 204 - 205).

3.5.3 **Product differentiation**

One of the strongest assumptions in traditional trade theories is that imported and domestic goods are completely homogeneous and perfect substitutes in consumption. However, many commodities, especially manufactured goods, are differentiated by style and quality (Markusen, 1995: 205). Thus, the taste for variety and ability to differentiate products provide an explanation for intra-industry trade.

3.5.4 **Increasing returns to trade**

Intra-industry trade associated with product differentiation is considerably reinforced by the existence of scale economics. Internationally as well as in South Africa, it has been difficult to quantify the role played by economies of scale in intra-industry trade (Tybout, 1993: 443 and Holden, 1993: 222). Tybout maintains that export activity and plant size are positively correlated: but trade liberalisation also leads to heightened

imports and many econometrics studies have found that import penetration is associated with reduced plant size for domestic demand.

3.6 **Innovation**

Classical economic debate has tended to conclude that innovation is essentially a function of market structure, with the intensity of competition being a key issue to consider if innovation in the long term is necessary. Schumpeter (1934) emphasised the role of the entrepreneur and innovation in the development process. Ultimately, however, it is the lag between the creation of knowledge and its adoption and the rate of dissemination of new knowledge, that most directly affect the rate of measured technical progress between countries. For Schumpeter, progress results from what he calls the “process of creative destruction”, which is bound up with innovation and instigated by competition. Innovation, in turn, is the driving force behind competition. For the clothing and textile industries however, it is about innovation, together with the capacity and ability to meet customer needs that are most important.

Porter’s (1990: 554) more recent research on competitiveness emerged with an approach to understand the causes of innovation. The innovation-driven firms not only appropriate and improve technology and methods from other nations but also create them. Research and Development plays an important role in the economy of each and every country and lead to further development and more creative innovation.

3.7 **Competitive advantage**

Firms create competitive advantage by perceiving or discovering new and better ways to compete in an industry and bringing them to market, which is ultimately an act of innovation. Innovation here is defined broadly to include both improvements in technology and better methods or ways of doing things (Porter, 1990: 45). Porter’s research findings suggest that innovation which leads to shifts in competitive advantage are typically driven by five different causes:

- New technologies. Technological change can create new possibilities for the design of a product, the way it is marketed, produced, or delivered and the ancillary services provided. It is the most common precursor of strategic innovation. Industries are born when technological change makes a new product feasible.

- New or shifting buyer needs. Competitive advantage is often created or shifts when buyers develop new needs or their priorities change significantly. Established competitors may fail to perceive the new needs or be unable to respond because meeting them demands a new value chain.
- The emergence of a new industry segment. The opportunity for creating advantage arises when a new distinct segment of an industry emerges or a new way is conceived to regroup existing segments. The possibilities encompass not only new customer segments but also new ways of producing particular items in the product line or new ways to reach a particular group of customers.
- Shifting input costs or availability. Competitive advantage frequently changes when a significant change occurs in the absolute or relative costs of inputs such as labour, raw materials, energy, transport and machinery. This may reflect new conditions in supplier industries, or perhaps the possibility of using a new or different type or quality of input.
- Changes in government regulations. Adjustments in the nature of government regulations in areas such as product standards, environmental controls, and restriction of entry and trade barriers are another common stimulus to innovations, which result in competitive advantage.

Examined from a slightly different perspective, indications are that the push for innovation may come from five different possible sources: customers, factor inputs, firms, supporting industries and government (Porter, 1990: 127). Innovation is therefore not simply a question of market structure in the narrow sense described by Schumpeter. These five sources of innovation describe the primary determinants of competitiveness.

According to Rigby (1993: 14), some types of competitive advantage are more defensible than others. There are basically two types of competitive advantage:

- Natural competitive advantage

This includes such things as indigenous and/or cheap raw materials, low labour costs, a large home market, a sophisticated home market, trading skills, etc.

- Acquired or developed competitive advantage

This includes basic or generalised competitive advantage, which can potentially be acquired by anyone who can pay for it. This includes such things as state-of-the art machinery, training, information on the market and fashion trends, quick response systems, design and transferred technology (e.g. licences).

These are also advanced or specialised competitive advantage, which are difficult for anyone else to acquire and is thus essentially more defensible. This includes such things as new fibres, machinery adaptation and patents. These often involve research and technology development and the creation, or learning by experience, of superior know-how.

South Africa has a variety of natural competitive advantage and can afford to buy into basic or generalised advantages. However, the real issue of concern is the choice of which advanced and specialised competitive advantage to acquire so that, when blended with the natural competitive advantage, will produce a winning combination in target products / markets.

3.8 **Summary**

This chapter shows that South Africa just like other countries cannot operate in isolation from the rest of the world. Trade orientated policies in economic development have been propagated in a way that favours foreign trade orientated policies. There is substantial international evidence that economies obtain significant gains from trade. With few exceptions most models point strongly to the conclusion that a country in a state of free trade likely enjoys substantially higher welfare than it would in isolation (Markusen, 1995:217). This view is shown in the classical and Heckscher-Ohlin model in which the ability to trade at world prices allow nations to specialise their resources along the lines of comparative advantage and allow consumers to benefit from cheaper import prices in those goods in which comparative advantage is absent. Additional gains from trade come from rationalisation of industry, greater economies of scale, improved quality and enhanced competition.

The enhanced internationalisation of trade has two opposite economic welfare implications for South Africa. On one hand, the increase generates standard competitive advantage gains (specialisation and exchange) and non-competitive advantage gains (pro-competitive, exploitation of economies of scale, increased variety and lower factor market adjustment costs of trade).

Additionally, liberalisation of trade could be consistent and complementary to sustainable development in the context of the Doha Development Agenda (DDA). On the other hand, the increased tradability may lead to higher factor market and adjustment along the lines of Stolper-Samuelson or vertical differentiation model of Flam and Helpman.

CHAPTER 4

INTERNATIONAL TRADE POLICY AND ECONOMIC DEVELOPMENT

4.1 Introduction

International trade policy is a set of policy measures used to influence a country's economic relationships with the rest of the world and is generally regarded as one of the most important components of a government's economic policy package (Du Plessis, 1996: 157). International trade has an important impact on production patterns through the principle of international specialisation, which it introduces.

This chapter shows the policy framework for industrial development and defends the rationale behind industrial support, which is a pre-requisite of trade reform. It also examines the liberalisation processes to which clothing and textile industries are subjected. This is followed by an examination of the role of the Government in the new trade regime and labour market regulations. The role of the Government in industrial development is examined with specific reference to sector planning, co-ordination, promotion and technological development. This is then finally followed by an outline of the experience of economic management and industrial performance in the 1990s.

4.2 A rationale for industrial support

Industrial policy is a major point of contention in the economic debate in South Africa. At stake is the question of what role the state should play in the promotion of industrialisation. Should it intervene to actively promote industrialisation, a neutral policy regime allows market forces to direct the process? It is argued that, both in theoretical terms and based on the comparative experience of other countries, there is an important role for the state in guiding the industrialisation process and that selective or targeted support provides an important means for achieving the aims of the government (Black, 1993: 203). These views are explored in a critical review of South Africa's trade policies and concessionary financing of industry by the state.

Industrialisation may be viewed as a process of becoming internationally competitive in the production of manufactures, where competitive means ultimately out-performing imports in the home market or invading export markets at a set of production prices determined by demand and supply (Holden, 1990: 10).

The current neo-liberal orthodoxy, combining Hayek's ideas on minimal government intervention and Friedman's monetarist approach to inflation management, has been extremely influential in determining the framework within which the government should act. General equilibrium theory has been widely used to demonstrate how competitive markets achieve Pareto optimal efficiency in the allocation of production resources. Many contemporary policy makers who see industrial policy as marginal or irrelevant have endorsed the neo-liberal view that markets are efficient while governments are inefficient. Yet, perfect competition can only be achieved with perfect information and no externalities or irrationalities affecting consumers and producers. Although the World Bank (1993: 7) has accepted that selective intervention has in fact played a major role in East Asian industrial development, they argue that industrial development may have been even more rapid had governments not intervened in the first place.

It is generally acknowledged that government intervention may not always be beneficial or cost-effective. However, there is growing evidence that selective intervention may be an important means of combating market failure and promoting industrial competitiveness. Joffe, et.al. (1994: 56), Shapiro and Taylor (1990: 861) and others who defend the concept of government intervention emphasise the importance of moderating market transactions in an open, honest, and equitable manner. The advocates of selective intervention appear to favour a streamlined, non-bureaucratic government, pointing out the advantages of fostering modern welfare principles over certain market transactions.

Governments should play a direct role in those areas where firms are unable to act (such as trade policy) or where externalities cause firms to under invest (Porter, 1990: 620). Externalities occur where the benefits to the nation as a whole exceed those accruing to any single firm or individual, so that private entities will tend to under invest in such areas from the perspective of the nation. The government is likely to adopt a new management role to help regulate and promote the industrial sector. The important thing to consider is the capacity of the government to perform this role in a manner that ensures optimal resource allocation. Government failure is as important as the issue of market failure. Slater and Jackson (1996: 1) argues that although selective intervention has been an important factor in the development of newly industrialised economics, a number of interventions were ill conceived and poorly implemented.

Slater and Jackson (1996: 2) shows how Thailand, for example, achieved impressive economic success with an average per capita growth of almost 4 percent per annum in the mid 1950's to the late 1980's. Much of this success is attributed to manufactured exports, with textile exports growing fourfold between 1983 and 1989 while exports in plastics, shoes and integrated circuits more than doubled over the same period. A neo-liberal interpretation of this success would credit what is seen as a *laissez-faire* approach to economic development, where government intervention is seen as both incoherent and irrelevant. Slater goes on to demonstrate that the Thai government had successfully pursued a strategy of selective intervention in industrial policy. The strategy contributed to the building of a strong corporate sector capable of restructuring relations with the government and export driven industrial development guided and promoted by government departments and agencies.

The model of Thailand implies a balance between the market as an allocative tool and government as a moderator of market imperfection rather than an instrument for allocation. In most countries the government continues to play an important role in industrial development, new institutional arrangements and the introduction of new types of expertise. Good examples are general education, environmental quality and some type of R & D that boost productivity in many industries.

Shapiro and Taylor (1990: 865) say that if public intervention is designed to assist rapid industrial growth it is crucial that the government has an adequate understanding of the industrial process. He emphasises the importance of strategic clusters in industry and the crucial role of marketing, information networks, brand management and inter-firm linkages.

Globalisation of trade and industry have brought changes that serve to increase the complexity and length of industrial maturity, a factor that has a significant bearing on the precise nature and form of indirect provision of government support. This is particularly true where intervention is considered to be more appropriate during periods of strategic change, where firms enter or alter production and where the focus is on the emergence of new firms and small enterprise. Some would therefore argue that in such circumstances public intervention should be selective.

This highlights the important issue of ensuring the correct timing for each stage of the reform process. In most situations the reform package falls into two categories. The first is stabilisation and the second is adjustment. Stabilisation tends to include fiscal and monetary severity, achieved through public spending

cuts, tax increases and credit restraints combined with devaluation to stimulate exports and price shifts in the terms of trade. Structural adjustment usually involves privatisation, trade and financial markets reforms and the deregulation of labour markets. These policies have to be carefully and sensitively implemented to avoid undue stress, especially since the costs of adjustment are experienced fairly quickly while the benefits accrue over a long time.

There is a continued lively debate on the effect of different forms of intervention. It is of concern to look at the capacity of government to operate with new roles and relationships within a more complex industrial development environment. Evidence shows that where the government has developed this capacity, it can greatly facilitate industrial competitiveness. Slater and Jackson (1996: 4) summarised the merits of the Thai economic bureaucracy in helping to establish industrial efficiency, technology and scale economy. He also shows that where industrial policy has been placed firmly in the hands of the market, as in the case of Argentina, Mexico and Turkey, the results can be problematic.

4.3 Trade reform and regulations

One of the traditional areas of government intervention in the industrial sector has been in the form of trade and investment policy, designed to encompass various protective measures aimed at fostering industrial development through the application of numerous tariff and non-tariff barriers and investment restrictions. A large number of developing countries have undertaken trade reforms as part of a wider package of stabilisation and adjustment, designed to accelerate economic and industrial growth (Industrial Development Corporation (IDC), 1990: 3). Trade and investment reforms have been fundamental to the process of liberalisation and structural adjustment and thus the institutional implications associated with the implementation of these reforms are fundamental to the analysis of the changing role of government in adjusting economics.

Economists and policymakers in developing countries agree that governments need to provide infrastructure, promote market efficiency and foster a stable macro-economic environment (World Bank, 1987: 8). Trade policy is a much more contentious issue and needs to be taken into consideration in each and every country.

Economic liberalisation has generally involved a reduction in government and the removal of investment controls, licensing, import quotas and other restrictions, which have been replaced by tariffs at reduced levels

and rates. This has resulted in a general decline in overall protection and a shift by governments away from the application of uniform protective measures to more selective forms of industrial and trade intervention (Slater and Jackson, 1996: 16). There has been a change in the actual policy instruments used by the government to apply selective intervention, with greater emphasis now being placed on certain aspects of sub-sector trade management, management, negotiation and strategic regulation. This shift in orientation has important institutional implications in an environment where governments are now concerned with balancing competition pressures and selective protection (World Bank, 1997: 167). This is particularly the case in the clothing and textile sectors that continue to operate within a globally regulated market.

A number of recent studies show that trade reform may generate mixed results in terms of industrial output and export growth (World Bank, 1993: 295 & 1997: 144). This has brought forward further complications. There are a number of problems associated with trade reforms. The report for these problems is brought forward by Slater and Jackson, (1996: 17) and contains an analysis of a sample of countries that have undergone structural adjustment and trade policy reform. In analysing the performance of trade policy reforms, the report shows that accelerated real export growth in the 1980's tended to coincide with the expansion in global economic activity.

4.3.1 Trade reform and trade liberalisation

Trade reform and liberalisation as discussed here refers to measures that move the economy closer to neutrality and greater liberty. A neutral trade regime is one where equal incentives are given to production for the domestic and export markets. A liberal trade regime is one that replaces government controls and direct intervention in the form of qualitative restrictions with tariffs, reduces the level of protection and opens the economy to international trade (Holden, 1992: 250).

Neutrality does not necessarily mean the absence of import tariffs and export subsidies. The incentive given to exporting and domestic production is a weighted average across different export and import competing activities. Within groups neutrality may not be achieved and the variance of incentives within groups becomes an issue. The benefits of uniformity of incentives as opposed to selectivity are addressed.

The role of the government in this task is quite different from its previous attempts to control the direction of investment through licensing and the protection of domestic producers through strict regulation of imports.

The reduction in trade tariffs after 1992 has served to make the domestic market more competitive and has at the same time improved access to foreign technology and goods. The task of the government in this situation is to manage the economy effectively through selective intervention, designed to address obvious weaknesses and failures arising from reform.

The trend towards labour intensive export manufacturing is now underway in almost all developing countries, including those with substantial domestic markets such as India, China, Indonesia and Pakistan. This trend is associated with substantial flows of inward investment, designed to modernise plant and machinery and inject new skills and expertise (Slater and Jackson. 1996: 20). In the textile sector this has meant a drift away from processing towards the manufacture of hosiery and clothing. Where processing industries continue to operate, as in China, India and Pakistan, they are now subject to greater competitive pressures as governments cease to regulate in their favour. In countries with a significant domestic market, such as India, the pressure for liberalisation may have taken longer to manifest itself but could not be avoided. Under the traditional regulatory regime industrial performance had been fairly dismal with industrial production growing at less than 5 per cent per annum within an environment plagued by inefficiency, under-utilised capacity, high costs and poor quality (Slater and Jackson. 1996: 20). This in turn, led to a situation where industry was both unable and unwillingly to export, with a consequent adverse impact on foreign exchange earnings. As a result mainly of world trade beginning to grow rapidly during the 1960's and 1970's, India's share of world trade declined from 2 percent in 1950 to 0,4 percent by 1980 (Slater and Jackson. 1996: 21). The transition from early protective regulation and control to strategic regulation and support in India was a gradual process, and this is applicable to all countries.

There is evidence that trade liberalisation may not always result in the rapid growth associated with an increase in manufacturing output. Ul Haque (1995: 145) argues that trade liberalisation in India has been responsible for a process of premature de-industrialisation. He shows that the main propeller of accelerated growth in industry since the mid 1980's have been domestic activity rather than foreign trade. Having gone on to de-segregate industry into various resource-related categories, he examines the detailed impact of foreign trade and domestic use on each category, demonstrating that in all but the consumer goods sector, foreign trade has had a negative impact on both value added and employment.

He concludes that trade may be no more than one among a number of variables affecting growth and may not be the dominant factor. It is possible that these findings have more to do with the way that trade reforms

have been implemented than with reform *per se*. He underlines the importance of administering reforms in such a way that growth in value added and employment is maximised across all sectors.

Another complication associated with liberalisation has been that, as more countries around the world begin to engage actively in export manufacturing there has been a resurgence of protectionist pressure by the West in response to growing imports from cheap labour economies. Nevertheless, the nature and form of this protection is subtly different in its expression as supra-national or regional rather than national. (International Trade Centre (ITC), 1994: 71).

As the products from newly industrialised countries (NICs) begin to penetrate Western markets, there has been a trend in industrialised countries, especially the United States of America, to maintain restrictions on imports from least developed countries (LDCs) and at the same time, demand from these countries for concessions *via* a Generalised System of Preferences (GSPs). The benefits of the GSPs have in practice been highly concentrated, with the main beneficiaries being Mexico, Brazil, Thailand, Malaysia and the Philippines, favouring non-traditional exports (Slater and Jackson, 1996: 21).

A particularly important aspect of trade policy that is relevant to this study relates to the multilateral tariff reduction within the World Trade Organisation (WTO). The General Agreement on Tariffs and Trade (GATT) was devised in the post-war period as a means of generating equity through multilateral tariff bargaining in response to specific bilateral negotiations. Some of the most sweeping cuts in tariff barriers were negotiated during the Kennedy Round in 1967 when participants agreed to weighted average cuts of 35 percent (Slater and Jackson, 1996: 23). These cuts were extended in the Tokyo Round (1973 - 1979) where the major industrial countries agreed to a further one-third reduction over an eight-year period. The Uruguay Round (1986 - 1993) highlighted the difficulty of expanding regulatory reforms to cover the General Agreement on Trade and Services (GATS), Trade Related aspects of Intellectual Property rights (TRIP) and Trade Related Investment Measures (TRIM's) (SRI, 1999: 79).

In spite of a general consensus on multilateral tariff reduction, countries like the USA have made increasing use of voluntary export restrictions with specific trading partners. Such restrictions, which began in 1957, on the import of cotton textiles from Japan have gradually expanded over the years to cover a number of bilateral arrangements, limiting the rate of growth of textile imports into the USA as expressed in the Multi Fibre Agreement (MFA) (Pepper and Bhattacharya. 1991: 68). The rationale for such an agreement has been

to delay the contraction of domestic textile manufacturing. However, protection has not always had the desired effect, since more than one-third of the entire USA textile and apparel industries in 1982 were less than 6 years old, despite 25 years of protection (Slater and Jackson. 1996: 23). While many economists argue that such restrictions have done little in practice to benefit the concerned industry, the policy has imposed large costs on consumers.

The MFA has played a very important part in shaping the clothing and textile industry in almost all the NICs in Asia and elsewhere. As investors reached their production limits within any one country they migrated to neighbouring states with liberal trade regimes, to take advantage of prevailing quota ceilings (Ul Haque, 1995: 175).

Although there are distinct benefits to these kinds of arrangements in the early years of production, there are a number of negative consequences that quickly become apparent as firms are constrained from expanding beyond their targets and governments allocate quotas between firms, according to political criteria. In the textiles sector the manipulation of MFA quotas by governments represents a major intervention on the part of any government and will have to be carefully examined in each of the countries. There is strong evidence that governments have used quota allocations within the clothing and textile industry to pursue other policies such as industrial decentralisation and employment generation with severe negative consequences to the host sector (Slater and Jackson. 1996: 23).

The consequences of all this is that while countries throughout the world have come to accept the changing role of government in relation to economic development away from protection and towards promotion, there continues to be a residual regulatory role under the auspices of the MFA. The implication for government, as far as the clothing and textile industry is concerned, is that it must continue to manage trade restrictions within a broader economic environment of deregulation.

Another important institutional implication derives from the shift in emphasis between the operation of uniform protection and selective intervention. In most cases trade liberalisation has involved both a reduction and simplification in the level of protection (IDC, 1990: ii). The administrative advantages of operating a standard uniform policy are obvious in terms of cost, simplicity and predictability.

4.3.2 The government and the new trade regime

The effective application of selective intervention is a difficult task requiring considerably more skill and capacity than that which is required for the setting of uniform restrictions of either a prohibitive or more liberal nature. Many governments consequently prefer to avoid the application of more detailed selective measures altogether. Governments find themselves under pressure to re-instate selective protection from time-to-time, with unsatisfactory consequences. Pressures in Pakistan, where the cotton industry accounts for 55 percent of total exports, illustrate this point. The combination of a serious drought and a cotton virus in 1993 led to a dramatic decline in cotton output (Slater and Jackson, 1996: 24). The powerful All Pakistan Textile Mills (APTMA) lobbied hard for government intervention to restrict the export of raw cotton in order to ensure a sufficient supply for domestic spinners and weavers (Slater, *et. al*, 1996: 24). After initial pressures to resist intervention, the Pakistan government banned exports to combat shortages affecting the hosiery and garment manufacturers. When the government intervened again, it faced severe criticism, this time from APTMA members who were now blocked from filling export orders. The restrictions on yarn exports resulted in one-fifth of the spinning industry's total capacity being laid off. The net effect of government action was to invite criticism from all quarters.

This Pakistan case illustrates the difficulty of applying selective intervention in an attempt to protect any one sector. Once restrictions had been applied, they were bound to impact on different producers in the supply chain. At the same time, there has been an underlying problem of inconsistency on the part of the state towards the sector as a whole. In the past, the industry expanded rapidly due to hidden subsidies and cheap cotton, resulting in an expansion of unproductive capacity (Slater and Jackson, 1996: 25).

As adjustment policy begins to hold in the textile sector (just like in other sectors), governments will have to be sufficiently resilient to withstand the social and political pressures that such policies will inevitably generate (World Bank, 1997: 13). Yet, there is little alternative but to maximise comparative advantage by engaging in an open trade system, whilst simultaneously trying to supplement this advantage with maximum competitiveness, to engage in the rapidly expanding global market. As seen from the foregoing, tariffs and other trade restrictions do not encourage nations to exploit their comparative advantage and they simultaneously prevent industry from developing a strong competitive position in a less protected environment.

All this requires a new approach to intervention, based upon an accurate understanding of structural weaknesses and market failures and the dynamic operation of these factors within firms of a specific sector. Trade liberalisation may be an essential precondition for the development of a dynamic export sector, but industry should be well prepared for such reforms (Jayarajah and Branson, 1993: 191).

Evidence from countries such as Korea demonstrates the importance of creating the right conditions through enabling policies designed to assist firms becoming competitive (De Vries, 1983: 43). This further illustrates the importance of co-ordinating trade policy with other forms of strategic support, hence the need for a strong link between the regulatory and the enabling institutions of the state. In both cases intervention has to be tailored to the specific needs of individual sectors, recognising that the process of reaching international competitiveness consists of a sequence of phases which may vary between firms and sectors (Jayarajah and Branson. 1993: 200).

Trade protection may induce firms to enter into production, but may not help overcome other imperfections in finance, technology and manpower (World Bank. 1997: 25). What is required is a set of policy instruments, rather than a single uniform instrument. In some areas it may be desirable to apply trade and investment policies that assist agglomeration rather than fragmentation as a means of overcoming global entry barriers and generating sufficient scale economics to compete in the world economy. Trade liberalisation may have to be phased in, in line with the maturatisation process in different sectors to provide sufficient learning time for each sector to gear up to competitive pressures. As IDC points out, liberalisation must be preceded and accompanied by appropriate enabling policies (IDC. 1990: 10). IDC suggests that one such measure could be a requirement that for firms to qualify to receive domestic protection, they must begin to export. This reservation of protection has in fact been successfully applied in Korea (Industrial Bank of Korea. 1990: 18).

A report by the Board of Tariffs and Trade (BTT) (RSA, 1994 (6): 169) points out that considerable administrative capability is required to pursue successful intervention, which combines both competency, integrity and professionalism. Staff must be trained in the economics of industry with detailed sub-sector knowledge. At the same time, they must be able to regularly monitor and constantly reassess and adjust policies (Slater and Jackson. 1996: 26).

The main implication of this requirement is that government administration must be capable of understanding the industrial development process in depth in order to apply policies that relate to the different stages of growth and maturity. At the same time, the administration must be able to design effective policy instruments and identify appropriate institutional arrangements for implementation. This must be undertaken within a framework designed to limit the possible bias associated with different policy instruments. The administration must also retain the capacity to monitor programme variance and modify interventions where necessary.

4.4 The state and labour market regulations

Labour institutions constitute a critical aspect of industrial development, governing all aspects of the way in which labour is incorporated into the overall production process, including the setting of wage rates working hours and conditions, output levels and work quality. It is important to recognise that formal labour market institutions co-exist with underlying social rules and conditions, which may be as important in determining, overall labour relations as the formal institutions themselves.

In most countries, the single most important factor in the field of labour relations is the government. In many of the rapidly growing free-market economics of East Asia such as Singapore and Korea (De Vries and Brakel, 1983: 43), the government has been responsible for wage-fixing and controlling labour unions. In many countries labour markets are highly regulated by the government, which may implement rules and regulations to protect particular subgroups of workers. Often these rules are enforced through legislation, although where the means of enforcement are absent, such legislation may be more symbolic than real.

In other situations, government may actively seek to prevent labour institutions from exercising real power through legislation aimed at curbing unionisation and wage fixing. Labour markets are often distorted by the presence of institutions, such as trade unions, which attempt to push wages above market levels; hence, government intervenes to force down transaction costs and protect private capital.

In recent years there has been an increasing tendency on the part of government in many countries, to question the economic value of labour laws and collective bargaining agreements, which are seen to cause fundamental rigidities in the labour market (Slater and Jackson, 1996: 34). Indeed, many governments

believe that labour institutions must be firmly controlled, if countries are to remain internationally competitive.

For many economists, however, there is a simple correlation between the extent of labour restrictions (imposed through a variety of controls), over the hiring, laying-off and firing of workers and the cost of production, which have a negative impact on labour demand and employment. In this context, labour institutions are seen as a hindrance to the smooth operation of the labour market that, like any market, should function with the minimum of external interference.

A desire to free up the labour market in order to achieve a high level of growth and employment often assumes the mythical goal of a truly competitive market free of any intervention. Yet, many NICs in Asia, for example, achieved a high level of growth and employment within a constricted labour market governed by substantial repressive intervention (Slater and Jackson, 1996: 34). At the same time it might be wrong to assume from the Asian case that anti-labour intervention will necessarily produce long-term growth, which may depend as much on the consumption of workers as it does on the exports of manufactured goods.

4.5 The enabling role of government in industry

4.5.1 Sector planning and co-ordination

As governments are starting to recognise an important role for the state in enhancing competitive advantage in industry, a key question for policy makers is the extent of intervention required and the form it should take. This notion challenges the view associated with the law of competitive advantage, namely, that industry is best served by non-intervention and that the legitimate role of the state is confined to the promotion of economic stability, the reduction of obvious market failure and the management of distributive justice (Shapiro and Taylor, 1990: 861). As governments recognise that competitive advantage can be achieved through careful strategic positioning within and between industries, there is a new interest in exploring various types of support services to industry.

Careful analysis of the Japanese situation shows that industrial growth did not depend on the exploitation of comparative advantage and the consequent withdrawal of the state from all but macro-economic and welfare management, but has instead been supported by strategic intervention on the part of the state, to optimise

industrial competitiveness (Ul Haque, 1995: 75). Likewise, Korea and Taiwan have adopted a similar approach of strategic intervention to support industrial development. This approach to state involvement in the industrial sector is in sharp contrast to the new conservative orthodoxy promulgated in countries such as the United Kingdom and USA in recent years. Rather than intervening purely in the realm of market failure, strategic intervention requires the state to take a lead role in sector planning and co-ordination. This role is in direct response to perceived organisational failure within broad industrial sectors as opposed to market failure, which is a more familiar point of intervention.

It could be argued that sector planning for industrial development is intended to overcome the structural failures of *ad hoc* and uncoordinated investment choices. The main task of sector planning has entailed the identification of points of maximum strategic influence within a sector that displays significant long-term prospects. Slater and Jackson (1996: 35) have identified a number of prerequisites for effective sector planning:

- Firstly, there must be a suitable leverage point for government intervention where state involvement will have an impact on the entire sector.
- Secondly, it is important that the state has sufficient resources to influence the sector.
- Thirdly, the sector should have minimum efficient scales of production and critical mass to realise significant industrial and regional development.

Assuming these conditions are met, the main role of the state is to guide investment and coordinate support in such a manner as to maximise the returns to the sector. This role has been performed in different ways by different governments through different institutions.

4.5.2 Investment promotion and infrastructure development

One of the main forms of government intervention in the industrial sector of many countries has been concerned with investment promotion in an effort to attract or reallocate investment capital towards specific regions, areas or sectors (SRI, 1999: 150). In a number of industrialised countries these initiatives have grown out of a physical planning tradition associated with regional development policy. In developing countries, investment promotion tends to be more closely associated with attracting external capital within a national, rather than regional, economic context, although this is often complemented by area-specific

investment promotion based on the concept of investment enclosed for export processing and manufacture (SRI, 1999: 92).

The investment promotion role of the public sector entails the formulation, coordination and implementation of strategies designed to attract industrial and commercial investment into a country or region. The main components of investment promotion policy tend to be associated with economic, industrial and social deregulation linked to subsidies and the provision of infrastructure, often on concessionary terms. In an increasingly competitive environment of trans-national investment, governments have been forced to implement ever-increasing deregulation to attract mobile capital. Jobs are rarely matched for the maximum benefit of investors. The main instruments of promotion tend to be packaged in a concessionary box that includes substantial tax-free holidays, full repatriation of profits and exemption from quotas, import restrictions and regulations (SRI, 1999: 14 - 29). It is this situation, which has led many critics to argue that inward investment has done little more than attract mobile capital (Slater and Jackson, 1996: 41).

The other main instrument of investment promotion has been the provision of economic and industrial infrastructure. The emphasis on the development of physical infrastructure for industrial restructuring purpose has been a major feature of economic development and investment promotion agencies over the world.

Broad-based investment promotion activity may incorporate a range of other business support initiatives to complement the task of physical development. Urban regeneration programmes in the United Kingdom (UK), for example, have increasingly started to focus more on ways of supporting and strengthening existing industry, rather than on attracting new industries from outside the locality (KPMG, 1993: 457).

The precise shape and form of these activities will differ according to the industrial or business strategies of any particular government. In some countries these activities may embody a strong sectoral focus, designed to maximise sectoral competition, while in other countries, such activities may be considered interventionist and instead focus on general support in training, finance and counselling (KPMG, 1993: 457).

There are a variety of legal and institutional arrangements for investment promotion as well as related business support services. These arrangements are likely to reflect the changing political and economic climate within a country at a given period of time. In many countries the dominant institutional model for investment has been based on the concept of a statutory board, corporation, public parastatal or Article 21

company (in South Africa) vested with full government powers and significant public funds through grants. This institutional form has the advantage of being able to influence the powers of government in relation to planning, development control, by-law formulation and enforcement, provision of greater control over the process of physical infrastructure development and regeneration for investment promotion. At the same time these publicly constituted bodies may be in a better position to apply legal and fiscal concessions as well as trade and labour market relaxation in order to enhance the process of inward investment.

Another model that has been adopted for investment promotion is that of private company by limited guarantee (Slater and Jackson, 1996: 43). Such companies have to operate within the established legal framework governing private company operations but may enjoy significantly more autonomy at an operational level. Investment promotion companies have to operate within the market, focussing on ways of enhancing operations in relation to inward investment and the provision of physical infrastructure, rather than shaping the market through the application of development policy and fiscal and legal legislation.

Much may depend on the relative importance of physical development combined with deregulation in the overall investment promotion equation. Where a more responsive, market driven service is required, institutional arrangements of a private sector nature may be more appropriate. In Singapore, Turkey, South Africa, Dominican Republic, Ghana and Thailand, institutional arrangements for investment promotion represent a hybrid model to combine the power of government with the relative autonomy of the private firm (SRI, 1999: 63).

In spite of a general move away from explicit forms of government intervention in the industrial sector, many states continue to support investment promotion as a core part of a strategic approach to enhancing local, regional and national industrial competitiveness (SRI, 1999: 64). In such cases, investment promotion is applied in such a way as to strengthen specific sectors rather than simply attracting investment for the maximum return.

4.5.3 **The role of government in technological development**

Governments have long supported scientific and technological development in the advanced industrialised countries. Support has been validated by clear demonstrations, both empirical and theoretical, that, if left to the market, the level of investment in generating new advances would be less than is socially optimal (Joffe,

et. al., 1994: 98). By contrast, until recently, the prevailing consensus was that the developing countries were simply technological borrowers; users of technologies developed by the advanced countries. As with the purchase of all other goods, it is argued, the consumers of technology would be best served by the operation of freely functioning markets.

The ever-increasing quantity, quality and variety of goods and the general decline in the physical difficulty of work are nothing but the result of technological change. By increasing the range of choices in respect of new products and production process, technological progress raises the potential for economic expansion and in general, brings about human and economic development. By its very nature, technological change is uncertain and oriented to the future. Both of these characteristics are difficult to accommodate within the established equilibrium free market approach used by the World Bank (Ul Haque, 1995: 11) in structural adjustment programmes (SAPs). Indeed, the concept of technological innovation and Pareto-optimality are fundamentally incompatible. Pareto optimality relies on getting the prices right through the allocation of resources according to marginal valuations of inputs and outputs. In addition, externalities can be regarded as a constraint on the incentive to innovate. A simple measure of this is the widespread legislation. If everyone had access to all innovative changes once discovered, then there would be no opportunity to exploit the advantage gained through innovation. These factors, plus the fact that many innovations have considerable public good implications, have led to strong arguments in favour of public intervention in order to correct market imperfection.

Having said that, it is also necessary to recognise that the historical record of public policy in this case is not faultless. The government as well as the market can fail. In terms of technology, the government must have access to detailed microeconomic information and be able to act upon it (World Bank, 1997: 2). Uncertainty requires flexibility and a wide range of policy options, the very flexibility of which, it is argued, gives the market system an advantage over government.

At the international level, the overriding feature of the evolutionary innovation policy development period has been the rise of Japan and NICs of Asia, whose success has been built upon the initial development and export of textiles, eventually moving into higher technological areas of electronics and automobile production (Pepper, *et. al.*, 1991: 75). This group of countries exhibited an extraordinary capacity for technological catch-up. At the same time at micro level, technological innovation was opened up to a whole series of variables that had previously been outside the core areas of R & D activities, *viz.:*

- Incremental innovations came from production and design engineers. Examples of this are teamwork associated with quality circles.
- Product improvement was seen to derive from increased interaction with the market, which interaction can be broadened to include sub-contractors, suppliers and related firms.
- External linkages with science and technology institutions and universities were shown to be important.
- Finally, the importance of systems in terms of creating an acceptable environment for innovation and the resulting technology diffusion process came to the fore. The productivity gains associated with specific innovations such as robotics rely upon accompanying organisational and systemic change.

All in all, technological innovation has come to be seen as an increasingly organic process involving the evolution of systems that are likely to create and adapt innovative technology as well as the activity of formal R & D (Ul Haque, 1995: 16).

The major features of the Japanese system has been as follow: Strong integration of R & D and technology transfer at the firm level; strong inter-firm network; international experience of competition; strong integration of private and public organisations; and, a high proportion of investment generated at the firm level as well as R & D.

A similar comparison may be made for the 1980's between Latin America and the East Asian NICs. Throughout the 1980s the East Asian NICs outperformed the Latin American countries that had been designated as fast-growing economies in the 1970s. Whereas several structural factors undoubtedly affected this performance there are stark contrasts between the innovation and technology policies of the two regions. The economies of East Asia largely subscribed to the Japanese model (Shinohara, 1964: 21) with closely integrated firms and government linkages, Japanese management structures and organisational systems, investment in advanced technology such as telecommunications, high levels of education with a very high number of engineering graduates and significant local initiatives in terms of R & D promotion.

In both Korea and Taiwan, the government played a direct role in helping to develop domestic capabilities in high technology electronic projects. Here, the state has acted as an intermediary in the technology transfer process, ensuring that producers enter into licensing agreements on favourable terms (Ul Haque, 1995: 22).

This provides the best explanation of major R & D differences between the up-and-coming and the less dynamic economies of the last century. In terms of practical considerations, there are no clear-cut guidelines regarding the creation of innovation. The only commonality is the close integration of the different institutions connected with innovation. Universities relate research to firms, technology institutes support R & D within firms, training institutions are relevant to the needs of firms and government provides an overarching framework within which all of these elements can flourish. It should also be pointed out that the question of funding, certainly in Japan and the NICs, is not merely a question of government providing the cash, but the private sector paying for what it regards as a useful investment. All the members of the network have an incentive to make it work.

In the Japanese system, there is the added element of the Ministry of International Trade and Industry (MITI), whose role it is to provide overall national direction to the system of innovation. Small, and controlling only 13 percent of the Japanese government's science and technology budget, MITI exercises disproportionate influence through the companies it controls and through its control over the Japanese global information network. The success of this system has not merely been due to domestic innovation, or on mere imitation of Western goods at lower prices; the key has been that MITI has managed the R & D process so that they are in line with the national objectives (Slater and Jackson, 1996: 49).

4.6 Economic management and industrial performance in the 1990's

Industrial development has become one of the main instruments of economic and social restructuring in developing countries over the last decade and it is likely to become increasingly important in the near future. The significance of industrial development lies in the fact that there are now serious demographic and environmental constraints on achieving further growth in agricultural productivity and value added production.

Industrial development has assumed an increasingly important role in promoting economic growth and social well being. There has been an important shift in industrial policy away from inward orientation,

characterised by extensive regulation and a redefinition of state responsibilities (IDC, 1990: 2). In most of the countries, the adjustment process has centred upon a number of important reforms of state economic regulation. The main thrust of policy re-orientation has been concerned with a shift away from the imposition of quantitative controls in the form of duties, licensing and quotas to economic liberalisation and the provision of fiscal incentives to promote investment and export-led growth. Adjustment and economic reform has been a fundamental part of the process of restoring market incentives intended to raise domestic efficiency and expand the role of the private sector (Slater and Jackson, 1996: 50).

The underlying rationale for such reforms is that the state can best promote industrial development by reducing the level of intervention over monetary and fiscal policy, trade relations, ownership of capital, labour markets, investment and infrastructure. In this context, the government has ceased to see itself as a lead producer in protected core industries directing foreign trade and exchange intervention. The government has come to perceive its role in industrial promotion as essentially one of initiating trade reform policy to establish uniformity and to promote foreign investment as a vehicle for growth and diversification of the economy.

A number of issues relating to contemporary economic and industrial reform can be highlighted. The underlying assumption is that trade liberalisation will lead to export-led industrialisation and growth in sharp contrast to previous systems of regulation designed to promote import substitution (IDC, 1990: 26). Moreover, it is commonly held that trade liberalisation will also contribute to significant industrial diversification as early export-led investment natures and re-investment takes place in higher value-added products and processes of a more capital-intensive nature. As a consequence, trade liberalisation and associate measures, as Slater and Jackson (1996: 51) point out, form the core around which many of the contemporary industrial policy debates revolve.

The fundamental question arising from this, is how effective has trade liberalisation been in promoting sustainable industrial growth and what precisely should the role of the state be in helping to achieve this objective? Whilst the main body of contemporary thinking appears to support a reduction in macro-economic intervention in favour of market mechanisms, there is growing recognition that certain kinds of market weakness or failure may need to be addressed through specific sectoral support programmes if industry is to benefit beyond mere competitive advantage. Lessons learned from a number of high performing Asian economies (HIAEs), which have successfully blended economic reform with strategic

intervention, may be quite instructive. Indeed, modern western industrial policy appears to acknowledge the role of the state in stimulating industrial competitiveness.

4.6.1 **Economic reform and industrial performance**

The World Bank's structural adjustment has developed largely as a response to the growth and development of the NICs of East Asia. From their inception in the early 1980s these programmes were largely based on the South Korean model. Later, the World Bank (1993) published a revised view in *The East Asian Miracle: Economic Growth and Public Policy*, which sets out to alter the emphasis by highlighting that East Asian development was market-friendly, rather than free-market.

The market-friendly view asserts that growth is associated with effective, but delimited government interaction. Economic growth must be driven by market forces, with the government taking responsibility for creating an environment conducive for entrepreneurs, providing a stable macroeconomic framework, enhancing human capital and providing exposure to international competition through trade liberalisation (World Bank, 1993: 7). These policies have therefore come to constitute the core of structural adjustment programmes and this is justified by the successes of the NICs.

Where SAPs were enforced, the performance was positive and the crucial element in bringing about success has been the ability of the regime to impose and enforce these programmes over a period of time. When evaluating the implementability of SAPs, several key strategic issues must be taken into consideration before transplanting the East Asian Model (Slater and Jackson, 1996: 52). These key strategic issues are found in the following experiences:

- Most East Asian countries began their industrialisation programmes by introducing import substitution policies to build up domestic markets and form a base from which to export.
- All of the NICs, particularly Korea, used heavily directed credit policies in their drive to industrialisation.
- Slater and Jackson, (1996: 52) attest to the East Asian Miracle as an economic analysis based on an attempt to compare what actually happened with what would have happened if pure market policies had been adopted. Surprisingly enough, the conclusion is that the East Asian NICs would have performed much better than they did had there been less government intervention.

This leads the World Bank (1993: 312) to its conclusion that: "... industrial policies were largely ineffective and furthermore, that promoting specific industries did not work." The conclusion - more markets, less government. Apart from that, the Korean government did not really have a "picking the winners" strategy. Rather, industrial policy was aimed at strengthening the industrial agglomerations to facilitate their ability to compete globally.

- Markets appear to work better in East Asia and the institutions surrounding them facilitate it. Administration in East Asia is well rewarded, well trained, professional and flexible. This is in sharp contrast to the African situation where retrenchments have left public administrations fairly demoralised, dismally rewarded and inflexible. In such a situation, markets could malfunction seriously and under-achieve significantly compared to East Asia.
- Human capital development through education was crucial to development in East Asia, again in contrast to many other countries. In the face of higher population growth and a reduction in public expenditure, education is frequently cut back.
- Trade liberalisation and outward orientation has significant benefits and yet many African countries are very open but have been subject to trade dependence, particularly on imported goods. Openness has its pitfalls as well as its benefits.

The picture of structural adjustment and economic performance is a confusing one and there may be several paths to development. This leads to a distinct complexity when it comes to identifying the kind of role that the state should adopt in support of industrial development. Whilst many of the basic liberalising policies are beneficial to industry, in practice these policies will require a degree of selective intervention and / or regulation on the part of the state if they are to have the desired impact on overall industrial growth and development. This, in turn, implies a certain capacity on the part of the state to assume these functions.

Evidence from both India and Sri Lanka shows that government reform of industrial policy had an important beneficial impact on industrial development and growth. In both cases it can be demonstrated that liberalisation has had a marked impact on aggregate performance. In India, economic reforms enacted since 1991 have led to a period of sustained growth in gross domestic product (GDP) whilst opening up opportunities for the domestic and foreign private sector. Since 1991 the budget deficit has been halved while foreign investment has accelerated. The liberalisation of the financial markets has also played a major role in stimulating private sector expansion.

Whilst the reform process appears to have had a positive impact on economic growth and development, domestic industry has had to transform itself rapidly to survive in a substantially more competitive market. Meanwhile domestic industry will have to ensure it is competitive at the declining tariff rates. There are signs of companies placing more emphasis on restructuring and strategic planning designed to cut costs, raise productivity and improve quality.

One area where there has been little progress is that of labour reform. Indian law still prevents industry from shedding labour and the Industrial Disputes Acts require government approval before loss-making ventures can be closed down and labour retrenched. Whilst reforms have undoubtedly had a major impact on overall industrial performance, the process at the macro-economic level is by no means complete and will require further adjustment on the part of the state if industry is to continue to develop and expand.

In contrast to India, Sri Lanka experienced a substantially longer period of adjustment and reform, although the effects were affected by continuing unrest. The government's policy framework for the period 1992 to 1995 includes a sustained 6 percent growth rate, single digit inflation and a budget deficit below 7 percent. An important factor to determine in both India and Sri Lanka is the nature and form of growth in the manufacturing sector, following trade liberalisation. Evidence from Sri Lanka suggests that while liberalisation has improved access to raw materials and manufacturing quality, it has not generated balanced sectoral development nor has it produced a sustainable level of growth in manufactured export. In many product areas export growth has been marginal and liberalisation has achieved little in the way of industrial diversification (Slater and Jackson, 1996: 56).

At the same time it is doubtful whether or not economic reforms designed to promote industrial growth have had a marked impact on small-scale enterprise. In many developing economies, small-scale enterprise accounts for a significant share of employment and manufacturing value-added, yet the incentives associated with liberalisation are restricted to large enterprise. The result is that the benefits of contemporary industrial backward linkages is not capitalised on using the strengths of small-scale flexibility in production. Evidence from Sri Lanka suggests that backward linkages remain weak even in the textile and clothing sub-sector that experienced substantial export-led growth (Slater and Jackson, 1996: 56). The case of India may be different, in that a component of industrial policy was specifically designed to promote small enterprise (Slater and Jackson.1996: 56).

4.7 Summary

This chapter examined a number of key policy interventions of relevance to the industrial sector in adjusting economies and the changing role of the state in the management of monetary and fiscal policy, privatisation, trade reform, labour institutions and infrastructure provision. In each case, the chapter has examined the specific policy changes associated with a more liberal industrial environment in an attempt to understand the implications of such changes on the roles and responsibilities of those organisations charged with policy implementation. The chapter further considered how industry performed in response to the changing institutional environment and more specifically, how clothing and textiles performed as a leading industrial sector, given a decline in direct state involvement. The chapter showed that the economic adjustment process involves more than just the implementation of certain macroeconomic reforms designed to limit the role of government in industry.

The most important result of the literature review in this chapter is that evidence suggests a new role for the state in managing business in the current globalising and liberalising environment, with the sole purpose of increasing a nation's welfare from international trade. This new role of the state is that of a strategic partner whose sole purpose it is to create an enabling environment for business in its country through selective and flexible interventions; some of which may involve the labour market, education and training, multi- and bi-lateral trade affairs, domestic structural adjustments, and competitiveness and R & D issues.

The chapter shows a small number of policy areas of a particular relevance to the textile and clothing industry, in an attempt to examine the changing roles, relationships and institutional arrangements of those organisations responsible for policy and programme implementation. In each case, the policy focus on those departments which have retain some responsibility for textile and clothing development, as well as one or two organisations responsible for providing services of particular importance (e.g. boards of trade and investments, technology and design centres etc) The chapter also look at identifying the changing role and responsibilities of the concerned organisations in attempt to assess the capacity of the organisation to perform their tasks. Here, particular attention will be paid to the way in which internal institutional arrangements and external relations enhance the ability of the State to optimise overall resource allocation for textile and clothing industry's production as a means of illustrating the role of government in industrial development.

CHAPTER 5

STRUCTURAL ADJUSTMENT IN SOUTH AFRICAN TEXTILE AND CLOTHING INDUSTRY

5.1 Introduction

The purpose of this chapter is to provide an overview of what structural adjustment is and how trade liberalisation development strategies were implemented in South African clothing and textile industry. Attention will be paid to the governments investigations under the chairmanship of McCrystal into the development and structural adjustment programme (SAP) of the apparel textile and clothing industries in South Africa (RSA, 1988 (a)) and Swart into a long-term strategic plan for the South African textile and clothing industries (RSA, 1994 (b)). The first section will address the General Agreement on Tariffs and Trade (GATT). This will be followed by the structural adjustment assistance as well as the main objectives for the programme as submitted by the clothing and textile industries in their separate submissions. The Government introduced the structural adjustment programme in 1986 and various elements of the programme will be addressed as well as the impact of the programme.

5.2 The general agreement on tariffs and trade (GATT)

GATT, now the WTO, is the basis for a global rule-based trading system. According to Holden. (1993: 19), members agree to treat each other equally and to reduce barriers to trade. The tariff concessions are linked to non-discrimination through the principle of most-favoured nation (MFN) treatment. Through tariff concessions, contracting countries reduce the tariffs imposed on imports from other GATT signatories, while the MFN rule obliges contracting states to extend to other GATT signatories the most favourable trade treatment accorded to an individual country.

These non-discriminatory rules are critical to the developing countries and those with formally centrally planned economies whose future growth depends on access to industrialised markets. The non-discriminatory policies that are at the heart of the GATT provide a basis for equal treatment with well-established traders. More over, the multilateral nature of the GATT, including its procedures for resolving disputes, prevents large countries from exerting pressure on smaller countries; the latter can and to use the rules to win equal status with larger countries.

Tariff concessions have been periodically negotiated by the contracting parties through a series of rounds conducted under the auspices of the GATT. The latest negotiations include areas that previously had been largely or completely excluded, such as services, intellectual property rights and agriculture (Holden, 1993: 20).

The Uruguay Round is the latest negotiations and took place in a difficult economic and political environment. Many participating countries, both developed and developing, were, and are still, facing a slowdown in growth, rising unemployment and large domestic and foreign international debts (Holden, 1993: 20). Moreover, in many countries, excess capacity in traditional industries, and the intense competitive pressures in these and more modern sectors, such as electronics, from emerging industrial competitors, provided an impetus for strengthening protectionism. Politically, governments in the industrialised countries appear insecure, with the governing parties or coalitions vulnerable to small swings in support (Holden, 1993: 20). Against the background of increasing protectionism and politicisation, the UR not only devoted attention to industrial products, but also devoted attention to domestic subsidies for agriculture, non-tariff barriers, services, textiles, trade related investment measures (TRIMs), and trade related intellectual property rights (TRIPs). Developing countries have much to gain from the negotiations on services, TRIPs, TRIMs, and textile and agriculture.

5.3 **Structural adjustment assistance for the textile and clothing industry**

The Government has accepted that increased exports offer an important means of promoting economic growth (RSA, 1988 (b): 54). Tariff protection imposes the equivalent of a tax on the export sector of the economy. This type of distortion can be removed in three alternative ways:

- Remove the tariff protection.
- Create a free trade regime for exporters.
- Introduce SAPs.

The BTI's view is that the best alternative of the three to remove the distortion is by introducing a wide-ranging programme of structural adjustment and modernisation to improve the competitive ability of local producers (RSA, 1988 (b): 54). Improved competitive ability will tend to reduce the need for protection and have the effect of reducing the local price structure relative to world prices, thereby removing the bias against exports.

In evaluating the past and the present performance of the clothing and textile industries, the view could be taken that they are sunset industries. Indication of this includes the decline in growth in recent years, lack of investment and ageing technology, an inward-looking culture and a general lack of dynamism in parts of the industry. If these views were adopted, then there are two alternative approaches. The first is to expose the industry to foreign competition by reducing protection and let the sun set on those parts, which cannot compete. The second alternative is to seek ways to rejuvenate the industries and devise policies to assist this process.

The product life cycle of clothing and textile in South Africa is longer than in most countries because of the varying stages of development of the different population groups. The cycle is mature in the higher income group and is immature in the case of the lower income group. Therefore, there should still be plenty of growth opportunities in the South African markets. Further, if the inward-looking culture of the industry could be turned outwards, there would be substantial growth opportunities in export markets.

At the request of the BTI, the clothing and textile industries submitted separate reports setting out what they considered to be the optimal long-term strategies for their industries.

The main objectives of the textile industry were to maintain full production capacity and a minimum cost per unit of output. Their proposal included the following (RSA, 1988(b): 55):

- Government assistance would be required to reduce raw material costs and the further development of cotton and wool production.
- A comprehensive export programme.
- Development of the cottage industry making clothing should be developed
- Tariff protection consisting of an *ad valorem* plus an alternate formula duty structure.

The main proposals of the clothing industry included the following:

- “An increase in the rebate facility on imported fabrics for the manufacture of clothing to rebate of the full duty less 15 percent *ad valorem*.
- The withdrawal of formula duties in respect of textiles.
- The introduction of a quantitative quota scheme for duty-free imports of textiles.
- Retention of the present level of tariff protection for the clothing industry with possible increases in the reference prices in the formula duties.
- The maintenance of import control on clothing.
- The creation of an export council to promote, lead and administer exports.
- The recognition of the role, influence and power of the major retailers in achieving real growth through competitive pricing.
- A quota system to import 35 percent of the clothing industry’s requirements under a rebate facility.
- Export incentives should be in the form of cash rather than tax based or promissory notes should encourage added value.
- A clear direction by Government for exporters by establishing an improved incentive package that is motivational and assist the industry to become competitive”. (GATT, 1993: 56).

5.4 **The structural adjustment programme (SAP)**

The SAP that BTI introduced in 1986 consist of the following elements:

5.4.1 **Tariff protection**

Although it has been indicated that tariff protection imposes the equivalent of a tax on exports, it is accepted that protection of the local industries could not be withdrawn without a disastrous effect on them. It has, therefore, been decided to recommend moderate tariff protection.

Disruptive competition in textile and clothing markets emerges periodically, the BTI therefore recommend appropriate formula duties with realistic reference prices. This is to guard against over-protection, which inevitably leads to abnormal price increases in the home markets as well as decreases in volumes produced and an unnecessary burden on the economy.

5.4.2 **Import control**

Import permits will be issued freely by the DTI in respect of clothing and import control will be lifted completely in respect of textiles (RSA, 1988 (a): 61).

5.4.3 **Duty-free imports on the basis of local purchases and withdrawal of rebate facilities**

The report (RSA, 1988(a): 62) assert that in order to make fabrics available at world prices, it is proposed that those manufacturers which participate in the SAP be enabled to import under full rebate of the duty, 10 percent of their anticipated total domestic purchases for processing locally.

5.4.4 **Loan scheme**

The report (RSA, 1988 (a): 63) proposed that participants in the programme may qualify for working capital loan from commercial banks, at preferential rates.

5.4.5 **Imports on the basis of value exported**

In order to encourage exports, the BTI is of the opinion that exporters should be allowed to import a certain percentage of the value under rebate of the full duty, based on their exports during the previous year.

5.4.6 **Value added adjustment assistance**

The purpose of the value added assistance is to bring about a situation where local clothing and textile manufacturers will be placed in a position where the cost structure for local supply and export is in equilibrium.

(i) **Textile manufacturers**

The BTI recommended (RSA, 1988 (a): 64) that textile manufacturers should have a choice of either exporting directly or supplying fabrics to clothing manufacturers at ruling international prices for local and export production purposes. The scheme would afford textile manufacturers access to imported yarn under

rebate and value added assistance, on the basis of performance. The purpose of the scheme is therefore to supply textiles to local clothing manufacturers at international prices, thereby ensuring that clothing manufacturers will use local cloth in preference to imported cloth.

(ii) Clothing manufacturers

Clothing manufacturers would have a choice of buying raw materials from local textile suppliers at world prices or importing a certain percentage of textile fabrics under rebate of duty (RSA, 1988(a): 64). The assistance is determined according to the value of sales, the percentage value added on average and the competitive disadvantage experienced. The BTI would assess each application in detail before recommending the level of assistance.

5.4.7 Marketing and market development

The BTI (RSA, 65) recommended that the following two types of assistance measures be introduced:

(i) Export market development assistance

Assistance would be considered in respect of such matters as primary and joint marketing research; promoting including participation in trade fairs; outward trade missions; registration renewal; extension of patents, designs and trademarks; export credit guarantee insurance premium; trade promotion and market entry.

(ii) Marketing project assistance

To accommodate projects that cannot be handled under the standardised norms, firms, industry associations and marketing organisations, could apply for project assistance.

5.4.8 Productivity improvement schemes

The Report (RSA, 67) attests to the importance of assistance to industries and firms in respect of specific productivity improvement programmes as part of the SAP for the clothing and textile pipeline. Such

programmes could include productivity, as well as quality improvement schemes, technology development schemes and production management improvement schemes.

5.5 Evaluation of the structural adjustment assistance for the textile and clothing industries

The Report (RSA, 1988(a): 69) indicated that the net gain to the economy flowing from SAP has been quantified using 1986 figures. The Report also assumes that equilibrium between exports and imports can be achieved.

Table 5.1: Net gain to the economy due to the SAP

Sector	Net gain with current tariffs & export assistance Net value - Rb	Net gain with SAP Net value - Rb	Net gain with SAP & foreign funds in equilibrium Net value - Rb
Textiles	1 149	1 204	1 848
Clothing	468	521	1 448
Total	1 617	1 725	3 296

Source: Republic of South Africa, 1988 (b)

From these figures it is evident that the proposed package would produce a net benefit of R108 million more than the existing scheme (RSA, 1988(a): 69).

5.6 Long-term strategic plan for the textile and clothing industries in South Africa

On 3 September 1992 the Minister of Trade and Industry appointed a Panel and Task Group to undertake an investigation and develop a strategy to restructure the South African clothing and textile industries to become viable and competitive (RSA, 1994 (b): 1).

The Report stated that the following considerations are to be taken into consideration to achieve the above-mentioned objective:

- International tendencies, including international obligations under GATT.
- Sustainable growth and job creation in these industries. Hence, the strategy should create an environment for these industries to make the maximum contribution to the long-term welfare of the South African community.

- It is not necessarily feasible to conserve all sections, which cannot be restructured to become viable and competitive.

In addition to the above statement of terms of reference, the Panel interprets this more specifically as follows:

- Submit a restructuring strategy to Government that will ensure that the clothing and textile industry will become more internationally competitive, thereby placing more emphasis on exports and creating employment on a sustainable basis.
- In doing so the following considerations should be taken into account:
 - WTO arrangements and other international tendencies.
 - Advantage of industry pipeline and niches.
 - The supply-side support system.
 - Transparent norms and standard to ensure fairness and equity.
 - Institutional commitments and arrangements that will ensure the long-term implementation of the strategy.

5.7 Long-term strategies and action plans

5.7.1 Introduction

The Report (RSA, 1994 (b): 118) highlights the following three areas: industrial policy in terms of supply-side measures, the tariff structure, and the social dimension of restructuring. Supply-side support measures are used in various forms by various countries to assist industries and notably, the clothing and textile industries. These supply-side support measures will be addressed later.

“The Government does not want to be prescriptive to the industries in terms of its own strategies. For instance, the Panel believes that protection through tariffs will not save companies who refuse to recognise that the world has changed. ... On the other hand, South African companies may place themselves in a position to compete by contracting on areas such as high quality, skilled workers, market responsiveness and close relationships with retailers - areas in which the local manufacturers will always have an edge” (RSA, 1994(b) 118 - 119).

The Panel wants to stress that the strategies proposed form a package and must be implemented as such. It also indicated that the South African offer to GATT, and the revised tariff structures, were based on the agreement to provide substantial supply-side support to the industry and assistance to workers displaced by restructuring.

5.7.2 The social dimensions of restructuring

The Report (RSA, 1994(b): 119) emphasises strongly the need to have a strong social dimension to ensure that workers are not discarded, or their needs ignored in the process. It therefore, proposed the following:

(i) Public support for the workforce

The Panel (RSA, 1988(b) 119) supports a programme for retrenched workers who have been employed in the two industries for at least 24 out of the 36 months, according to which they would be entitled to:

- Income support for a period for vocational training.
- Income support for a period for formal training.
- Assistance by employers to re-deploy retrenched workers.
- Relocation assistance for those willing to move to become re-employed.

A proper audit of existing skills is required within the workforce, to identify the training needs, and public funds should be provided for this service.

(ii) Greater trade union capacity to manage and assist the restructuring programme

The Report (RSA, 1994(b) 120) recommended the following:

- Government ought to assist union liaison officers to provide information and job location services to retrenched workers.
- Provision needs to be made for a union database of retrenched workers, with skill levels and experienced recorded, as well as for centralised information on vacancies.

(iii) Employer support to the workforce

It ought to take the form of an accord on jobs, whereby employers commit themselves to ensuring that jobs are protected wherever possible and that alternatives to retrenchment will be explored (RSA, 1994(b): 120).

In addition, it should endorse the following principles to guide the restructuring process:

- Good faith negotiations on the terms of restructuring, at plant to industry level, between organised labour and employers.
- Improved industrial relations environment, including greater democracy on the shop floor.
- Sharing the gains of restructuring by employees.

5.7.3 Input costs

Profit earned by the clothing and textile industries will not sustain long-term growth and viability. One of the major structural problems is that of too high raw material costs. The Panel (RSA, 1994(b): 120 - 127) recommends the following with regard to the input costs:

(i) Cotton

- Introduction of a cotton subsidy when the world price is at depressed levels.
- That the fortnightly market reports of the Liverpool Cotton Association be used on the markets indicator used by ginners and spinners.
- Productivity of the cotton growers be increased to a level of at least two lint bales per hectare.
- Governments should support cotton research and extension services since this is also important to emerging small farmers.
- It is recommended that a task group be appointed to investigate the potential and requirements in respect of developing the small cotton farmers in South Africa. Special attention should be given to land, technical, financial and other requirements.
- It is recommended that an input subsidy for labour intensive (handpicked) cotton producers be investigated.

(ii) Synthetic and man-made fibres

- Acrylic fibre does not need any tariff protection.

(iii) Wool

- The establishment and support of strong, international sales and marketing initiatives.
- That the International Wool Secretariat and Wolex be utilised to structure focussed sales and marketing packages.
- Those final products are targeted in terms of a wool beneficiation programme.
- Attractive packages should be made available for intermediate industries (yarn and fabric) to pursue, to extend their production facilities on specialists rather than a vertical basis.

(iv) Labour costs

The Panel attests to the potential to improve productivity of labour, thereby reducing the unit labour cost in clothing and textile. The following points focus on the clothing and textile industry, where it is intended to turn the commitment into practical reality:

- Educate all stakeholders in the productivity concept and on how to achieve productivity improvements.
- Employers should agree that productivity improvements would not lead to the retrenchment of these employees,
- The principle of full disclosure of productivity gains to all participants in such programme must be accepted.
- The gains of a productivity improvement programme in which the employees actively participate should be shared between the workforce and the suppliers of capital.
- Productivity improvements are needed in all parts of a firm's operations, not only in the labour area.
- Management and labour need to reach consensus on productivity improvement programmes to promote both economic performance and decent social standards.
- Career path opportunities should be developed for the workers on the shop floor.
- Strive for an improved industrial relation environment.

- Acceptance of unionisation at higher levels than the traditional bargaining unit.

5.7.4 Training and skills development

The Panel (RSA, 1994(b): 128) asserts the following:

- There are currently deficiencies in the clothing and textile industries' education and training infrastructure and policies.
- Costly duplication in clothing and textile training facilities should be avoided.
- Government needs to introduce financial incentives to encourage industry to train and develop employees.
- The Textile Industry Training Board and the Clothing Industry Training Board seek to work together, eventually amalgamating.
- The activities of these two boards should cover all workers in the industry.
- The training boards should in future, ensure that the following skills are expended:
 - Flexibility for machine operators.
 - Quality management skills.
 - Basic machine maintenance skills.
 - Artisan skills.
 - Faultfinding / identification skills.
 - Planning and job organising skills.
 - Knowledge of health and safety provisions.
- Training should be cost effective and appropriate to the needs of the industry. It must be geared towards productivity improvement and international competitiveness.
- Obstacles which face employees when becoming involved in training programmes should receive attention, e.g.:
 - Entry requirements for training should not be too restrictive.
 - Adult basic education should be promoted.
 - Employees should assist workers with issues such as transport problems.
 - Modular-based courses need to be provided to enable employees to access training at times most suitable to their personal and work circumstances.

- Higher skills should result in higher wages to induce an improved skills base.
- Programmes to bring informal sector activities into the formal sector through the provision of training should be developed.

The report accepted the need for training and assert the “... need to increase the investment in effective training in the clothing and textile industries. The funding mechanism most suited to that would appear to be a combination of compulsory industry funding and government funding - a combination applying to operating costs and to incentive mechanisms. The Government’s contribution could take the form of a tax incentive (double deduction principle)” (RSA, 1994(b) 131).

5.7.5 Technology upgrading requirements

5.7.5.1 Textile Industry

According to the National Productivity Institute (NPI) (1993: 8) the productivity of the total textile industry falls short of world norms. The local textile plant is aged compared to that of overseas competitors and therefore the NPI suggested that assistance should be granted and linked to internationally competitive investment upgrades with the effect of job creation also being considered (NPI, 1993: 44).

During the NPI investigation (NPI, 44), the textile industry indicated their investment needs and the survey team extrapolated this to the entire textile industry as follows, for the period 1993 to 2001:

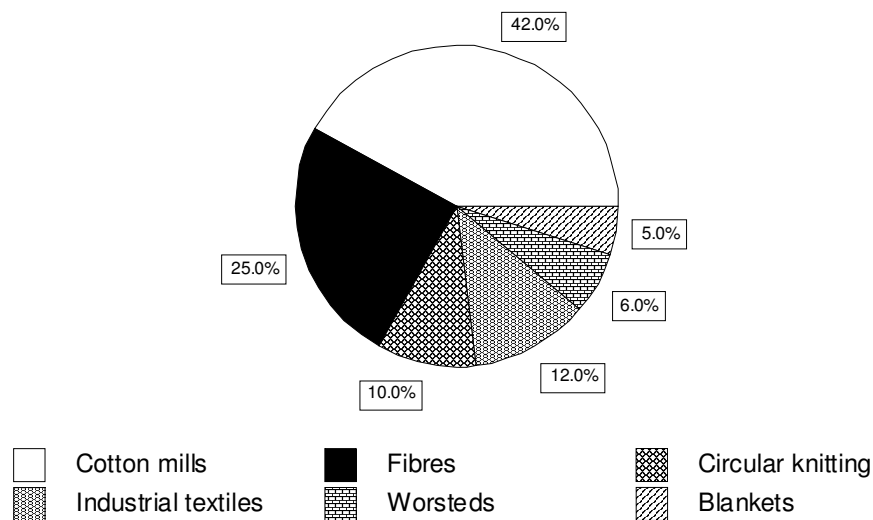
Table 5.2: Textile industry investment needs, 1992/93.

Activity	Rm
Cotton mills	1 086
Fibres	631
Circular knitting	250
Industrial textiles	319
Worsteds	164
Blankets	125
Total estimate	2 575

Source: NPI, 1993

The total investment requirement is R2711 million, of which R969 million is required in the next 3 years, a further R1087 million in year 4 and 5 and R654 million is foreseen for years 6 to 8.

Figure 5.1: Percentage contribution of textile sector investment needs, 1992/93.



Source: RSA, 1994 (b).

The Report (RSA, 1994 (b): 136) asserts that any government assistance with the funding of technology needs to be accompanied by a comprehensive productivity impact analysis study a post-investment monitoring programme to establish whether the management has implemented the technology in the correct manner to achieve success.

The panel recommends that the major part of the investment funds required must be obtained from private sector sources. The role of the State is primarily to provide incentives to attract the required investment. One such incentive is a subsidised interest rate.

The DTI is the implementing agency for this proposal and the IDC is the Government's funding agency. A prerequisite for funding assistance in any format would, however, be based on the following conditions (IDC, 1997 (a): 9):

- Submission of clear business plan.
- Sustainable international competitiveness.
- Net employment creation capacity to pay fair and equitable wages and salaries and generate

reasonable profits.

- Funding programme will be subject to such audits as determined by the implementing agency.

5.7.5.2 Clothing Industry

(RSA, 1994 (b): 135) reported that fabric lead times in South Africa were approximately four times longer than those achieved by world class manufacturers. Cutting and sewing took twice as long. Multi-skilling and work practices are outdated in South Africa and a move towards modular manufacturing, small work teams and multi-skilled employees is required. Technology upgrading in the clothing industry should therefore focus on the improvement of quality and quick response parameters and on utilising multi-skilled employees in modern manufacturing work practices.

NPI (1993: 41) estimated the investment required for a technology upgrade for the South African clothing industry as follows in Table 5.3.

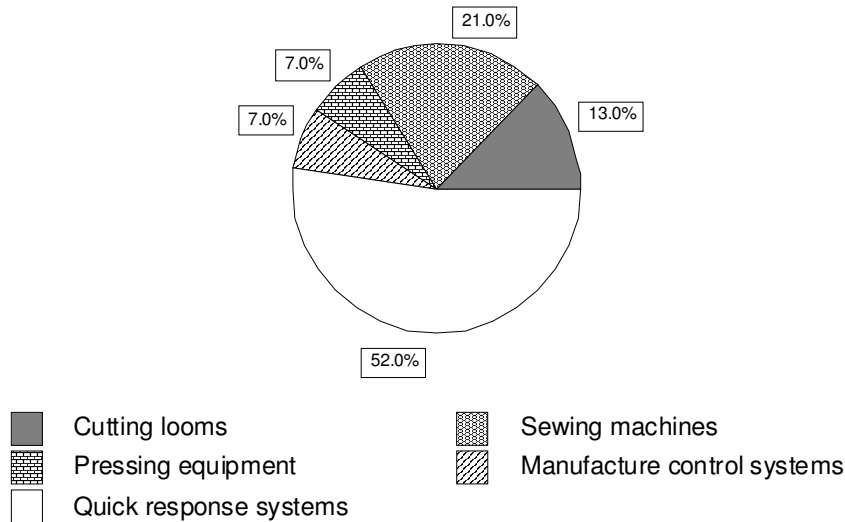
Table 5.3: Clothing industry investment needs, 1992/93.

Activity	Rm
Cutting looms	20
Sewing machines	32
Pressing equipment	10
Manufacturing control systems	10
Quick response systems	78
Total estimate	150

Source: NPI, 1993.

The percentage contributions of the different clothing activities are illustrated in Figure 5.2.

Figure 5.2: Percentage contribution of clothing sector investment needs, 1992/93.



Source: RSA, 1994 (b).

5.7.6 Development of exports

5.7.6.1 General

The Report (RSA, 137) underscores to the concept of trading houses, since trading houses are not well developed or defined in South Africa and may become important vehicles of export drives in the future. Trading houses in the Asian countries have been, and are still, instrumental in consolidating the manufacturing capabilities of small firms and the informal sector. The concept should thus undoubtedly be given special consideration in the restructuring of the South African export sector in general. Trading houses were one of the keys to success in the export achievement of countries such as Japan, Taiwan, Korea and others in the Asian Block (IDC, 1985: 14).

The Report (RSA, 1994 (b): 141) recommend that trading houses and retail chains be rewarded for product development and that they qualify for the same pre-and post-shipment finance as manufacturers, in those cases where they have been instrumental in the product development of companies.

Jain (1994: 3) assert the importance of trading houses "... from the export perspective and especially the availability of pre-shipment finance to the small and medium enterprises (SMEs), the banking system does not feel comfortable with evaluating and assuming manufacturing performance risk on marginal clients from a credit point of view".

Jain (3) further suggest that in order to make pre-shipment export financing available to the SMEs who have a relatively weak balance sheet there are two other issues of importance:

- The manufacturing performance risk will have to be underwritten by a government entity; and
- The execution of the service has to be user friendly - both from the exporter and the funding bank point of view.

5.7.6.2 **Export incentives**

In April 1990, the General Export Incentive Scheme (GEIS) was introduced to help the firms offset the price disadvantage that the country's exports faced in the international markets, including that arising from the anti-export bias inherent in the import protection system. Belli et. al. (1993) quotes a study by the South African Chamber of Business (SACOB) in 1991 which showed that the manufacturing costs in South Africa was 15 percent higher than the OECD average because South African manufacturing firms pay 24 percent more than their OECD counterparts for their inputs, and their capital and productivity adjusted labour costs were higher as well. The GEIS, which replaced the input and value added compensation to exporters, provided tax free subsidies to exporters based on the value of exports, the degree of processing of the exported product, the extent of local embodied in exports, and the degree of overvaluation of the exchange rate.

The Duty Credit Certificate (DCC) is a document given to the exporter indicating the value of duty credits granted to the exporter so that certain prescribed textile products can be imported up to this value. Exporters of certain prescribed textile and clothing products can earn duty credits based on exports of these products during a 12 month period from April to March of a particular year (DTI, 2005)

An exporter under the scheme can be a company, a close corporation, a partnership or sole trader. The following product quality as exports under DCCS:

- Clothing and clothing accessories
- Household textiles
- Fabrics and other textiles
- Yarn

Only products manufactured for export that have used local or imported textile inputs on which the duty has been paid will qualify for the Duty Credit Certificate. Textile inputs are limited to fibre, yarn and fabrics only (DTI: 2005)

The Report (RSA, 1994 (b): 142) recommends that export incentives are required during the transitional phase as the textile and clothing industries re-adjust from their protective bias, and to enable manufacturers to export at world competitive prices.

The Report (RSA, 1994 (b) 142), therefore recommends the following:

- GEIS to continued until July 1997
- Duty Credit Certificate (DCC) at 30 percent on clothing unchanged based on local inputs and duty paid on imported items.
- DCC on household textiles to 15 percent.
- DCC on yarn to be 10 percent.
- DCC's to be transferable / tradable.
- One Customs Union issuing authority for the DCC.
- Exports based on imported inputs under rebate item 470.03 to qualify for DCCs but on the added value portion of those exports only (added value = sales value less input value).
- DCC is reviewed annually and seasonable notice of 9 to 12 months given of any changes.
- DCC to be phased down equally over 10 years from 30 percent beginning on 1st April 1995 to 31st March 2005.
- DCC or other export incentive to compensate for GEIS phase out; and it is recommended that an appropriate incentive system be introduced to promote the export of household textiles.

The SAP proved to be an ill considered and highly disruptive export incentive that ultimately led to the destruction of certain sectors of the textile and clothing (i.e. Jerseys) industries. This was aggravated by excessive dumping of textile products from the East into South Africa, as well as fraud and inadequate customs control. In 1994, the SAP was replaced with a Duty Certificate Scheme (DCCS) that offers a customs duty credit reward for export performance, and was phased out on 31st March 2005 (DTI, 2005).

5.7.7 Development strategy for the small and informal sector

5.7.7.1 General commends

The Report (RSA, 1994 (c): 145) attests to the importance of the SMEs and the informal sector for the future of the clothing and textile pipeline. It therefore, recommends that short, medium and long term strategies be developed to meet the following objectives:

- Encourage the development and protection of existing and new job creation enterprises.

- Attempt to graduate smaller and informal enterprises into the formal sector.
- Improve the overall productivity of all such enterprises.
- Maintain fair labour standards set by the industrial councils.

5.7.7.2 Main constraints and recommendations

The main constraints facing the SMEs and informal enterprises are identified below, together with policy intervention required to address their impediments:

- Most entrepreneurs face constant problems with regard to easy access to affordable start-up finance and working capital in particular. Policy needs to be developed which will allow more funds to be made available to these manufacturers at affordable interest rates.
- Most entrepreneurs face problems in relation to access to material inputs. In this regard three problem areas are identified: accessibility to fabric inputs (wholesalers, SME manufacturers); accessibility to apparel output (informal traders); and the costs of inputs (SME manufacturers, wholesalers, informal traders).
- Generally, these manufacturers have limited education and skills, which impacts negatively upon availability of their enterprises. Accordingly training programmes need to be focused at the following two levels: those which will encourage owners to enhance their production skills (e.g. production systems, cutting techniques, quality control, work study, etc.), and business skills (e.g. purchasing, marketing, basic bookkeeping, banking, etc.); and secondly, those which will assist employees to improve their productivity via improved work practice and skills.
- Generally SMEs and informal traders have been unable to optimise market opportunities, therefore the following initiatives must be taken.
- Production of simple trade directories of fabric suppliers, clothing manufacturers, informal traders, etc.:
 - Preferences in respect of State tenders.
 - Establishment of production / buyer co-operatives to assist SMEs and informal traders to achieve bulk purchasing economies of scale and networks of commission sellers.
 - State departments should ensure that SMEs and informal sector traders are aware of export opportunities, regulations and incentives.

- All state levels, committees and forums to take note of those national and regional debates affecting SMEs and informal sector activities. Some practical solutions that the Report (RSA, 1994(b): 147) referred to include informing town planning and business licensing regulations, securing use of abandoned and under-utilised buildings and land for business premises, creation of container depot storage facilities for street traders and the development of industrial areas (clusters) of SMEs and informal sector traders mainly involved in the manufacturing and sale of apparel.

5.7.8 **The need for up-to-date industry database**

If the clothing and textile manufacturing industries are to maintain aware of the pertinent factors affecting their industries, reliable information must be available. This will require investment in database for the industries with reference to world norms.

Periodic information concerning the behaviour of markets, industrial statistics and technological aspects will constitute an important means of assistance for companies, to move in the desired direction. To monitor matters relevant to the implementation of the various policy and strategy proposals and to make recommendations on any administrative changes that appear to be necessary to ensure proper implementation of the policies is also required.

Analysis of trends in economic policies and performance has been abundant at the aggregate level. However, surprisingly little is known about the lie behind these aggregate statistics.

The result of its work should be disseminated among policy makers, employers, trade unions and the media for broader discussion and debate.

5.7.9 **Management consultancy assistance to the clothing and textile industries**

The Report (RSA, 1994(c): 152) asserts that it is clear that if the present protection levels are reduced according to South Africa's undertaking on WTO and international trade in general, and if export incentives such as the GEIS are unavailable, the effect on local clothing and textile manufacturers will be traumatic.

As part of a restructuring strategy, the Government should consider the benefit of subsidising management consultancy projects aimed at improving the international competitiveness of local clothing and textile companies.

5.7.10 Long-term tariff structure

For the past decades the clothing and textile industries' main focus was on the tariff structures as part of a protectionist regime in South Africa (RSA, 1994(c): 145). This focus has led to bitter conflict within the pipeline, sterilising the fundamental development of the industries in terms of efficiency and international competitiveness.

The Report (RSA, 1994(c): 153) negotiated a set of binding rates and phasing in periods as is indicated in Table 5.4. These rates were seen as a safety net for the industries and not as the actual duties.

Table 5.4: South African GATT offer, 1994.

Product Group	Fibres	Yarn	Fabrics	Made-up Products	Clothing
HS Codes	5501.20	51.07	51.11 - 51.13	63.01 - 63.04	61
	55.03	51.09	52.08 - 52.12		62
	55.05	52.04 - 52.07	54.07 - 54.08		
	55.06	54.01	55.12 - 55.16		
		54.03	58.01 - 58.02		
		55.08 - 55.11	58.06 - 58.08		
			58.10 - 59.06		
			59.07 - 60		
Existing rates	15% or Formula duties	35% or specific duties⁴⁵	50% or specific duties	60% or specific duties	100% or specific duties
Reduction schedule year					
1	25	35	50	60	100
2	25	35	50	60	100
3	25	35	50	60	100
4	25	35	50	60	100
5	23.5	33	47	56.5	94

6	22	31	44	53	87
7	20	29	41	49.5	80
8	18	27	38	46	73
9	16	25	35	42	66
10	14	22.5	32	38	59
11	12	20	29	34	52
12	10	17.5	25	30	45

Source: RSA, 1994 (b).

The Report (RSA, 1994(c): 154) that the Panel realises that simplification and reduction of tariffs as well as elimination of formula and specific duties are only possible if an effective anti-dumping unit is in place. The Panel (RSA, 1994(c): 154) recommends the phasing down schedule of tariff as part of a total industrial policy package.

However, since this Report, the South African Government negotiated with the WTO to accept the following down scaling tariff structure with effect from 1996 (Clofed, 1997: 304). The duty levels are being phased down annually on 1st September. The maximum specific duty remains constant and the minimum specific duty decreases by 10 percent per annum. The negotiated phase-down of *the ad valorem* duties is planned as follows:

Table: 5.5: Summary of tariff phase down, 1997 - 2002.

Product	1/9/1997	1/9/1998	1/9/1999	1/9/2000	1/9/2001	1/9/2002
Fabrics	36	33	30	27	24	22
Clothing	72	66	60	54	47	40

Source: Clothing Industry of South Africa, 1997.

A more detailed tariff structure for the clothing and textile industries is presented in Table 5.6.

Table 5.6: Textile and clothing duty phase down, 1992 - 2002.

Description	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>Ad valorem</i> %											
Polyester fibre	15	25	25	23	21	19	17	15	13	11	7.5
Filament yarn	35	32	15	15	15	15	15	15	15	15	15
Spun yarn	35	32	32	30	28	26	24	22	20	18	15
Woven fabric	50	45	45	42	39	36	33	30	27	24	22
Knitted fabric	50	45	45	42	39	36	33	30	27	24	22
Domestic textiles	60	55	55	52	49	46	43	40	37	34	30
Clothing	100	90	90	84	78	72	66	60	54	48	40

Source: Textile Federation, 1999.

5.7.11 Customs control

The Report (RSA, 1994 (b): 168) supports the proposals that South African Clothing Textile Workers Union (SACTWU) presented to the National Economic Forum in March 1993 in order to increase the efficiency of customs control. These involved:

- Limit the number of parts of entry for specific goods.
- Improve technical resources at ports of entry.
- Speed up computerisation of all ports of entry.
- Utilise private sector technical assistance for customs-related alternatives.
- Publicise names of companies guilty of fraudulent claims.
- Provide effective control over exports of goods subject to the granting of incentives.

5.7.12 Anti-dumping and countervailing measures

In the past imports at dumped or subsidised values, were combated by means of formula duties. The Panel has noted that formula duties can no longer be used as protection instruments and has therefore given attention to other measures that may be employed. Relatively high *ad valorem* duties, combined with specific duties cannot be sustained in the longer term, in terms of a commitment to scale down tariff levels. The only other measures that could conceivably be considered are anti-dumping and countervailing measures or quotas.

The Panel (RSA, 1994 (b): 169) recommends the following:

- The tariff and infrastructure of the BTT be strengthened to facilitate effective anti-dumping and countervailing investigations.
- To ensure that the effective infrastructure is put in place, the BTT, Texfed, Clofed and NACTWU launch an investigation into anti-dumping and countervailing measures.

5.7.13 **Institutional arrangements**

5.7.13.1 **Clothing and Textile Authority**

It would be necessary to monitor and evaluate developments on an overall basis. For this purpose the Report (RSA, 1994(b) 171) recommends the establishment of a Clothing and Textile Authority (TCA) with the objectives and functions.

- The objectives of the TCA:
 - To assist in the improvement of the efficiency and international competitiveness of the clothing and textile industries through various programmes of upgrading and restructuring.
 - To monitor the performance and evaluate the results of projects and programmes on a continuous basis with a view of advising the Minister.
 - To reduce the dependence of these industries on assistance from the Government.
- The functions of the TCA:
 - A programme designed to encourage and facilitate the development of plans aimed at increasing the international competitiveness of producers by providing financial assistance to them for that purpose.
 - Measures to improve efficiency and planning in the clothing and textile industries.
 - Measures to improve and co-ordinate the provision of infrastructure and institutional support for the industry.
 - Measures to increase the exports of the textile and clothing products produced in South Africa.
 - To prepare and give the Minister regular reports on the state of the industries in South Africa; global developments in the industries; progress made towards the achievement of objectives of industrial

policies with respect to the industries; and any industry matters referred to the TCA by the Minister for investigation.

5.7.13.2 **Industrial Development Corporation (IDC)**

The IDC operates nationally, offering an extensive range of financing facilities for small, medium and large scale industries, to assist entrepreneurs in the establishment and expansion of economically viable manufacturing concerns in South Africa. The most general form of financing is by means of medium to long-term low-interest loans, but in certain cases the IDC may take equity in industrial enterprises (IDC, 1984: 3).

5.7.13.3 **Small Business Development Corporation (SBDC)**

Small business constitutes an important sector in the clothing and textile industries, especially the latter. The SBDC was founded with specific purpose of developing small and medium enterprises. The SBDC can become an important institutional partner in the programmes of the TCA. Close and co-coordinated association between these two organisations is therefore important.

Previously, government funded for specific support to SMMEs was primarily channelled through the SBDC and eight universities based small business institutes. With the adoption of the Small Business Enabling Bill, DTI (IDC, 1996 (a): 33) decided to formulate new institutions and new programmes for small business development in South Africa.

5.7.13.4 **Texfed and Clofed**

The new global environment in which the clothing and textile industries find themselves requires new strategies and focuses. Historically the two federations were mainly focused on tariff issues and this has created a culture of conflict.

The two federations will have to focus their efforts on pipeline issues, how to support each other, international marketing and competitiveness issues, training and the effective use of and implementation of supply-side measures, and improvement in productivity.

5.7.13.5 NPI and other consulting firms

The NPI and various other consulting organizations in South Africa have to experience, expertise and capacity to assist the clothing and textile industries in their drive to international competitiveness.

5.8 Cost implications

5.8.1 The social dimension of restructuring

This aspect is very controversial and would be difficult to implement. If income support, employment assistance, employment assistance subsidy, relocation assistance and training of union liaison officers were to be considered for the clothing and textile industry, the position for support for the other union would be unbearable. According to the IDC's calculations, the labour force in the textile industry alone will decrease by approximately 3 percent due to lower tariffs, e.g. a job loss of approximately 2500 (IDC, 1994: 5). The average wage for textile workers is R750, 00 per month. In the cities the wages are an average R1 100,00 per month, while in the rural areas the wages are R400, 00 per month (IDC, 1994: 5).

Wiese (1994: 18) estimated that the costs of the social dimension to implement the recommendations of the long-term strategic plan for the clothing and textile industries are shown in Table 5.7.

Table 5.7: Estimated costs of the social restructuring, 1994.

Description	Rm
Income support for job loss (2 500 x R750, 00 x 6 months)	11,0
Employment assistance	5,0
Combined formal training & employment assistance	5,0
Relocation assistance	5,0
Union liaison officers (R2 500 p.m. x 12 x 8 years x 4 persons)	2,0
Total	28,0
Union data base of retrenched workers	SACTWU subs
Training of union negotiators	Training & Skills development fund

Source: Wiese, 1994.

5.8.2 **Summary of subsidies**

Wiese (1994: 15) asserts that the estimate for implementing the recommendations could be R340 million during 1995, and the total R3 355 million over the eight years period from 1995 to 2003. The figure for 1995 is subdivided into an amount of R172, 1 million in subsidies, R3, 6 million in government expenditure and a loss of income of R164, 5 million. These figures exclude any provisions for the social dimension of restructuring and government funds for small business and informal sector development.

Table 5.8: Summary of subsidy costs.

Description	Period Years	1995 Rm	1995 - 2003 Rm
Cotton	8	30.0	240.0
Wool	3	11.0	33.0
Training	4	37.5	200.0
Technology	8	31.0	1 032.0
Exports	8	224.5	1 800.0
Bata base	8	0.6	4.8
Management and consultancy services	8	2.0	16.0
Customs control	8	1.0	8.0
Anti-dumping	8	1.0	8.0
Textile and Clothing Authority	8	1.6	12.8
Total		340.2	3 354.6

Source: Wiese, 1994.

An additional cost is the price premium to the consumer because of protection. By using the 1993 wholesale trade figures on clothing and textile of R3 900 million, and accepting a conservative price premium of 40 percent, a total premium of R1 560 million per annum is considered (Wiese, 1994: 15). Based on the approximately 200 000 job opportunities in the clothing and textile industries, the premium amounts to R7 800,00 per worker vs. an average salary of R18 600,00 per worker per annum (Wiese, 1994: 16).

Further calculations were done by the IDC, using a computable general equilibrium model to simulate the likely economic impacts of changes in the total economy as well as in the clothing and textile industry's protection structure.

All tariff reductions have a beneficial impact on the total economy. Total employment and real GDP rise while total imports and exports increase, with imports increasing by more than exports. Real household consumption also rises, while the consumer price index decreases. The net losses to the textile industry's value added and employment are more than offset by the gains to the clothing (IDC, 1994: 16).

5.9 **Factors that make successful adjustment**

The industrial sector has long been the focus of special attention in many countries. Indeed, industrialisation is viewed as almost synonymous with development (World Bank, 1995: 185). Misguided attempts to the factors that create the environment conducive for investment have led to highly inefficient uses of resources in many countries. The World Bank (12) review points to the following factors that make for successful adjustment:

- Achieving macro-economic stability is one of the prerequisites for successful adjustment.
- Real exchange rate competitiveness is significantly associated with successful adjustment in the industrial sector.
- Making the import regime transparent by simplifying rules, quantitative restrictions to tariffs and reducing the number and dispersion of tariffs.
- Efficiently administered schemes used to produce export (duty drawback programmes, bonded warehouses, imports for exports and export-processing zones) have internationally proved to be useful in promoting manufactured exports.

- Relaxing investment restrictions and entry and exit barriers helps to lower adjustment costs by easing movements of factors into newly profitable sub-sectors and out of firms and sub-sectors that have become uncompetitive.
- The international evidence suggests that foreign direct investment has been important in supporting supply response in successful adjustments.

5.10 **Summary**

The most important of structural adjustment programme for the clothing and textile industries should never be underestimated, and should also never be overrated and continued if it is to the detriment of the country, and job creation especially.

The chapter is concluded with some factors that are necessary to make adjustment programme successful. Without these factors, the Government cannot expect that optimal results are achievable. Future programmes should also give more thought to issues of technological capabilities and institutional efficiency so that world-class products could be produced and the country could compete with the rest of the world. The World Bank (12) assets the importance of developing government capability so that effective policy programmes can be designed and implemented.

Shepley (1994), an international textile consultant, reported to the IDC in 1994 that the structure of the South African textile industry must be considered fragile with no evidence of a common policy or objective throughout the manufacturing chain. “The type of machinery used the factories and the technology it offered is not seen as a major contributory factor to the difficulties facing the spinners. What is more relevant has been the lack of product focus, cost engineering and insufficient appreciation of what yarn types could be sold profitably into the market”.

South Africa should develop definite strategy for the clothing and textile industry. Measurable targets should also be set for the development of exports of clothing and textile products. Benefits and failures of companies that will survive should also be clearly stipulated.

CHAPTER 6

DETAILED STRUCTURAL ANALYSES OF CLOTHING AND TEXTILE INDUSTRY

6.1 Introduction

This chapter, by discussing the structure and composition of the sub-sectors in the clothing and textile industry, gives perspective and understanding of the structure of the South African clothing and textile industry. The chapter is divided in two main components, *viz.* a detailed historic analysis of each of the sectors and sub-sectors in the clothing and textile industry for the period from 1996, at the time projected to the year 2001 (Part I) and Part II, which considers some of the more recent dynamics of the clothing and textile industry.

With regard to Part I, it is important to note that at the time of doing this literature research, the most detailed analysis of the sector was found in Republic of South Africa, official yearbook of the Republic of South Africa. At the time the 1998 yearbook was the most recent and updated source providing such detailed analysis of the structure of the industry under discussion. Even though the data on the different sectors and sub-sectors may be outdated, it provides a solid foundation on which to build further discussion and analysis of the sector for purposes of the limited scope of this particular study.

Different sectors and sub-sectors will be discussed according to the following:

- Introduction; indicating the different activities.
- Performance; analysing the past, present and future trends.
- Demand; identifying the sales structure, the major trading partners as well as the most important traded products, the preferential access that has been negotiated and the export propensity.
- Supply; showing the components of the cost structure, the most important trading partners, the most important traded products and trends in the import penetration ratio.
- Prospects; presenting future growth trends, the import weighted average tariff that has been presented and accepted by the WTO, as well as the import tariff within specific tariff categories.

Part II considers the more recent dynamic changes that occurred in the clothing and textile industry, especially those that took place in the last five years.

PART I

6.2 Textiles (SIC: 321)

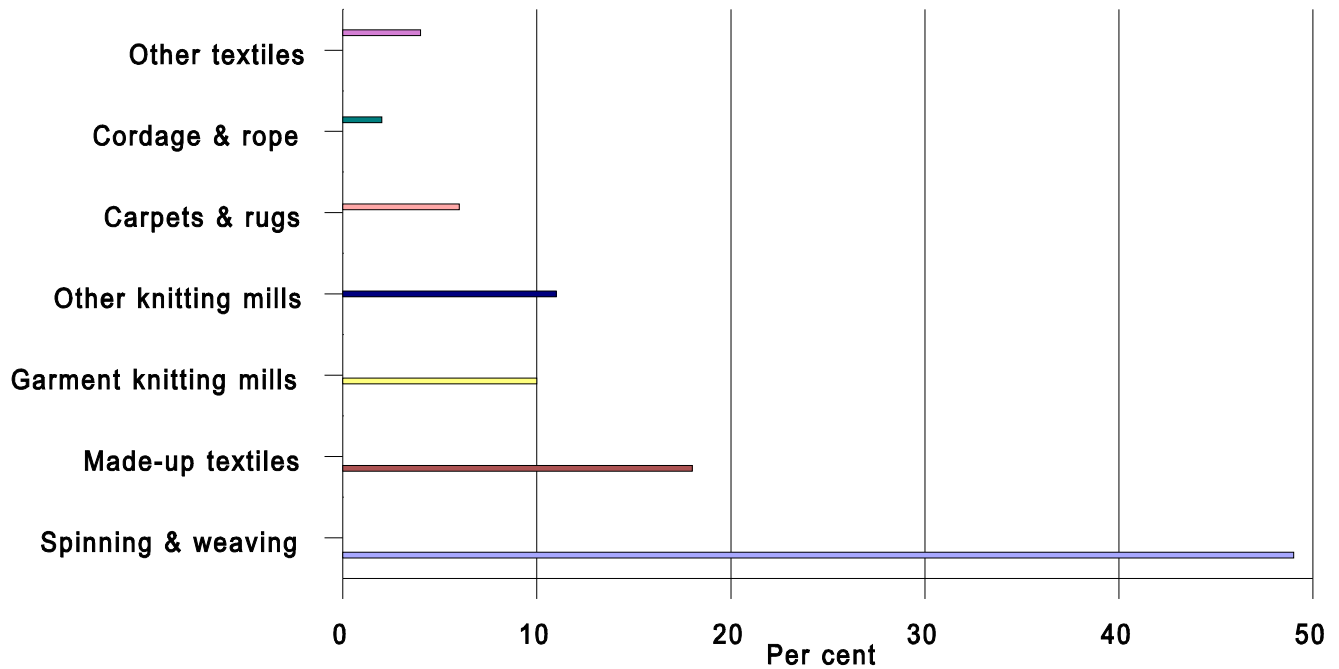
6.2.1 Introduction

The 'textile manufacturing sector is divided into the following seven sub-sectors (RSA, 1993: 14). Their respective contribution to the textile output in 1996 is shown in Figure 6.1.

- Spinning, weaving, dyeing, printing and finishing of textiles.
- Manufacture of made-up textile goods, except clothing.
- Garment and hosiery knitting mills.
- Other knitting mills.
- Manufacture of carpets and rugs.
- Cordage, rope and twine industries.
- Manufacture of textiles not elsewhere classified.

Figure 6.1 clearly illustrates the largest sub-sector, spinning, weaving and finishing of textiles, covers a wide range of activities and contributes 49 percent to the wide range of production in the textile sector. The other six sub-sectors each contributed between 2 percent and 18 percent to production (RSA, 1998 (d): 7.4).

Figure 6.1: Output shares: Textile sub-sectors (percentage contribution to total output), 1996



Source: Republic of South Africa, 1998 (d).

6.2.2 Performance

Textile production contributed 0,69 percent to South Africa's gross domestic product (GDP) in 1996, 1,14 percent to employment, 1,32 percent to export and 2,42 percent of total imports as indicated in Table 6.1.

Table 6.1: Textile's percentage share of total economy, 1996.

Value added	Exports	Imports	Employment	Capital stock
69	132	242	114	26

Source: Republic of South Africa, 1998 (d).

The performance of the textile industry between 1991 and 1996 and forecast for the period 1997 - 2001 are summarised in Table 6.2.

Table 6.2: Current and expected performance: Textiles.

Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic production	11 242	-0.8	2.2	1.7	2.4	2.8	3.1	2.4
Demand	12 933	-3.4	-0.9	4.3	4.5	4.5	5.2	3.5
-domestic goods	9 367		-2.0	-0.7	-0.1	-0.2	0.1	-0.6
- imported goods	3 566		1.9	17.0	14.5	13.4	13.4	12.0
Exports	1 876	-4.5	19.4	10	11.4	11.8	11.6	12.8
Investment	747	24.5	8.7	4	3.9	3	2	4.3
Employment	80 000	-6.3	-2.5	-0.4	0.4	0.6	1	-0.2
Ratio (%)								
Import penetration	27.6	-	28.4	31.8	34.8	37.8	40.7	-
Export propensity	16.7	-	19.5	21.1	22.9	25	27	-

Source: Republic of South Africa, 1998 (d).

6.2.3 Demand

The general business cycle to a large extent determines conditions in the textile industry as the sector is closely linked to both industrial activity and consumer demand. The clothing industry is the main consumer of textiles, but the motor industry (seat covers and mats), the mining industry (rope), and the building construction industry (carpets) are also important buyers of textile products as material inputs. In addition, final products such as carpets, knitted clothing and bedding are supplied to consumers (RSA, 1995 (6): 9 - 10).

A feature of the South African textile market is that the demand for variety equals that of sophisticated first world market, while the overall level of consumption is low at only 7 kilogram per capita (RSA, 1998: 72).

The textile sector, similar to most manufacturing sectors, has traditionally had a domestic market focus. Despite this, export opportunities have begun manifesting themselves recently. The African market, especially SADC countries, has opened up to South African products while potential markets in the northern hemisphere have also become more accessible due to agreements regarding the easing of trade barriers. Whereas export growth decline by 4,5 percent per annum between 1991 and 1996, it picked up after the recent restructuring of the industry. Currently South Africa's major textile export destinations are the UK, Italy and Zimbabwe, as indicated by Table 6.3.

Table 6.3: South African important trading partners: Textiles, 1996

Country	Exports - % of total
UK	14
Italy	8.1
Zimbabwe	7.9
USA	7.3
France	6.7
Other	56
Country	Imports - % of total
Taiwan	14.1
China	7.4
South Korea	6.9
Germany	6.4
Hong Kong	6.1
Other	59.2

Source: Republic of South Africa, 1998 (d).

Table 6.4 illustrates the textile sectoral percentage break down for imports and exports in 1996. As a reflection of the sectoral percentage contribution to textile output, the spinning and weaving sub-sector also contributes the major share of the textile sector's export at 52 percent, followed by the other sub-sectors with substantially lower contributions (RSA: 7.4).

Table 6.4: Sectoral percentage traded products: Textile, 1996.

Sub-sector	Imports % of total	Exports % of total
Spinning & weaving	63	52
Made-up textiles	11	15.1
Garment knitting mills	8.5	11.6
Other knitting mills	6.9	9.2
Other textiles	5.8	5.9
Other	4.7	6.2

Source: Republic of South Africa.1998 (d).

Preferential market access possibilities exist for the textile sector could further aid export growth in the sector. For example, tariff cuts are provided for a wide range of textile products by countries such as the USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their respective Generalised System of Preference (GSP) programmes (RSA: 75).

In addition, better market access is negotiated with the EU through the establishment of a free trade area between the two country groups (RSA: 7.4). This could reduce the tariffs applicable to a wider range of products than is currently the case under the GSP programme.

The signing of the Trade Protocol between Southern African Development Community countries also created a large export market for textile as trade between these countries is freed and non-tariff barriers are removed. Africa is the fast-growing and largely untapped market with high urbanisation growth rates. In fact, it has been estimated that urban populations in the SADC region are growing at 6 percent per annum, implying a doubling of urban markets of the next 12 years (RSA: 7.3). This provides South African textile manufacturers with a considerably way of market opportunities.

The preferential access for the textile sector is indicated in Table 6.5.

Table 6.5: Preferential access: Textiles.

Country	GSP % Qualifying product lines
Canada	41
EU	97
Hungary	93
Japan	77
Norway	100
Switzerland	100
USA	7

Source: Republic of South Africa, 1998 (d).

Table 6.5 shows the percentage of product lines within a sector or sub-sector that currently enjoy preferential access to these export market. Her larger trading partners have offered seven GSP's to South Africa. These are USA, Canada, The EU, Hungary, Japan, Norway and Switzerland. The level of tariff cuts as well as the product coverage of each of these schemes vary significantly and it is therefore crucial that each GSP scheme be evaluated on a line-by-line basis. The USA and Norway are the only countries offering total tariff

reduction (or very nearly 100 percent) for GSP-qualifying products. In the case of the USA, these cuts apply to 46 percent of tariff lines and in the case of Norway to more than 80 percent of products. In EU and Switzerland offer tariff cuts between 40 percent and 100 percent to more than 70 percent of tariff lines, while Hungary and Japan afford GSP status to almost half of all products, providing these qualifying products with average tariff cuts of between 63 percent and 67 percent. Canada is the only country that offers 100 percent product coverage under GSP, providing an average of 67 percent reduction in duties payable (RSA, 1998 (d): 4)

6.2.4 Supply

The local textile industry consists of a small group of major producers, as well as hundreds of smaller concerns. Pockets of producers are mainly situated in the coastal regions of the Eastern and Western Cape and Kwazulu Natal (Ligthelm, 1998: 25).

The clothing industry, which is the main user of textiles, has increasingly turned to imports as a source of raw material (RSA, (b): 9 - 10). Imports have thus progressively become a major source of competition to the local textile industry, while smuggling and quota busting, especially from non-WTO countries serves to exacerbate the threat from imports. With the opening up of South Africa to global competition, production levels in this sector decreased by 0,8 percent per annum between 1991 and 1996. Imports from Asian countries, especially Taiwan, China, South Korea and Hong Kong, were mainly responsible for import penetration (Table 6.3). The spinning and weaving sub-sector made the major contribution to textile imports (63 percent), followed by the other textile sub-sector as indicated in Table 6.4.

The need to extend a degree of protection to the industry, was recognised in the late 1980's and the SAP was introduced in 1989 for five years and offered duty-free imports based on export volume (RSA, 1998 (a)). In 1994, the SAP was replaced with Duty Credit Certificate (DC) Scheme, which offers a customs duty credit reward for export performance (RSA, 1998 (a)). Due to the sensitive nature of the sector, the industry agreed on an import tariff phasing down period of seven years to bring tariffs in line with WTO requirements as presented in Table 6.6.

Table 6.6: Average import tariff: Textiles

Sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Textile products	30.8	28.7	21.1	24.7

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d). Sectoral Prospects. Growth Guidelines for 80 South African Industries - 1997 - 2001. DTI and IDC. Sandton.

According to table 6.6 the import weighted average tariff will phase down from 30,8 percent in 1994 to 21,1 percent in 2001. The WTO tariff reference refers to 24,7 percent as the upper limit set within the range of textile products.

Table 6.7 depict the percentage distribution of textile products within the different tariff range during the period 1994 to 2001.

Table 6.7: Import tariff phase down schedule: Textiles

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	3.7	2.4	2.4	0.7
1 - 5%	1.4	1.1	1.4	0.6
6 - 10%	4.9	2.4	2.2	0.5
11 - 15%	2.2	1.2	1.3	0.3
> 15%	87.8	92.9	92.7	97.8

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

The supply of raw materials for textile production is to a large extent, available locally, which should provide a strong contributing factor to the sector's competitiveness. Although abundant wool is produced in South Africa, it is largely exported before being spun (Werner International, 1998 (a): IB 14). South Africa has a relatively well-established grease wool export market, especially in European countries like UK, France and Germany (RSA, 1992: 31). The South African grease wool, because of its special quality, is used to blend with wool from other countries to obtain special characteristics in the textile products. The wool and mohair cluster study that has been commissioned will explore the potential of this sector in detail. Cotton is also produced locally, but can only satisfy 50 percent of local requirements. Hence this product will have to be supplemented by imports. During 1998 the IDC and DTI explored the possibility of strengthening the cotton

pipeline through Southern Africa. This has increased the availability of cotton in the region and enabled the competitive export of value-added products in SADC to the rest of the world (RSA, 1998 (d): 7.3). However, notwithstanding these advantages, the industry is more competitive in higher value-added products and less in lower value-added goods, especially against the low-cost Asian producers, since the domestic industry's cost structure makes it difficult to compete with low cost and high-volume producers in countries such as China, Taiwan and Hong Kong. Various reports (Werner International, 1998 (a); RSA, 1992; RSA, 1998 (d)) have indicated that it is therefore imperative for South African companies to produce higher value-added or differentiated products, foregoing market shares at the low end of the industry.

The textile industry has been hampered by low productivity, which has contributed to the lack of competitiveness (WEFA, 1996 (c): 46). In the past it has experienced difficulties in the timely provision of the correct raw materials. Apart from possible management weaknesses, which have developed in the context of the past inward-focussed environment, the relatively high average age of plant and machinery, unfavourable trade-off between labour cost and productivity, and the lack of specialisation have also contributed to these problems. Substantial upgrading of machinery and equipment has, however, recently been undertaken as part of the industry's capital investment programme to enable it to become world competitive (RSA, 1998 (d): 7.2). The upgrading has included technological innovations such as new automatic bale feeders, aerated systems, high-draft spinning, texturisation, shuttle looms; rotary screen-printing and computer-integrated manufactured processors. According to figures from the Textile industry during 1995 and 1996, while future investment is expected to reach R4 billion by 2000. Productivity and training issues are also high on the agenda of the restructuring process taking place in the industry, to make it globally competitive. The IDC "World Player" scheme was important in assisting manufacturers in their quest for global competitiveness.

6.2.5 Prospects

Table 6.2 illustrates that the textile industry is expected to expand by an average of 2.4 percent over the period 1997 to 2001. The decline of the industry over the period 1991 to 1996 of 0,8 percent per annum is expected to be turned around to show a positive growth of 2.4 percent per annum over the forecast period. This is largely due to local manufacturers having completed significant restructuring during the past few years and having possible advantages over foreign competitors in areas such as their competitive edge internationally, on short production runs developed during years of isolation, as well as concerted efforts being made to secure large export orders which would achieve economics of scale in the industry. Exports are expected to grow at 12,8 percent per annum, which will lead to a marked increase in the export

propensity ratio, from 16,7 percent in 1996 to 27 percent in 2001 (RSA, 1998 (d): 7.2). Due to world competitiveness, this was impossible to be achieved and many firms were shut down.

The envisaged improved competitiveness is a result of the continuous upgrading of technology that has been taking place in the industry. The positive investment trend is foreseen to continue from 1997 to 2001, with growth in investment of 4,3 percent per annum (RSA: 7.2). Besides upgrading of technology, producers have also started to focus on fewer products ranges leading to benefits from economies of scale. In the quest for improved competitiveness, the industry has shed job opportunities. The trend is expected to continue for a while before job-gains again materialise around 1999 when the expansionary forces released by improved competitiveness could overcome the job losses associated with the continued automation (RSA: 7.2). Overall, employment losses in this capital-intensity sector are anticipated to be absorbed downstream in the more labour-intensive clothing sector as exports in the latter are expected to increase, but these could not happen and more firms were closed and many people lost jobs.

Domestic consumption will continue to substitute locally produced products for imported products as a result of the reduction in import tariff (RSA: 7.2). The import penetration ratio in 1996 of 27,6 percent could thus grow to 40 percent in 2001 (RSA: 7.2). However, import growth is expected to peak in 1998, after the depreciation of many East Asian currencies relative to that of the South African Rand.

It is anticipated that the cotton raw material sourcing from neighbouring countries could increase substantially, contributing to a higher import penetration ratio. Domestic demand can therefore not be seen as proving a potential source of growth of the same magnitude as in the past, especially since an uncompetitive cost structure for producing lower priced goods has divorced local suppliers from their domestic market. This was expected to place pressure on local producers to find new international market for their production surpluses. It is difficult for local firms to compete with companies from the East or China and other Asians countries. The main problem being delivery time and the quality and pricing thereof.

6.3 Spinning and weaving of textile (SIC: 3211)

6.3.1 Introduction

Spinning and weaving is the largest sub-sectoring of the textile sector, contribution almost half of total textile output (RSA: 7.4). The activities included are the preparation of animal and vegetable fibres for spinning, such as netting, scotching, scouring, carding, combing, carbonising, throwing, dying, bleaching, printing and finishing. It includes the manufacture of yarns and fabrics and other small wares such as bias binding and woven labels, braids and other primary textiles, yarn fabric and jute mills. Also included is the weaving of

material such as plastic, glass fibre and glass wool and the manufacture of finished textile fabrics by means of a weaving process (RSA, 1998 (e)).

6.3.2 Performance

The performance of the spinning and weaving sub-sector for the period 1991 to 2001 is indicated in Table 6.8.

Table 6.8: Current and expected performance: Spinning and weaving of textiles

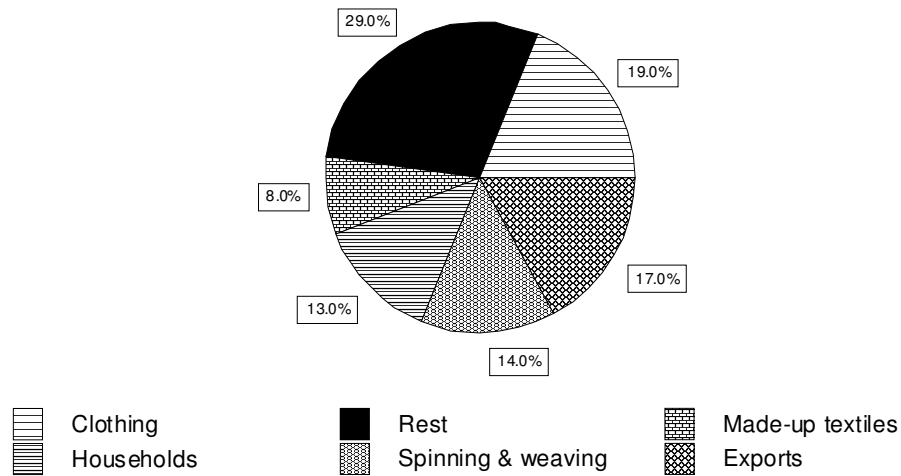
Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic production	5 610	-0.5	4.5	2.4	2.2	3.2	3.2	3.1
Demand	6 883	-	2.2	6.0	5.1	5.4	5.5	4.8
- domestic goods	4 636	-	3.2	0.7	0.1	0.6	0.5	1.0
- imported goods	2 248	-	0	17.3	14.3	13.1	12.5	11.4
Exports	975	-10.1	10.7	9.8	11.4	13.2	13	11.6
Employment	40 000	-6	-2.8	-0.7	0.3	0.8	0.3	-0.4
Ratio (%)								
Import penetration	32.7	-	32	35.4	38.5	41.3	44	-
Export propensity	17.4	-	18.4	19.7	21.5	23.6	25.8	-

Source: Republic of South Africa, 1998 (d).

6.3.3 Demand

The bulk of this sector's products are sold as intermediate inputs to the clothing (19 percent of total sales) and other sub-sectors of the textile sector, as indicated in Figure 6.2.

Figure 6.2: Sales structure: Spinning and weaving of textiles



Source: Republic of South Africa, 1998 (d).

The export propensity of spinning and weaving was 17 percent in 1996, after an average annual decline in export of around 10 percent per annum over the period 1991 to 1996 (RSA, 1998 (d): 7.7). Exports were mostly directed towards the UK, Italy, France, Taiwan and Japan (as indicated in Table 4.9) and mainly comprised wool and fine, or coarse, animal hair, synthetic filament, braids and woven fabrics of cotton (as indicated in Table 4.10). The export propensity increased substantially during the early seventies (1972 - 1974) from 36 percent to 49 percent in the late eighties (1988 - 1990), before declining to the current levels below 20 percent (17 percent in 1996) (RSA: 7.7). Table 6.9 depicts South Africa's most important trading partners in 1996.

Table 6.9: South African important trading partners: Spinning and weaving of textiles, 1996

Country	Exports - % of total
UK	14
Italy	11.5
France	9.2
Taiwan	6.8
Japan	6.3
Other	52.2
Country	Imports - % of total
Taiwan	13.8
South Korea	9.3
Hong Kong	7.4
China	6.1
Germany	5.5
Other	57.9

Source: Republic of South Africa, 1998 (d)

Table 6.10 presents a description, as well as the percentage contribution of the most important imports and exports in 1996

Table 6.10: Important traded products: Spinning and weaving of textiles, 1996

HS Code³³	Description	Imports % of total
5201	Cotton, nor carded or combed	13.9
5407	Woven fabrics of synthetic filament yarn	13.8
5502	Synthetic filament yarn not put up for retail sale	8.9
5516	Woven fabrics of artificial staple fibres	6.9
5208	Woven fabrics of cotton not more than 200 g/m ²	6.2
	Other	50.3
HS Code	Description	Exports % of total
5105	Wool & fine or coarse animal hair, carded or combed	40.7
5101	Wool, not carded or combed	23.8
5402	Synthetic filament yarn not put up for retail sale	8.4
5208	Woven fabrics of cotton not more than 200 g/m ²	4
5209	Woven fabrics of cotton more than 200 g/m ²	4
	Other	19.0

Source: Republic of South Africa, 1998 (d).

Expected new legislation in the USA regarding market access could be the key to major export opportunities for South African manufacturers. Currently, only 4 percent of spinning and weaving products qualify for preferential access to the USA market. A reduction of USA import duties will potentially be a huge boost for the South African industry (RSA: 7.7). The detailed preferential access information is indicated in Table 6.11.

Table 6.11: Preferential access: Spinning and weaving of textiles.

Country	GSP % Qualifying product lines
Canada	44
EU	96
Hungary	95
Japan	65
Norway	100
Switzerland	100
USA	4

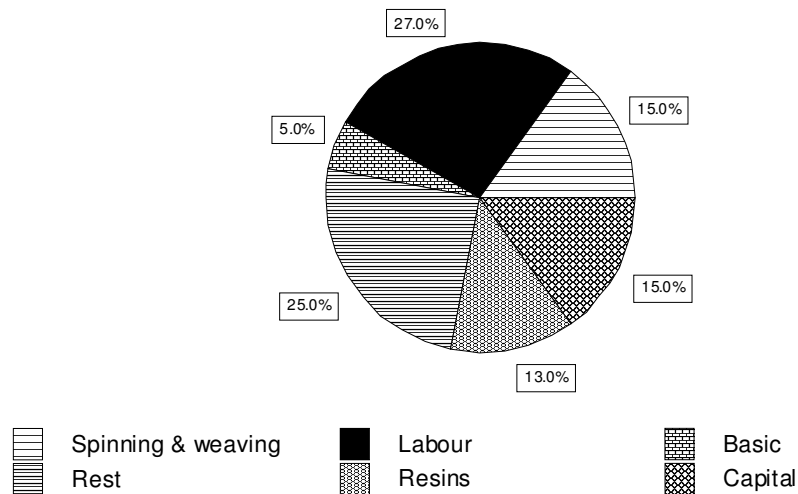
Source: Republic of South Africa.1998 (d)

6.3.4 Supply

The spinning and weaving sub-sector mainly depends on suppliers from within the sub-sector (15 percent of total costs) (RSA, 1995 (b): 9 - 10). Its second largest intermediate cost item originates from the resins and plastic sector (13 percent of total cost). The sub-sector is relatively labour-intensive, with labour contributing 27 percent to total labour costs and capital contributing 15 percent. The breakdown is presented in Figure 6.3.

Imports satisfy a significant 32 percent share of local demand for the products of the spinning and weaving industry (RSA, 1998 (d): 7.7). Import competition has increased over the period 1991 to 1996 with import growth of 1,4 percent per annum. Imports mainly originate from Taiwan, South Korea, Hong Kong, China and Germany and consist of cotton, woven fabrics of synthetic filament yarn, synthetic filament yarn not put for retail sale, woven fabric of artificial staple fibre and woven fabrics of cotton.

Figure 6.3: Sales structure: Spinning and weaving of textiles



Source: Republic of South Africa, 1998 (d)

The import penetration ratio has not changed substantially during the past decades. In the early seventies, the ratio was 30 percent, decreasing marginally to 25 percent in the early eighties, before increasing to 31 percent in the late eighties and almost 33 percent in the mid-nineties (IDC, 1995: ISIC 3 211,1).

6.3.5 Prospects

The expected average annual growth in domestic production over the forecast period is 3 percent per annum, reversing the sub-sector's negative growth rates in recent years. The forecast is based on the view that this sub-sector's international competitiveness will start to improve due to the technology and skill upgrading currently being undertaken in the industry, as well as a focussed production strategy, targeting differentiated products to both the domestic and export markets. Although off a low base, the export growth for the forecast period is expected to be reasonably high, 11 percent per annum. This represents a major structural change in the focus of the sub-sector's production, from import replacement to export growth (RSA, 1998 (d): 7.7).

Import growth is expected to accelerate, especially in certain products that can perhaps not be produced as competitively in the local market or in the required design or minimum quantities. Low-cost producing countries target this sub-sector's market and domestic production is simultaneously becoming increasingly focussed on improving its international competitiveness. In addition, the tariff phase down from 27 percent in 1998 to less than 20 percent in 2001 will also continue to increase imports, although the current minimum *ad valorem* duty of 22 percent on textiles, has the effect of discouraging significantly low-cost imports which could be harmful to the industry during the restructuring period (RSA: 7.7).

Table 6.12: Average import tariff: Spinning and weaving of textiles

Sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Spinning and weaving of textile	29.6	27.1	19.4	22.4

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

Table 6.12 contains information on the distribution of product lines within different tariff duty ranges as well as average import weighted rates applicable for each of the sub-sectors. The 1994 average tariffs, the proposed phase down rates for 1998 and 2001, as well as the WTO bound rates are shown. The 1994 average tariffs are indicated, as this was the baseline on which negotiations took place.

Table 6.13: Import tariff phase down schedule: Spinning and weaving of textiles

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	3.2	1.9	1.9	1
1 - 5%	0.9	0.9	1.3	0.9
6 - 10%	5.5	2.2	2	0.7
11 - 15%	1.6	0.3	0.5	0.4
> 15%	88.7	94.7	94.4	97.1

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

In its drive to become internationally competitive, the spinning and weaving sub-sector needs to continuously improve its productivity, resulting in the shedding of employment. Increased mechanisation offset by better output growth may result in employment gains surfacing in the period 1999 to 2001 (RSA: 7.7).

6.4 Made-up textile goods (SIC: 3212)

6.4.1 Introduction

The made-up textile goods sub-sector is the second largest sub-sector in the textile sector, contributing 18 percent to total textile output with a total production value of R2 billion in 1996 (RSA: 7.11). Activities in this sub-sector cover the making up, from purchased materials, of household furnishing such as curtains, draperies, sheets, blankets, bedspreads, pillows, laundry bags and slipcovers. Also included are textile bags, canvas products, and trimmings of fabrics, embroideries, automotive textile goods, banners, flags and pennants. Clothing is excluded (RSA, 1988 (e)).

6.4.2 Performance

Table 6.15 indicates performance of the made-up textile goods sub-sector during the period 1991 to 2001. It is anticipated that positive domestic production growth will be experienced in the period 1997 to 2001 compared to the negative growth recorded between 1991 and 1996. The lowering of import tariffs will encourage higher volumes in imports and this will lead to higher volumes of exports, as already experienced in 1996 (RSA, 1998 (d): 7.11).

Table 6.14: Current and expected performance: Made-up textile goods

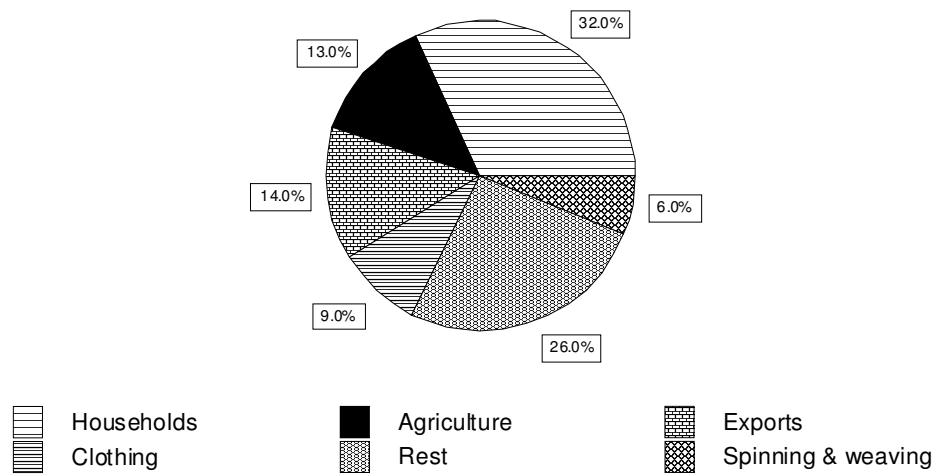
Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic Production	2 003	-1.8	-2.1	1	3.4	2.4	3	1.4
Demand	2 113	-12.4	-9.4	1.2	3.6	3.7	4.0	0.6
- Domestic goods	1 719		-14.1	-3.2	-0.6	-1.6	-1.2	-4.1
- imported goods	394		11.0	14.8	14.6	16.7	14.7	14.8
Exports	974	-10.1	63.7	12.1	12.9	10.8	11	22.1
Employment	17 000	-4.9	-3.6	-0.1	0.1	-0.6	0.4	-0.7
Ratio (%)								
Import penetration	18.6	-	22.8	26.1	29.2	32.8	36.2	-
Export propensity	14.2	-	23.7	26.3	28.7	31	33.4	-

Source: Republic of South Africa, 1998 (d).

6.4.3 Demand

The bulk of sales, almost one-third, of the sub-sector's products are sold to households. Total private consumption expenditure is therefore a major driving force in demand trends. The sub-sector's intermediate customers are agriculture (13 percent of total sales), clothing (9 percent), and spinning and weaving (6 percent) (RSA: 7.12). This is shown in figure 6.4.

Figure 6.4: Sales structure: Spinning and weaving of textiles



Source: Republic of South Africa, 1998 (d)

The 1996 export propensity of this sub-sector is 14 percent and exports are mostly directed to countries in the SADC region, such as Zimbabwe, Mozambique, Angola and Zambia. This export focus started from a very low basis of almost nothing (1 percent) in the period 1972 - 1974, increased to 4 percent in the early eighties and further expanded to 10 percent in the late eighties (RSA: 7.7).

Table 6.15: South African important trading partners: Made-up textile goods, 1996

Country	Exports - % of total
Zimbabwe	24.4
Mozambique	22.4
UK	10.6
Angola	8.1
Zambia	8.1
Other	26.3
Country	Imports - % of total
China	12.6
Turkey	12.6
India	11
Pakistan	10.6
Taiwan	9.6
Other	43.6

Source: Republic of South Africa, 1998(d).

Table 6.16 indicates the five most important traded products in 1996.

Table 6.16: Important traded products: Made-up textile goods, 1996

HS Code	Description	Imports % of total
6302	Bed linen, table linen, toilet linen & kitchen linen	28.1
6301	Blankets (exc. Electric blankets) & travelling rugs	21.4
6307	Other made-up articles, including dress patterns	19
6305	Sacks % bags used for the packing of goods	9.6
5810	Embroidery in the piece, in strips or in motifs	9.4
	Other	12.5
HS Code	Description	Exports % of total
6301	Blankets (exc. Electric blankets) travelling rugs	28.7
6306	Tarpaulins, awnings, sun blinds, camping goods	25.8
6305	Sacks & bags used for the packing of goods	15.4
6302	Bed linen, table linen, toilet linen & kitchen linen	15.3
6303	Curtains (incl. Drapes) & interior blinds	8.1
	Other	6.7

Source: Republic of South Africa, 1998 (d).

Preferential market access possibilities exist for this sub-sector and could further aid export growth. For example, tariff cuts are provided for a wide range of products by countries such as the USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their respective GSP programmes (RSA: 7.7).

Table 6.17: Preferential access: Made-up textile goods

Country	GSP % qualifying product lines
Canada	28
EU	100
Hungary	83
Japan	95
Norway	100
Switzerland	100
USA	11

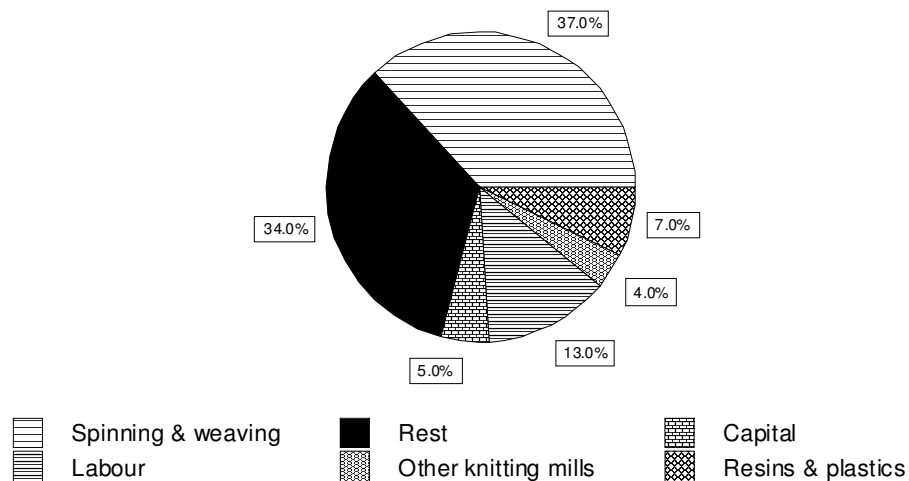
Source: Republic of SouthAfrica, 1998(d).

The most important export products of made-up textiles include blankets, tarpaulins, sacks and bags and linen. Between 1991 and 1996, the export growth in this sub-sector was significantly high with a growth rate of over 27 percent per annum.

6.4.4 Supply

This sub-sector utilises intermediate inputs from industries, such as spinning and weaving (37 percent total costs), resins and plastics (7 percent) and other knitting mills (4 percent) (RSA, 1995 (b): 9 - 10). These inputs are processed in a relatively labour-intensive production process, with labour accounting for 13 percent of total costs and capital, for 5 percent. The breakdown is illustrated in Figure 6.5.

Figure 6.5: Cost structure: Made-up textile goods



Source: Republic of South Africa, 1998 (d).

The import penetration ratio of this sub-sector is around 20 percent after import growth of 12,5 percent per annum between 1991 and 1996 (RSA, 1998 (d): 7.12). Imports originated mainly from countries with relatively low labour costs and advanced forms of technology, including China, Turkey, India, Pakistan and Taiwan. Bed linen, blankets and other made-up articles are the more significant imported products.

6.4.5 Prospects

Although this sub-sector has not performed well over the recent past, it is expected that it will start to experience positive growth rates in the forecast period. Domestic production growth should increase by 1,5 percent per annum over the period 1997 - 2001. The main source of growth is production for the export market. A 22 percent annual increase in exports is anticipated for the forecast period. The export propensity ratio should therefore be more than double from 14,2 percent in 1996 to 33.4 percent in 2001 (RSA: 7.12).

Once again, a move to niche markets, branded goods and specialised products is necessary to complete a global market.

Table 6.18: Average import tariff: Made-up textile goods.

Sub-sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Made-up textile goods	342	356	286	308

(1) *WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

The detail import tariff range is presented in Table 6.19 for the period 1994, 1998 and 2001 as in the WTO upper limit.

Table 6.19: Import tariff phase down schedule: Made-up textile goods.

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	4.4	4.4	4.4	0
1 - 5%	4.4	0	0	0
6 - 10%	0	0	0	0
11 - 15%	1.1	1.1	1.1	0
> 15%	90	94.4	94.4	100

• WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

Lower tariffs and increased import competition for the lower end of the market will contribute to strong import demand due to the availability of cheaper import prices. The growth rate in domestic demand for imported products are likely to be substantial while the domestic demand for the products produced in South Africa is expected to decline, thus contributing to a significant increase in the import penetration ratio from 18,6 percent in 1996 to 36,2 percent in 2001 (Table 6.14).

The strong focus on export as a growth engine for this sub-sector and the subsequent pressures to compete in international market will constrain the ability of this sub-sector to generate new employment opportunities over the forecast period. Employment in this labour-intensive sector is therefore expected to decline by 0,7 percent per annum (RSA: 7.12). This is in line with the general sector trend, and perhaps also due to the vertical integration of made-up textiles into most large textile factories.

6.5 Garment and hosiery knitting mills (SIC 32130)

6.5.1 Introduction

The garment and hosiery knitting mills sub-sector is the third largest sub-sector in the textiles sector, contributing 10 percent to total textile output (RSA: 7.4). It covers knitting mills engaged in producing hosiery, outerwear, underwear, nightwear, fabrics and laces as well as other knitted clothing from natural or synthetic fibres. Included are the bleaching, dyeing and finishing processes of knitted products (RSA, 1998 (e)).

It should be noted for the purpose of consistency in data when reading the statistics, that knitted clothing is in fact categorised by the Textile Federation as being part of the clothing sector data and not as textile sector data. However, in terms of the SIC classification, it has been included as textiles data in this study.

6.5.2 Performance

The performance of the garment and hosiery knitting mills is indicated in table 6.20.

Table 6.20: Current and expected performance: Garment and hosiery knitting mills

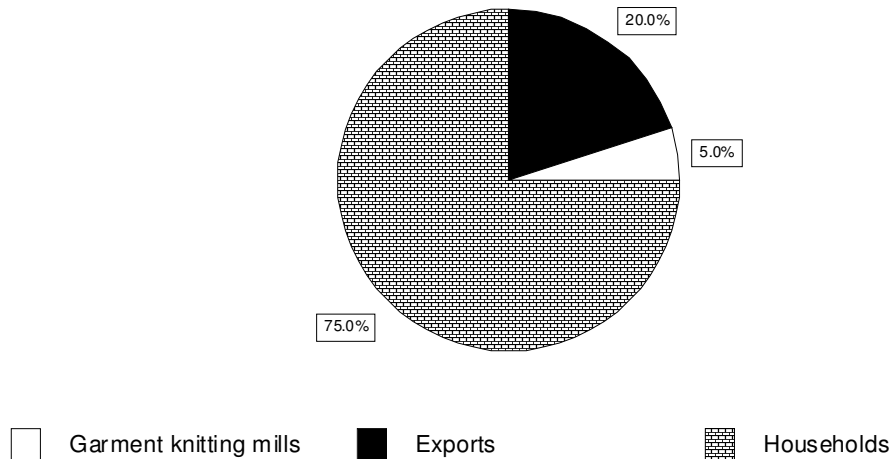
Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic production	1 104	-2.8	-4.3	0	3.2	3.7	3.5	1.2
Demand	1 190		-5.9	3.0	4.7	3.7	5.4	2.2
-domestic goods	886		-10.1	-3.4	0.8	0.1	0.4	-2.4
- imported goods	304	7.8	6.4	18.8	12.5	10.2	13.5	12.3
Exports	218	4.2	19.7	10.4	9.9	12.9	10.7	12.7
Employment	12 000	-6.6	-3.7	-3.7	1.9	1.2	2.6	0.6
Ratio (%)								
Import penetration	25.5	-	28.8	33.2	35.7	38	40.9	-
Export propensity	19.7	-	24.7	27.2	29	31.6	33.8	-

Source: Republic of South Africa, 1998 (d).

6.5.3 Demand

Most of the sub-sector's products are sold to households for private consumption purposes (75 percent of total sales) (RSA, 1998 (d): 7.16). The growth in private consumption expenditure is therefore the main driving force behind this sub-sector's growth performance (Figure 6.6).

Figure 6.6: Cost structure: Garment and hosiery knitting mills



Source: Republic of South Africa, 1998 (d).

The export propensity ratio of the garment and hosiery knitting mills sub-sector is 19,7 percent, following a growth rate in exports of 4,2 percent per annum between 1991 and 1996. This sub-sector's exports are mostly directed towards the USA, UK, Germany, Mozambique and United Arab Emirates (RSA: 7.16). (Table 6.20).

Table 6.21: South African important trading partners: Garment and hosiery knitting mills, 1996.

Country	Exports - % of total
USA	28.5
UK	23.3
Germany	11.7
Mozambique	7.5
United Arab Emirates	5.6
Other	23.3
Country	Imports - % of total
Malawi	25.9
China	25.7
Hong Kong	9
Italy	8.9
Zimbabwe	6.7
Other	23.9

Source: Republic of South Africa, 1998 (d).

The major imports and exports appear in Table 6.22.

Table 6.22: Important traded products: Garment and hosiery knitting mills, 1996.

HS Code	Description	Imports % of total
6109	T-shirts, singlets & other vests, knitted or crocheted	25.9
6105	Men's or boys' shirts, knitted or crocheted	14.1
6115	Pantyhose, tights, stockings & other hosiery	12.2
6111	Babies' garments, knitted or crocheted	10.1
6110	Jerseys, pullovers, waistcoats & similar articles	7.8
	Other	29.8
HS Code	Description	Exports % of total
6109	T-shirts, singlets & other vests, knitted or crocheted	26.8
6112	Track suits, ski suits, swimwear, knitted or crocheted	11.7
6115	Pantyhose, tights, stockings & other hosiery	11.5
6105	Men's or boys' shirts, knitted or crocheted	11
6110	Jerseys, pullovers, waistcoats & similar articles	9.8
	Other	29.2

Source: Republic of South Africa, 1998 (d).

Preferential market access possibilities exist for the garment and hosiery knitting mills and could further aid export growth in the sub-sector. Tariff cuts for example, are provided for a wide range of products by countries such as USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their respective GSP programmes (RSA, 1998 (d): 7.16).

Table 6.23: Preferential access: Garment and hosiery knitting mills.

Country	GSP % qualifying product lines
Canada	7
EU	100
Hungary	100
Japan	100
Norway	100
Switzerland	100
USA	3

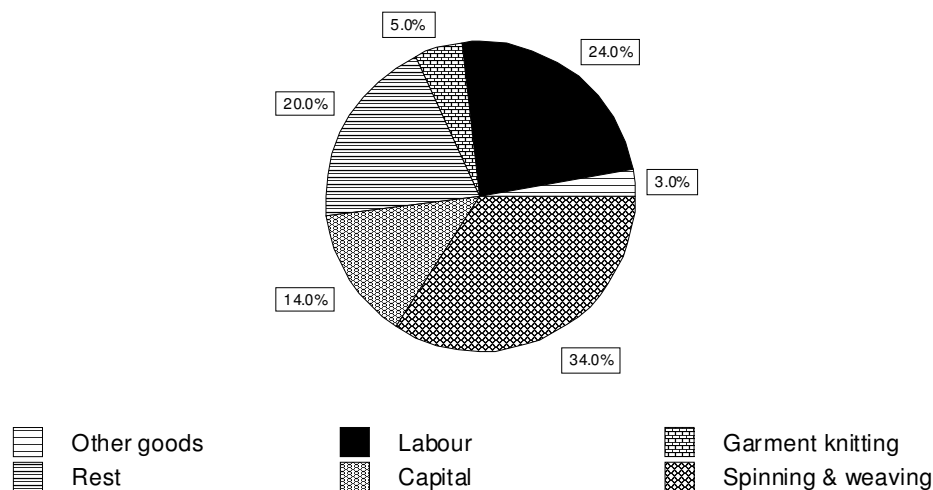
Source: Republic of South Africa, 1998(d).

The major export products include T-shirts, men's or boy's shirts, jerseys, pantyhose and tracksuits. Currently, only 3 percent of knitted garment products qualify for preferential access to the USA. The potential reduction of duties into the USA market will result in major export opportunities for local manufacturers (RSA: 7.15).

6.5.4 Supply

On the supply-side, this industry mainly utilises intermediate inputs from the spinning and weaving sub-sector (34 percent of total cost). The production processes are relatively labour-intensive, with labour cost representing 24 percent of total cost and capital representing 14 percent (RSA, 1995 (b): 9 - 10). (Fig 6.7).

Figure 6.7: Cost structure: Made-up textile goods



Source: Republic of South Africa, 1998 (d).

6.5.5 Prospects

Domestic production is expected to pick up slightly over the period 1997 to 2001; with a 1,2 percent per annum increase over the forecast period (RSA: 7.15). This is mainly the result of growth in exports rather than growth in the domestic market. Consequently, the export propensity ratio will increase from its 1996 level of 19,7 percent to 33,8 percent in 2001. The growth in exports over the forecast period is almost 13 percent per annum, while domestic demand for locally produced goods is expected to decline by 2.4 percent per annum (RSA: 7.15).

In line with the trends in the other textile sub-sectors, expected improvement in international competitiveness will be the result of high levels of investment in new technologies and increase specialisation. However, it is

expected that this sub-sector will increase employment opportunities at a rate of 0,6 percent per annum over the forecast period (RSA: 7.15).

The sub-sector has been forced to restructure due to the increasing levels of import competition. Hence, the industry should not specialise in lower value-added goods such as T-shirts but should rather focus on higher value-added goods such as tracksuits. Tariff rates continued to decline from the 1998 rate of 69 percent to a rate of 47 percent in 2001 (RSA: 7.15). (Table 6.24).

Table 6.24: Average import tariff: Garment and hosiery knitting mills

Sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Garment and hosiery knitting mills	79.3	69	47	46.2

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

Table 6.25 depicts the import tariff range of the garment and hosiery knitting mill products.

Table 6.25: Import tariff phase down schedule: Garment and hosiery knitting mills.

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	3.7	0	0	0
1 - 5%	0	0	0	0
6 - 10%	0	0	0	0
11 - 15%	0	0	0	0
> 15%	96.3	100	100	100

* WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

It is therefore anticipated that import growth will increase by 12.3 percent per annum over the period 1997 to 2001 although the current minimum *ad valorem* of 40 percent on clothing has the effect of discouraging extremely low-priced imports of these products. In conclusion, the import penetration ratio will increase from its 1996 level of 25,5 percent to 40,9 percent in 2001 (RSA: 7.15)

6.6 Other knitting mills (SIC: 32139)

6.6.1 Introduction

The other knitting mills sub-sector contributes 11 percent of total textiles output (RSA: 7.4). This sub-sector cover knitting mills engaged in producing all knitted products excluding garment and hosiery products (RSA, 1988 (e)).

6.6.2 Performance

The performance for the knitting mills is depicted in Table 6.26 for the period 1991 to 2001.

Table 6.26: Current and expected performance: Other knitting mills

Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic production	1 185	4	-0.1	-0.8	1.1	0.3	1.6	0.4
Demand	1 258		-0.7	1.4	2.8	3.1	5.1	2.3
-domestic goods	1 012		-0.5	-2.3	-1.1	-1.9	-0.6	-1.3
- imported goods	246	4.7	-1.5	17.1	16.4	17.6	19.2	13.8
Exports	173	-4.2	2.5	8.2	13.3	11.3	11.7	9.4
Employment	3 000	-8.9	-1.1	0	0	0.1	0.4	-0.1
Ratio (%)								
Import penetration	19.5	-	19.4	22.4	25.3	28.9	32.8	-
Export propensity	14.6	-	15	16.3	18.3	20.3	22.3	-

Source: Republic of South Africa, 1998 (d).

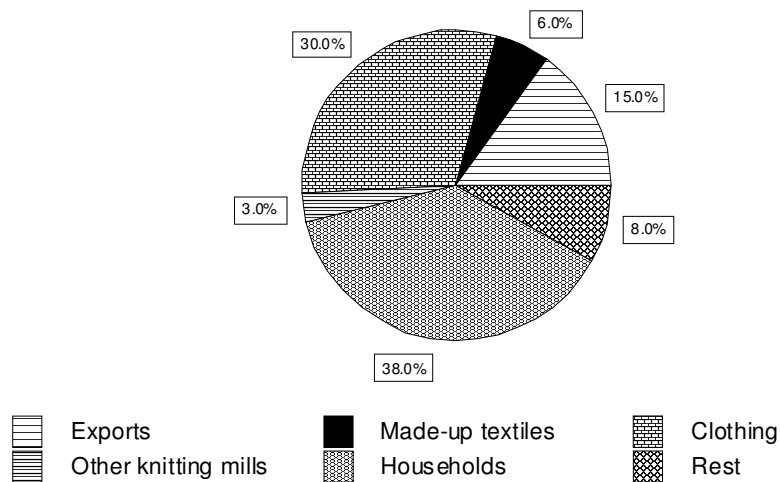
6.6.3 Demand

On the demand side, three domestic forces can be identified for this sub-sector as presented in Figure 6.8.

They are the following (RSA, 1998 (d): 7.20):

- Private consumption expenditure, which representing 38 percent of total sales.
- Intermediate sales to the clothing industry, representing 30 percent of total sales.
- Intermediate sales to sub-sectors within the textile sector.

Figure 6.8: Cost structure: Other knitting mills



Source: Republic of South Africa, 1998 (d).

Growth on domestic demand was the main source of growth for the sub-sector between 1991 and 1996. Production for foreign demand declined by more than 4 percent per annum over the same period and resulted in a 1996 export propensity ratio of less than 15 percent. During the same year, exports consisted mainly of products such as other knitted fabrics and pile fabrics. These products were exported to Zimbabwe, Malawi, the UK, the USA and Australia as illustrated in Table 6.27 (RSA: 7.20).

Table 6.27: South African important trading partners: Other knitting mills, 1996.

Country	Exports - % of total
UK	14
Italy	8.1
Zimbabwe	7.9
USA	7.3
France	6.7
Other	56
Country	Imports - % of total
Zimbabwe	51.8
Malawi	11.7
USA	7.4
UK	4.1
Australia	3.7
Other	21.3

Source: Republic of South Africa, 1998 (d).

The most important imports and exports of other knitting mill products are indicated in Table 6.28.

Table 6.28: Important traded products: Other knitting mills, 1996

HS Code	Description	Imports % of total
6002	Other knitted or crocheted fabrics	91.2
6001	Pile fabrics, knitted or crocheted	7.7
	Other	1.1
HS Code	Description	Exports % of total
6002	Other knitted or crocheted fabrics	76.8
6001	Pile fabrics, knitted or crocheted	21
	Other	2.2

Source: Republic of South Africa, 1998 (d).

Preferential market access possibilities exist for other knitting mills and could further aid export growth in this sub-sector. Tariff cuts for example, are provided for a wide range of other knitting mills by countries such as USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their perspective GSP programmes (RSA: 7.20).

Table 6.29: Preferential access: Other knitting mills

Country	GSP % Qualifying product lines
Canada	30
EU	100
Hungary	82
Japan	99
Norway	100
Switzerland	100
USA	2

Source: Republic of South Africa, 1998 (d).

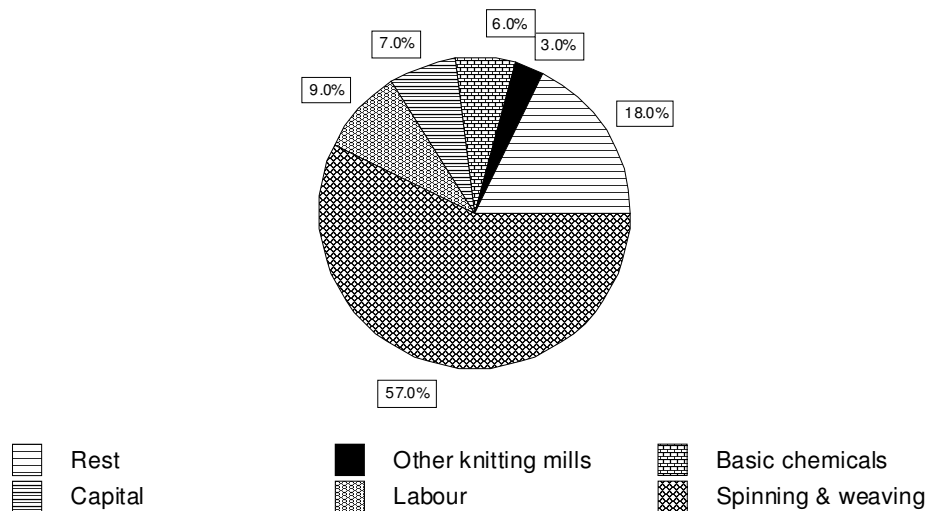
6.6.4 Supply

On the supply-side, other knitting mills used intermediate inputs from sectors such as a spinning and weaving (57 percent of total costs) and basic chemicals (6 percent). Primary factor costs, that are labour and capital costs, contribute only 16 percent to total costs, indicating a relatively low value-added component (Figure 6.9). This sub-sector only employed 3 000 people in 1996 while the downward employment trend of

8,9 percent per annum between 1991 and 1996 indicates major job losses in order to maintain its domestic market share in the face of increasing imports (RSA: 7.20). (Table 6.26).

Import competition intensified considerably between 1991 and 1996, with growth in imports of 4,7 percent per annum and an import penetration ratio of 19,5 percent in 1996. Import competition was primarily experienced in other knitted or crocheted fabrics with imports from Taiwan, Italy, the UK, South Korea and the USA (RSA: 7.20).

Figure 6.9: Cost structure: Other knitting mills



Source: Republic of South Africa, 1998 (d).

6.6.5 Prospects

It is expected that the other knitting mills sub-sector will experience marginal growth in domestic production of 0,4 percent per annum over the period 1997 to 2001, which is less than its growth in the past (RSA: 7.19). The weak performance of this sub-sector in 1997 is at least partially attributed to the negative impact of high real domestic interest rates on private consumption expenditure during that year.

Table 6.30: Average import tariff: Other knitting mills

Sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Other knitting mills	31.6	35.3	25.2	25.3

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

The phase down schedule for the import tariffs for the other knitting mills sub-sector is indicated in Table 6.31.

Table 6.31: Import tariff phase down schedule: Other knitting mills

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	0	0	0	0
1 - 5%	1.1	0	0	0
6 - 10%	0	0	0	0
11 - 15%	0	0	0	0
> 15%	98.9	100	100	100

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

As a result, the import penetration ratio increased from 19,5 percent in 1996 to almost 33 percent in 2001, although once again the minimum ad valorem of 22 percent of fabrics in place had the effect of discouraging extremely low-priced imports in this sector (RSA: 7.19).

Indications were that manufacturers in this sub-sector had invested in the upgrading of technology, skills and work organisation practices over the period 1991 to 1996. This enhanced their competitive ability over the forecast period. With specialisation and the export focus, it was expected that the export growth will turn around, with an increase of over 9 percent per annum over the forecast period. Although high, these export growth rate was realised from a low base with an additional export value of over R16 million annually (at 1996 prices). The export propensity ratio increased from 15 percent in 1996 to 22 percent in 2001 (RSA: 7.21).

6.7 Carpets and rugs (SIC: 3214)

6.7.1 Introduction

Carpets and rugs is one of the smaller sub-sectors in the textile sector, contributing only 6 percent to total textile output (RSA, 1998 (d): 7.4). It covers the manufacture of woven, tufted or braided carpets and rugs of any textile, fibre or yarn and mats or matting of twisted paper, grass, coir, sisal, jute or rags (RSA, 1998 (e)).

6.7.2 Performance

The current performance of the carpets and rugs sub-sector is indicated in Table 6.32 as is an overview of the forecast period.

Table 6.32: Current and expected performance: Carpets and rugs

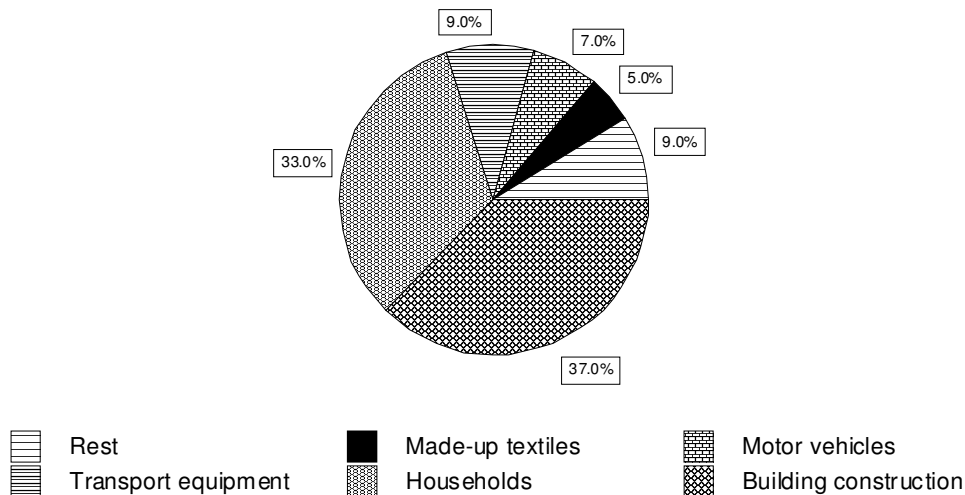
Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic Production	677	-3.6	-1.5	0.9	1.7	0.7	2.1	0.8
Demand	784		-0.8	3.5	4.6	2.7	4.9	3.1
-domestic goods	652		-1.8	0.6	1.1	0.2	1.5	0.3
- imported goods	132	5.0	4.4	17.2	18.3	11.5	15.5	13.4
Exports	25	1.9	8.8	8.5	14.3	12.6	13.3	11.5
Employment	4 000	-6.3	1.2	-0.8	-1.0	-2.2	1.2	-0.3
Ratio (%)								
Import penetration	16.8	-	17.7	20.0	22.7	24.6	27.1	-
Export propensity	3.7	-	4.1	4.4	4.9	5.5	6.1	-

Source: Republic of South Africa, 1998 (d).

6.7.3 Demand

Carpets and rugs are sold to the building and construction sector (37 percent of total sales) and to households (33 percent). Other major customers include transport equipment (9 percent), motor vehicles (7 percent) and made-up textile goods (7 percent) and made-up textile goods (RSA, 1998 (d): 7.24). (Figure 6.10).

Figure 6.10: Cost structure: Carpets and rugs



Source: Republic of South Africa, 1998 (d).

Demand trends within this sub-sector are therefore dominated by trends in private consumption expenditure as well as investment expenditure on residential and non-residential buildings. Relatively high interest rates and the consequent negative impact on private consumption and investment expenditure have in the past, contributed to the negative trends in this sub-sector.

The production of this sub-sector is almost exclusively focussed on the domestic market with its export propensity being only 4 percent in 1996, with an export value of only R25 million. The limited exports are directed towards Zimbabwe, Hong Kong, the UK, the USA and Singapore (RSA: 7.24).

Table 6.33 depicts the most important trading partners as well as their respective contributions to the total of carpets and rugs imports and exports.

Table 6.33: South African important trading partners: Carpets and rugs, 1996

Country	Exports - % of total
Zimbabwe	20.7
Hong Kong	10.4
UK	9.6
USA	7.0
Singapore	5.5
Other	46.6
Country	Imports - % of total
USA	20.0
Belgium	17.0
India	14.7
UK	8.5
Germany	5.0
Other	34.8

Source: Republic of South Africa, 1998 (d).

The following table represents the description of the most important imports and exports.

Table 6.34: Important traded products: Carpets and rugs, 1996

HS Code	Description	Imports % of total
5703	Carpets & other textile floor coverings, made-up	40.7
5702	Carpets & other textile floor coverings, woven	28.5
5705	Other carpets & other textile floor coverings	12.5
5701	Plaits & similar products of plaiting materials	4.2
	Other	2.3
HS Code	Description	Exports % of total
5702	Carpets & other textile floor coverings, woven	40.2
5703	Carpets & other textile floor coverings, made-up	32.5
5704	Carpets & other textile floor coverings, of felt	18.2
5705	Other carpets & other textile floor coverings	7.1
5701	Carpets & other textile floor coverings, knotted	1.7
	Other	0.3

Source: Republic of South Africa, 1998 (d).

Preferential market access possibilities exist for the textile sector and could further aid export growth in this sector. Tariff cuts, for example, are provided for a wide range of carpets and rugs by countries such as the USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their respective GSP programmes (RSA: 7.24).

Table 6.35: Preferential access: Carpets and rugs

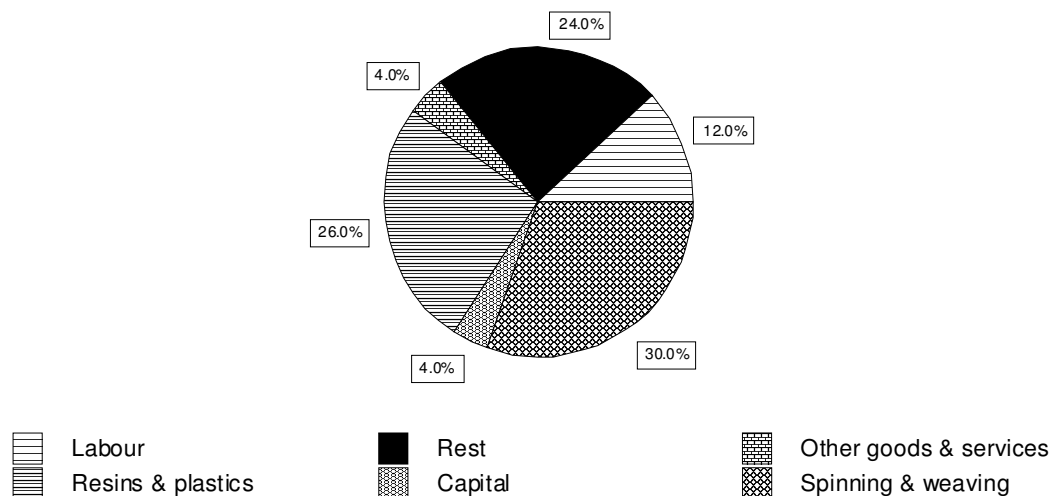
Country	GSP % qualifying product lines
Canada	100
EU	99
Hungary	95
Japan	89
Norway	100
Switzerland	100
USA	31

Source: Republic of South Africa, 1998 (d).

6.7.4 Supply

Production in the carpet and rugs sub-sector mainly utilises input from the spinning and weaving (30 percent of total cost) and resins and plastic manufacturing sub-sector (26 percent). The production processes are significantly labour-intensive, with labour contributing 12 percent to total costs and capital contributing 4 percent (Figure 6.11). Although relatively more than 6 percent per annum over the 1991 to 1996 period (RSA: 7.24).

Figure 6.11: Cost structure: Carpets and rugs



Source: Republic of South Africa, 1998 (d).

International trade linkages in carpets and rugs are dominated by imports with import penetration ratio of 17 percent. Imports in 1996 mostly originated from the USA, Belgium, India, the UK and Germany (RSA: 7.24).

6.7.5 Prospects

It is expected that the domestic growth rate of this sub-sector will improve from the decline of 3,6 percent per annum over the period 1997 to 2001. This is mainly the result of improved private consumption expenditure and higher demand for residential and non-residential buildings in the forecast period. Domestic demand is therefore expected to increase by 3 percent per annum over the forecast period (RSA: 7.23).

Imports are expected to increase by 13,4 percent per annum with the import penetration ratio increasing from 16,8 percent in 1996 to around 27 percent in 2001 (RSA: 7.23).

Table 6.36: Import tariff phase down schedule: Carpets and rugs

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	3.3	3.3	3.3	0
1 - 5%	0	0	0	0
6 - 10%	5.0	5.0	5.0	0
11 - 15%	5.0	5.0	5.0	0
> 15%	86.7	86.7	86.7	1000

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

Exports may increase at a rate of 11,5 percent per annum, but since the base is low, export value gains are limited to about R2, 9 m per annum. Hence, the export propensity ratio will increase from 3,7 percent in 1996 to 6,1 percent in 2001. Employment conditions are expected to remain negative, with employment decreasing by 0,3 percent per annum over the forecast period (RSA: 7.23).

6.8 Cordage, rope and twine (SIC: 323215)

6.8.1 Introduction

The cordage, rope and twine sub-sector is the smallest sub-sector in the textile sector, contributing 2 percent to total textile output (RSA: 7.4). It covers the manufacture of rope, cable, cordage, twine, net and related products from abace (manilla), sisal, henegwen, hemp, cotton, paper, jute, flax, man-made fibres, including glass and other fibres (RSA: 1998 (e)).

6.8.2 Performance

The performance of the textile sub-sector: cordage, rope and twine is presented in Table 6.37. The table also includes a forecast for the period 1997 to 2001, which has developed with IDC-GEM.

Table 6.37: Current and expected performance: Cordage, rope and twine

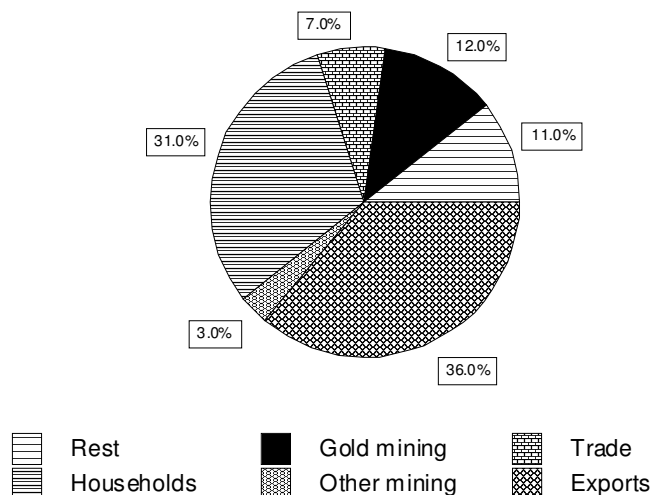
Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic production	248	-2.6	-1.6	-0.1	1.0	1.6	2.5	0.7
Demand	194		0.4	0.8	2.1	2.5	4.1	2.0
-domestic goods	156		2.1	-2.5	-1.9	-2.0	-1.0	-1.0
- imported goods	37	7.2	-6.4	15.8	17.1	16.8	17.8	12.2
Exports	92	5.7	-8.4	5.2	7.3	8.9	9.1	4.4
Employment	1 000	-10.7	-2.8	-4.6	-2.8	-0.6	0.7	-2.0
Ratio (%)								
Import penetration	19.3	-	18.0	20.7	23.7	27.0	30.6	-
Export propensity	37.0	-	34.5	36.3	38.5	41.3	44.0	-

Source: Republic of South Africa, 1998 (d).

6.8.3 Demand

Domestic demand is dominated by private consumption expenditure (31 percent of total sales). A unique feature of this sub-sector is its sales to diverse sectors such as gold mining (12 percent) and the trade service industry (7 percent) (RSA: 7.28) (Figure 6.12).

Figure 6.12: Cost structure: Cordage, rope and twine



Source: Republic of South Africa, 1998 (d).

The export propensity of this sub-sector is the highest in the textile group, with an export propensity of 37 percent in 1996 and export growth rate of 5,7 percent per annum over the period 1991 to 1996. As a result, exports are the largest single market segment of the cordage, rope and twine sub-sector.

The main export destination in 1996 was Hong Kong, Zambia, Chile, Spain and Zimbabwe (RSA: 7.28).

South Africa's most important trading partners are indicated in Table 6.38.

Table 6.38: South African important trading partners: Cordage, rope and twine, 1996

Country	Exports - % of total
Hong Kong	36.0
Zambia	19.7
Chile	16.9
Spain	6.5
Zimbabwe	3.8
Other	17.1
Country	Imports - % of total
USA	10.8
Germany	10.3
UK	9.5
France	7.2
Netherlands	7.2
Other	55.1

Source: Republic of South Africa, 1998 (d).

The following table provides a detailed description of the traded cordage, rope and twine products as well as their contribution to the total traded cordage, rope and twine import and export.

Table 6.39: Important traded products: Cordage, rope and twine, 1996

HS Code	Description	Imports % of total
5607	Twine, cordage, rope & cables, plaited or braided	75.1
5608	Knotted netting of twine, cordage or rope	24.9
HS Code	Description	Exports % of total
5608	Knotted netting of twine, cordage or rope	58.8
5607	Twine, cordage, rope & cables, plaited or braided	41.2

Source: Republic of South Africa, 1998 (d).

Preferential market access possibilities exist for the cordage, rope and twine industry and could further aid export growth. Tariff cuts, for example, are provided for a wide range of cordage, rope and twine products by countries such as the USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their respective GSP programmes (RSA: 7.28).

Table 6.40: Preferential access: Cordage, rope and twine

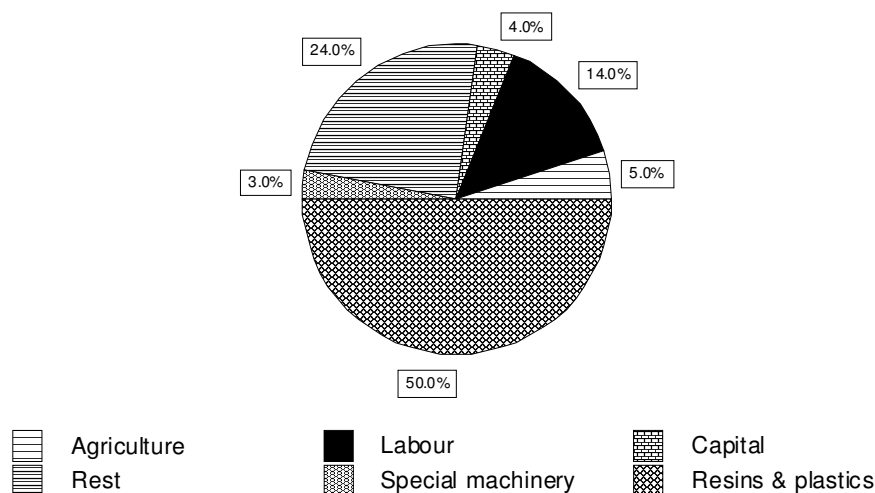
Country	GSP % qualifying product lines
Canada	17
EU	100
Hungary	79
Japan	100
Norway	100
Switzerland	100
USA	32

Source: Republic of South Africa, 1998 (d)

6.8.4 Supply

Viewed from the supply-side, this sub-sector mainly uses imports from resins and plastics, which contribute half of total costs in the sub-sector (RSA, 1995 (b): 9 - 10). Since it is overly dependent on one source of intermediate inputs, the performance of the cordage, rope and twine sub-sector is extremely sensitive to price changes, in efficiencies or shortages in the resins and plastics sub-sector (Figure 6.13).

Figure 6.13: Cost structure: Cordage, rope and twine



Source: Republic of South Africa, 1998 (d).

As is the case in most other textile sub-sectors, import competition is relatively high. Domestic supply satisfies 80 percent of total domestic demand. Imports for the balance originate mainly from developed countries, including the USA, Germany, the UK, France and the Netherlands. From 1991 to 1996, import penetration increased due to import growth rates of more than 7 percent per annum with a resulting import penetration ratio of nearly 20 percent in 1996 (RSA 1998 (d): 7.28).

6.8.5 Prospects

It is expected that domestic production will move from a decline of 2,6 percent per annum over the period 1991 to 1996, to an increase of 0,7 percent per annum for the period 1997 to 2001. The potential growth in domestic demand is limited due to the anticipated peer performance of the gold mining sector. However, domestic demand can be expected to grow at 2 percent per annum (RSA: 7.27).

The import weighted average tariff for the cordage, rope and twine will marginally decrease from 20,1 percent level in 1998 to 19,5 percent in 2001 (RSA: 7.28).

Table 6.41: Average import tariff: Cordage, rope and twine

Sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Cordage, rope and twine	21.4	20.1	19.5	20.0

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

Table 6.42 illustrates the import tariff range for the cordage, rope and twine products.

Table 6.42: Import tariff phase down schedule: Cordage, rope and twine

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	0	0	0	0
1 - 5%	5.3	5.3	5.3	0
6 - 10%	10.5	10.5	10.5	0
11 - 15%	0	0	0	0
> 15%	84.2	84.2	84.2	100.0

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d)

Imports should rise by around 12 percent per annum over the forecast period, which will increase the import penetration ratio from less than 20 percent in 1996 to over 30 percent in 2001. Export should increase by 4,4 percent per annum over the forecast period, raising the export propensity from 37 percent in 1996 to 44 percent in 2001. Employment is still expected to decline by 2 percent per annum over the forecast period (RSA: 7.27).

6.9 Other textiles (SIC: 3219)

6.9.1 Introduction

This is the most diverse sub-sector within the textiles sector; however, its contribution to total textiles output is only 4 percent (RSA: 7.4). The sector covers the manufacture of linoleum and floor coverings other than cork, rubber and plastic, impregnated and coated fabrics (not rubberised); felt, lace, upholstery filling, processed waste, type cord and fabric (RSA, 1988 (e)).

6.9.2 Performance

The performance of the sub-sector other textiles is illustrated in Table 6.43 for the period 1991 to 1996, as is an annual forecast until 2001. The forecast is done with the IDC-GEM.

Table 6.43: Current and expected performance: Other textiles

Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic production	416	-0.9	6.9	2.3	2.0	0.8	2.4	2.9
Demand	512		2.1	5.5	4.7	3.0	5.2	4.1
-domestic goods	306		1.7	0.2	-0.8	-2.5	-0.1	-0.3
- imported goods	206	4.2	2.8	13.3	11.8	9.2	10.7	9.6
Exports	110	3.8	22.0	7.5	8.5	7.8	7.1	10.6
Employment	2 000	-7.1	-2.2	0.5	-0.7	-1.0	1.0	-0.5
Ratio (%)								
Import penetration	40.3	-	40.5	43.5	46.5	49.3	51.9	-
Export propensity	26.5	-	30.2	31.7	33.7	36.1	37.7	-

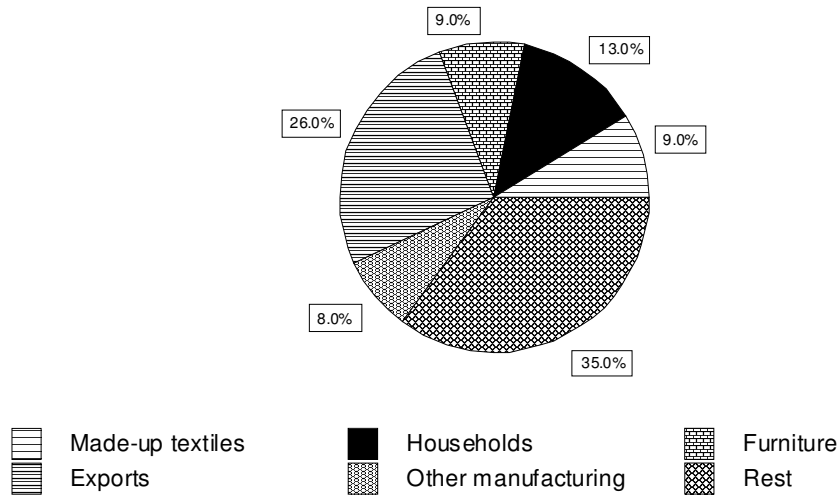
Source: Republic of South Africa, 1998 (d).

6.9.3 Demand

The diverse nature of this sub-sectors suggest that it sells its products to a diverse range of sectors - some of its main corporate clients are in the furniture, made-up textiles and other manufacturing industries, each

contributing around 9 percent to total sales. A distinguishing feature of this sub-sector is its low share of sales to households (13 percent of total sales) (RSA, 1988 (d): 7.32) (Figure 6.14).

Figure 6.14: Cost structure: Other textiles



Source: Republic of South Africa, 1998 (d).

The export propensity of this sub-sector is 26 percent and exports mainly consist of non-woven textile goods, coated textile fabrics and type cord. Exports are destined largely for Zimbabwe, Hong Kong, Mauritius, Chile and Australia (RSA: 7.32). The recent export performance significantly underpinning growth.

Table 6.44: South African important trading partners: Other textiles, 1996

Country	Exports - % of total
Zimbabwe	26.7
Hong Kong	15.6
Mauritius	5.3
Chile	5.0
Australia	4.9
Other	42.5
Country	Imports - % of total
Germany	18.8
UK	13.5
Taiwan	12.2
USA	8.8
Italy	7.0
Other	39.8

Source: Republic of South Africa, 1998 (d).

Table 6.45 indicates the most important import and export items, and their contributions to the total import and export of other textile products.

Table 6.45: Important traded products: Other textiles, 1996

HS Code	Description	Imports % of total
5911	Textile products & articles, for technical uses	37.3
5903	Textile fabrics coated, covered with plastics	19.0
5603	Non-woven, whether or not coated, covered	18.7
5601	Wadding of textile materials, textile fibres	6.2
5907	Textile fabrics otherwise coated or covered	5.8
	Other	13.1
HS Code	Description	Exports % of total
5603	Non-wovens, whether or not coated, covered	33.2
5903	Textile fabrics coated, covered with plastics	20.5
5911	Textile products & articles, for technical uses	18.0
5902	Tyre cord fabric of high tenacity, yarn of nylon	8.3
5601	Wadding of textile materials, textile fibres	5.8
	Other	14.2

Source: Republic of South Africa, 1998 (d).

Preferential market access possibilities exist for the other textile sub-sector and could further aid export growth in the sub-sector. Tariff cuts, for example, are provided for a wide range of other textile products by countries such as the USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their respective GSP programmes (RSA: 7.32).

Table 6.46: Preferential access: Other textiles

Country	GSP % qualifying product lines
Canada	63
EU	97
Hungary	91
Japan	89
Norway	100
Switzerland	100
USA	13

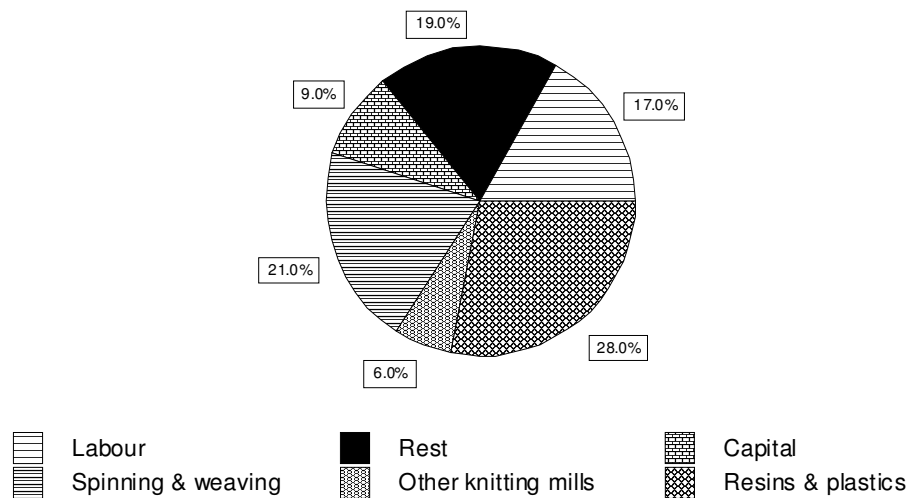
Source: Republic of South Africa, 1998 (d).

6.9.4 Supply

On the supply-side, this sub-sector utilises imports from sectors such as resins and plastics (28 percent of total costs), spinning and weaving (21 percent) and other knitting mills (6 percent). These inputs are processed by way of labour-intensive processes to arrive at the final product. Labour represents 17 percent of total cost and capital 9 percent (Figure 6.15). A drive to reduce costs had led to major job losses in this sub-sector (RSA: 7.32).

Import competition is severe with an import penetration ratio of 40 percent in 1996. Imports originated from Germany, the UK, Taiwan, the USA and Italy (RSA: 7.32 (Table 6.12).

Figure 6.15: Cost structure: Other textiles



Source: Republic of South Africa, 1998 (d).

6.9.5 Prospects

The prospects for the domestic production of the other textiles sub-sector are positive. It is expected that domestic production will change from a decline of 0,9 percent between 1991 and 1996 to growth of 2,9 percent per annum over the period 1997 to 2001. This is positive outlook for both domestic demand and enhanced exports (RSA: 7.31) (Table 6.43).

Growth in domestic demand for 4.1 percent per annum is anticipated for the forecast period. Domestic production can only satisfy 60 percent of this demand and imports will therefore continue to increase. The average annual import growth rate is expected to be more than 9 percent, which will increase the import penetration from its 40 percent level in 1996 to just over 50 percent in 2001 (RSA: 7.32).

The information presented in Table 6.47 shows that the import weighted average tariff will marginally decrease from the 12,8 percent in 1998 to 12,1 percent in 2001 (RSA: 7.32).

Table 6.47: Average import tariff: Other textiles

Sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Other textiles	13.2	12.8	12.1	23.8

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

Table 6.48 presents the distribution of products according to the different import tariff ranges.

Table 6.48: Import tariff phase down schedule: Other textiles

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	17.8	15.6	15.6	0
1 - 5%	10.0	8.9	8.9	0
6 - 10%	11.1	11.1	11.1	0
11 - 15%	17.8	16.7	16.7	0
> 15%	43.3	47.8	47.8	100.0

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

Increased import competition and the increased focus on exports will intensify the efforts of players in this sub-sector to improve their international competitiveness. Among these efforts are continued improvements in productivity through investment in skills, technology and improved work organisation. The change in employment over the forecast period will still be on 0,5 percent per annum decline. Productivity improvements, however, have positive implications for exports. Export growth of 10,6 percent per annum can be expected, with the export propensity ratio increasing from 26,5 percent in 1996 to 37,7 percent in 2001 (RSA: 7.31).

6.10 **Clothing (SIC: 322)**

6.10.1 **Introduction**

The clothing sector covers the manufacture of clothing by cutting and sewing fabrics, leather, fur, plastic, rubber and other materials and the making of hoods, hats, head-dresses and other accessories. The manufacture of knitted products and footwear is excluded (RSA, 1988(e)).

The lack of data prevents a discussion of sub-sector groups of the industry.

6.10.2 **Performance**

Since the clothing industry is a very labour-intensive industry, it is responsible for almost 1,8 percent (125 000 people) of the employment of the total economy of South Africa (RSA, 1998 (d): 8.2). It should be noted for the purpose of consistency in data when reading the statistics, that knitted clothing is in fact excluded because, although it is categorised by the Clothing Federation data as being part of clothing data, in terms of correct SIC classification it has been included in textile data (RSA: 8.2).

According to the Clothing Federation, many workers lost their jobs during the period 1995 to 1998 as a result of large-scale imports of cheap clothing and illegal imports. Borat (1998: 8) independently reached the same viewpoint as the Clothing Federation, namely, that illegal imports had a negative impact on textile and clothing businesses. This is true both for those producing at the low-end and mid-range items being sourced from East Asia. However, informal sector employment in clothing manufacturing is significant. The industry agreed on an import tariff phase down period of 7 years, starting 1995, and the 41 percent end tariff rate will be in line with the WTO requirements (RSA: 8.2).

Table 6.49 depicts the contribution of the clothing sector to the South African economy. Clothing production contributes 0,8 percent to South Africa's GDP, but only 0,4 percent to exports. Clothing imports

are 0,4 percent of total imports (RSA: 8.2). Past policies have created an environment of import replacement and employment creation at almost all cost, resulting in a non-competitive environment. However, industry has agreed that the long-term strategy for the clothing industry should support international competitiveness and an export drive, especially in the middle- and higher-priced garment sector and niches (Clothing Federation of South Africa, 1997: 80 - 81).

Table 6.49: Clothing's percentage share of the total economy, 1996

Value added	Exports	Imports	Employment	Capital stock
0.75	0.35	0.35	1.79	0.04

Source: Republic of South Africa, 1998 (d).

The performance of the clothing sector is illustrated in Table 6.50.

Table 6.50: Current and expected performance: Clothing

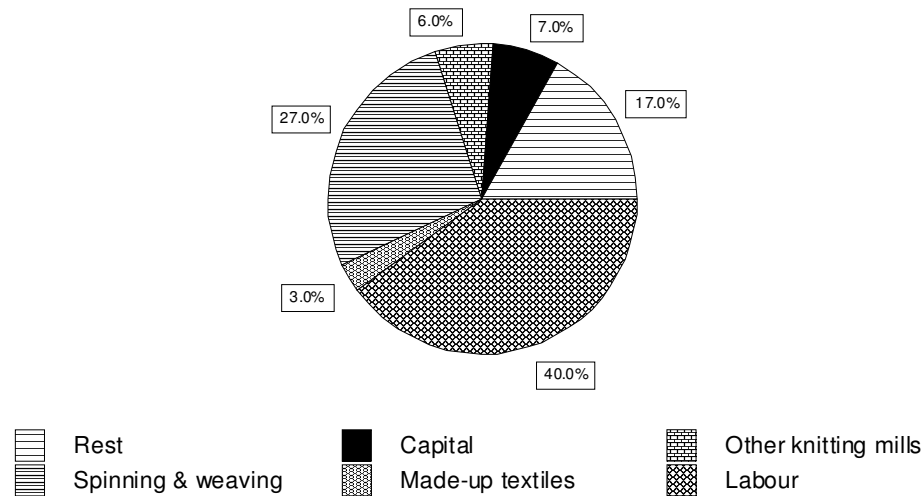
Description	1996	1991-96	1997	1998	1999	2000	2001	1997-01
	Rm	Real average annual % change						
Domestic Production	7 559	-0.1	0.5	1.7	4.2	3.8	4.3	2.9
Demand	7 577	-	-0.7	1.6	3.9	3.2	3.5	2.3
-Domestic goods	7 055	-	-0.8	1.0	3.6	2.8	3.3	2.0
- imported goods	522	11.2	-0.4	9.1	8.2	8.1	6.5	6.3
Exports	504	5.9	18.7	9.8	11.7	15.6	14.8	14.1
Investment	111	7.6	8.2	0.3	0.7	0.5	1.0	2.1
Employment	125 000	-5.9	-0.8	0.6	1.5	-0.1	0.8	0.4
Ratio (%)								
Import penetration	6.9	-	6.9	7.4	7.7	8.1	8.3	-
Export propensity	6.7	-	7.9	8.5	9.1	10.1	11.2	-

Source: Republic of South Africa, 1998 (d).

6.10.3 Demand

Local demand for clothing, like most semi-durable and durable consumer goods, is of a cyclical nature depending on a large extent on the personal disposable income of consumers (RSA, 1998 (d): 8.2). In line with the far-reaching changes taking place in the country regarding income distribution and demographic shifts, the clothing market is also experiencing significant changes in tastes and preferences. Historically, exports have been insignificant at less than 0,1 percent of world export and only 4 percent of total production (Clothing Federation of South Africa, 1997: 81).

Figure 6.16: Sales structure: Clothing



Source: Republic of South Africa, 1998 (d)

Although developing an export culture is a slow process, obstructed by foreign competition, trade barriers and seasonal differences with the Northern Hemisphere, the export potential is promising due to the opening up of the markets in Southern Africa and beyond. The major destinations of South Africa's clothing exports are the UK, the USA and Mozambique as illustrated in Table 6.51 (RSA, 1998 (d): 8.4).

Table 6.51: South African important trading partners: Clothing, 1996

Country	Exports - % of total
UK	31.5
USA	31.4
Mozambique	12.1
Angola	4.4
Germany	4.0
Other	16.7
Country	Imports - % of total
China	21.9
India	17.1
Malawi	13.4
Hong Kong	10.1
Italy	6.1
Other	31.4

Source: Republic of South Africa, 1998 (d).

The most important import and export items description and percentage contributions are indicated in Table 6.52.

Table 6.52: Important traded products: Clothing, 1996

HS Code	Description	Imports % of total
6204	Women's or girls' suits, blazers, dresses, skirts	19.0
6205	Men's or boys' shirts	15.9
6203	Men's or boys' suits, ensembles, jackets, blazers	14.1
6206	Women's or girls' blouses, shirts & shirts-blouses	8.8
4203	Articles of apparel & clothing accessories, of leather	8.2
	Other	34.0
HS Code	Description	Exports % of total
6203	Men's or boys' suits, ensembles, jackets, blazers	41.1
6205	Men's or boys' shirts	21.7
6204	Women's or girls' suits, blazers, dresses, skirts	11.4
6506	Other headgear, whether or not lined or trimmed	7.3
6505	Hats & other headgear, knitted or crocheted	3.8
	Other	14.7

Source: Republic of South Africa, 1998 (d).

Preferential market access possibilities exist for the clothing sector and could further aid export growth in the sector. Tariff cuts, for example, are provided for a wide range of clothing products by countries such as the USA, Canada, Hungary, Switzerland, Norway, Japan and the EU, through their respective GSP programmes (RSA: 8.4).

Table 6.53: Preferential access: Clothing

Country	GSP % qualifying product lines
Canada	24
EU	100
Hungary	95
Japan	94
Norway	100
Switzerland	100
USA	10

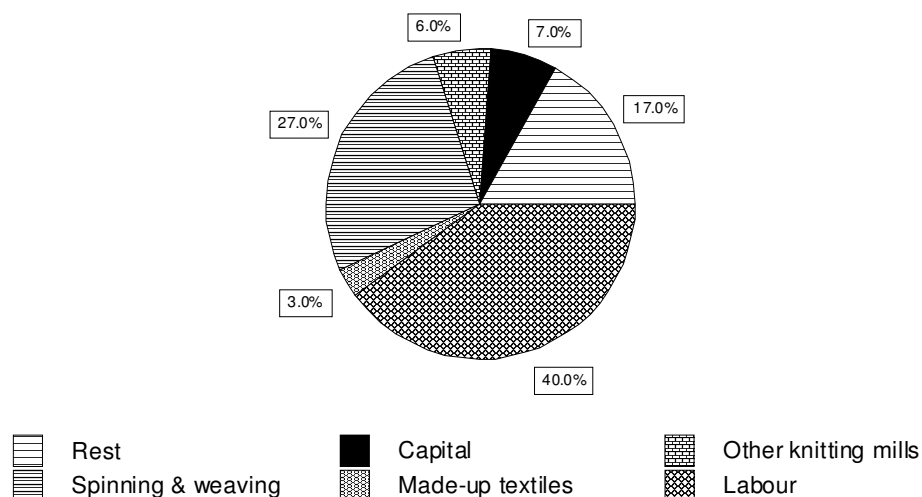
Source: Republic of South Africa, 1998 (d).

Since 1974, much of world trade in textiles and clothing has been regulated by the Multi-fibre Arrangement (MFA). Negotiated as an exception to normal WTO disciplines, the MFA has provided the basis on which industrial countries have established quotas on imports of clothing from more competitive developing countries. Expected new legislation in the USA could be the key to major export opportunities for South African manufacturers. The Clinton Administration and the powerful group of Congressmen were behind a new Africa Policy, which aimed at promoting trade with and investment in progressive African economies. Currently only 10 percent of the clothing products listed in the US as code lines has preferential access to the USA market (RSA: 8.2). A reduction in import duties to access the US market will be a significant stimulant to the South African industry, while overseas firms could invest in South Africa to benefit from the preferential tariff agreement with this country.

6.10.4 Supply

The clothing sector utilises intermediate inputs from industries, such as spinning and weaving (27 percent of total costs), other knitting mills (6 percent) and made-up textiles (3 percent). These inputs are processed in labour-intensive production process, with labour accounting for 40 percent of total cost and capital for 7 percent (Figure 6.17). The capital / labour ratio of this sector is well below that of manufacturing and has tended to decrease moderately since the early seventies (RSA: 8.4).

Figure 6.17: Cost structure: Clothing



Source: Republic of South Africa, 1998 (d).

Although the clothing manufacturing is spread across the country, manufacturing activity in this sector is mostly concentrated in KwaZulu-Natal and Western Cape (Ligthelm, 1998: 25). Significant relocation to other parts of Southern Africa has taken place in search of lower labour cost, to compete with mainly lower-end imports from the Far East. Apart from normal import competition, the domestic industry has also been adversely affected by the influx into the country of new and second-hand clothing, distributed mainly by the informal retail sector. Efforts by the DTI to prevent trade in second-hand clothing, in order to prevent the destructive effects on the local industry as has happened in neighbouring countries, have been hampered by illegal imports. Progress has however been made in reducing illegal imports, because of efforts by the customs law enforcement task group, which is partly sponsored by the Textile and Clothing Federation's (RSA, 1998 (d): 8.3). Imports of cheap clothing are likely to promote a shift by the local industry towards production for the higher end of the market while consolidating lower-end production.

Although the barriers to entry are low, the clothing industry's competitiveness has been affected by low productivity and high raw material costs. Raw materials contribution average about half of total production cost of clothing products (RSA, 1995 (b): 11). The extension of the DCC to March 2000 has helped clothing manufacturers to source raw material at competitive prices in an effort to adapt to international competition (RSA, 1998 (a): 2). Productivity and training issues are also high on the agenda of the restructuring process taking place in the industry, offering some signs of that industry of willing to break out of its defensive-protection mould and adopt a more pro-active attitude in dealing with foreign competition (Bhorat, 1998: 6).

6.10.5 Prospects

In contrast to an average annual decline in domestic clothing production during 1991 to 1996 period, growth of a 3 percent per annum is forecast for the period 1997 to 2001. This is mainly the result of an improved export performance during the forecast period (14 percent average annual growth rate) (RSA, 1998 (d): 8.2). The industry is already showing signs of focussing upmarket on value-added products in order to compete globally, and also exploring the opportunities of working with our SADC partners on supplying products in the lower-end, where prices are the main criteria. The opportunities of accumulation within the region (adding value to a product in various SADC countries in order to achieve originating status) offer many possibilities in textiles and clothing. This is in terms of the imminent European Free Trade Agreement and also the USA legislation mentioned earlier because these sectors are labour-intensive and tend themselves to the developmental component of South Africa's commitment to SADC. It is therefore expected that production for the domestic market will increase an average annual growth rate of only 2 percent, compared to the high growth rate of 6,3 percent expected for imported goods (RSA: 8.2).

The higher cost structure of South African firms compared to some Far Eastern producers, prevents the local industry from supplying the sizeable lower-end of the local clothing market unless local suppliers are able to effect a better trade-off between labour costs and productivity.

A much stronger export performance is possible, as evidence suggests that the South African clothing manufacturers have the potential to export higher quality clothing into niche markets. The Clinton Administration's new Africa policy could create exciting opportunities for South African manufacturers.

The 1998 import weighted average tariff of 56,9 percent will substantially decrease to 41 percent in 2001, while the WTO have set the upper limit for South African clothing import tariff at 41,1 percent (RSA: 8.2).

Table 6.54: Average import tariff: Clothing

Sector	1994	1998	2001	WTO*
	Import weighted average (%)			
Clothing	57.7	56.9	41.0	41.1

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

The distribution of products according to the different import tariff ranges is illustrated in Table 6.55.

Table 6.55: Import tariff phase down schedule: Clothing

Import tariff range	1994	1998	2001	WTO*
	% of products within range			
0%	3.2	0.4	0.4	0
1 - 5%	0	0.8	0.8	0
6 - 10%	1.2	0.8	0.8	0
11 - 15%	2.8	0.8	1.2	0.8
> 15%	92.7	97.2	96.8	99.2

*WTO refers to the upper limit set on South Africa's import tariff.

Source: Republic of South Africa, 1998 (d).

As a result of significant restructuring and the successful implementation of an appropriate industrial strategy, the clothing industry could start to experience expansion in production, investment, employment and export. More over, the Wool and Mohair Cluster Study has, in its preliminary findings, highlighted the possible scope of improvement in work organisation, innovation, age of machine, raw material input costs

and quality, and product design (Werner International, 1998 (a): I - II). Improvements in this regard will lead to further improvements in the competitive position of this sector.

6.11 Summary

Important structural changes are currently filtering into the South African clothing and textile industries as they adapt to the dictates of the global economy. These are reflected in fiscal and monetary policy adjustments, whilst in the real economy the quest for international competitiveness forces industries to achieve efficiency gains of the exceptional nature. An important outcome of these structural changes is the increased emphasis on productivity as companies endeavour to conform to standards set by international competition. This has led to some short-term job losses, particularly in the textile and clothing industry (WEFA, 1996 (b): A31 - A33).

However, a growth prognosis for 1997 to 2001 is also presented, indicating that moderate job gains are expected in the textile and clothing industry (RSA, 1998 (d): 7.2 and 8.2). These job opportunities is possible based on the following macro-economic underlying determinants:

- The continued redressing of inflation by suitable monetary policies.
- Continued fiscal discipline.
- Consistency in trade policy to lower protection and enhance external market access.
- Refined supply-side measures to assist industrial adjustment toward international competitiveness.

The textile industry in South Africa has had several boosts of late and expanding into the global market in some unusual ways. Mainstream producers are making good gains on finished products exports (Cresswell, 2002: 21).

The South African Textile Industry Export Council (SATIEC) has been formed to aggressively grow finished product exports for members in the textile and clothing industry, and related sectors. SATIEC says international clients are well aware of the strong industrial and financial infrastructure in the country and the good port and air facilities, and the potential for further development (Cresswell: 21).

Their task was made easy on May 18, 2000 when the African Growth and opportunity Act (AGOA) was enacted in the USA, opening up major opportunities for local industries. Bryan Brink, the executive director of the South African Textile Federation is very optimistic about the future of the textile industry and its positioning in the global market. He says in 2001 the industry did about R791 million worth of exports to the USA under AGOA or about 12 percent of total production, and believe this could reach 30 percent within three of four years (Cresswell: 21). The agreement allows duty-free access for many types of clothing, but at this stage excludes yarns, fabrics and household textiles. There are also lack of quota restrictions to the USA, Europe and other places, and this has benefited South Africa's exports, and many textiles industries were saved from closing down.

There are many companies, which are interested in relocating and investing in South Africa. This will be done through outsourcing some of their work to South African companies and also opening up subsidiaries in the country. This will help empowering local small and big companies in the country.

PART II

6.12 Micro- economic dynamics of structural adjustments in the clothing and textile industry

6.12.1 Introduction

After years of international economic isolation, South Africa's democratisation in 1994 heralded its entry into international economic arena, allowing for the globalisation of the economy. In this chapter the research is based on the impact of globalisation in South Africa and specifically, the relationship between trade liberalization, employment performance and aggregate income. This chapter looks briefly at the process of trade liberalisation in South Africa on one hand, and the nature of unemployment on the other, and then considers the possible links between the two.

6.13 Trade liberalisation and employment in South Africa

An overriding concern in the policy-making community is the specific implications that trade liberalisation have for employment in South Africa.

6.13.1 Trade liberalisation

The research focuses on one specific dimension of globalisation, i.e. South Africa's trade liberalisation episode from 1994 to date. While various attempts were made in the 1970's and 1980's to neutralise South Africa's trade regime and adopt a more outward-oriented growth strategy, South Africa only embarked on a process of over trade liberalisation in the 1990's. This trade reform episode sought to liberalise both import and export regimes. It began in 1994 with a successful GATT offer that led to a five year tariff liberalisation programme, accompanied by reforms to the export regime with a decision in 1994 to phase out the GEIS, considered inconsistent with the GATT and WTO rules.

A peculiar feature that dominated the country's trade oriented (given the abundance of labour) is that those sub-sectors classified as most capital-intensive in 1993 accounted for more than 50 percent of all manufacturing exports. Within manufacturing imports, by contrast, less than a quarter (22 percent) fell into this category. Little has changed in this respect and trade liberalisation appears to have reinforced the particular capital-intensive trajectory.

6.13.2 An analysis of formal and informal employment in textile and clothing industry

Table 6.56. Employment in Textile Industry:

Description	1996	1991-96	1997	1998	1999	2000	2001
Textile	80 000	74 960	73 086	72 794	73 086	72 647	72 720
Spinning and weaving	40 000	37 600	37 495	37 232	37 344	37 643	37 756
Made-up textile goods	17 000	16 167	15 585	15 569	15 585	15 491	15 553
Garment and hosiery knitting mills	12 000	11 208	10 793	10 394	10 592	10 719	10 998
Other knitting mills	3 000	2 733	2 703	2 703	2 703	2 706	2 717
Carpets and rugs	4 000	3 748	3 793	3 763	3 725	3 643	3 687
Cartage, rope and twine	1 000	893	868	828	805	800	806
Other textiles	2 000	1 858	1 817	1 826	1 813	1 795	1 813

Source: Republic of South Africa. 1998, (d).

Table 6.57. Year-on-Year % change of employment in the Textile Industry:

Description	1996	1991-96	1997	1998	1999	2000	2001
Textile	80 000	-6.3	-2.5	-0.4	0.4	0.6	1.0
Spinning and weaving	40 000	-6.0	-2.8	-0.7	0.3	0.8	0.3
Made-up textile goods	17 000	-4.9	-3.6	-0.1	0.1	-0.6	0.4
Garment and hosiery knitting mills	12 000	-6.6	-3.7	-3.7	1.9	1.2	2.6
Other knitting mills	3 000	-8.9	-1.1	0	0	0.1	0.4
Carpets and rugs	4 000	-6.3	1.2	-0.8	-1.0	-2.2	1.2
Cartage, rope and twine	1 000	-10.7	-2.8	-4.6	-2.8	-0.6	0.7
Other textiles	2 000	-7.1	-2.2	0.5	-0.7	-1.0	1.0

Source: Republic of South Africa. 1998, (d).

Table 6.58. Employment in the Clothing Industry:

Description	1993	1994	1995	1996	1997	1998	2000	2001
Knitwear (SIC: 313)	16 015	14 567	13 682	19 158	18 484	16 719	10 210	11 226
Clothing (SIC: 314)	108 280	109 971	121 263	130 061	118 340	116 980	121 281	127 123
Total Clothing Employment	124 295	124 538	134 945	149 219	136 824	133 699	131 491	138 349

Source: Statistic South Africa, 2000.

Table 6.59 Year-on-Year % change of employment in the Clothing Industry:

Description	1994	1995	1996	1997	1998	2000	2001	TOTAL
Knitwear (SIC: 313)	-9.04	-6.08	40.02	-3.52	-9.55	-38.93	9.95	-17.14
Clothing (SIC: 314)	1.86	10.27	7.26	-9.01	-1.15	3.68	4.82	17.42
Total Clothing Employment	0.20	8.36	10.58	-8.31	-2.28	-1.65	5.22	12.10

Source: Statistic South Africa, 2000.

From the Table 6.59 and 6.60 one can calculate year-on-year employment losses and gains. These can be represented as follows:

For the textile industry, the overall employment effect seems negative, with employment shedding occurred in 1991 - 1996 of 6,3% (i.e. 5040 job losses). This trend carried on even in 1997 where job losses of 2,5% (i.e. 1874 job losses) occurred in this industry. The situation carried on until 1998 where the job losses was only 0,4% (i.e. 290 job losses).

The sub-sectors highly affected were the spinning and weaving, made-up textile goods, garment and hosiery knitting mills, other knitting mills, carpets and rugs, cortage rope and twine and other textile for the period 1991 - 1998. In 1999 employment increased and declined again in 2000 onward.

On the contrary the clothing sector had employment losses in 1997 and 1998 respectively (Table 5.3 and 5.4). However, the overall employment effect was positive. According to Stats SA, there was a recorded growth in clothing sector employment between 1994 and 1999 of 6 400, but the figure did not include the Bantustans.

Between 1996 and 1999, the decline informally recorded employment in the clothing sector was 18 300. The decline appeared to be exaggerated and not an accurate reflection of actual job losses, but a reflection of a shift in the nature of employment. The shift was an amalgamation of the following trends:

- Subcontracting of workers by firms;
- Subcontracting of production to firms that might be legally registered but are not captured by Stats SA sampling.
- Increase in production in households, production that is linked into formal recorded retail sales as well as into unrecorded street and flea market sales.

A review of other official data sources is provided to present a wider base for analysis. The picture shows a need for the development of one agreed data source for employment, especially in those sectors that have undergone severe restructuring, leading to a complete change in the industry profile.

6.14 **Industrial development corporation**

The Industrial Development Corporation (IDC) recorded that the clothing sector had the second highest employment growth from March 1998 to March 1999 at 9,5% representing 9,4% of total manufacturing employment at 125 437 employees as of March 1999.

Table6.60 Growth in Sub-Sectoral Employment (March 1998 vs. March 1999)

Sector	Mar 98-99 increase	%	% of manufacturing employment Mar 99	Rank increase
Total Manufacturing	-1.5%		N/A	N/A
Leather & leather products	13.5%		0.5%	1 (highest)
Wearing Apparel	9.5%		9.4%	2
Footwear	-1.5%		1.6%	12
Textiles	-17%		4.7%	25 (lowest)

Source: Core Economic Indicators Third Quarter 1999, (SSA, IDC).

Whilst seasonally adjusted total manufacturing employment remained stable from the fourth quarter of 1998 to the first quarter of 1999, the total manufacturing sector still lost 18 374 jobs (1,4% of sectoral employment) in the year to March 1999. But labour productivity resumed an upward trend although at slow rates of increase than in 1994 - 1997.

6.15 Industrial council statistics

The Industrial Council figures for clothing employment and number of firms show a continual decline from 1990 with the data of September 1998 indicating total of 67 243 employees in 773 firms.

6.16 Industrial federations data

Textile federation statistics show clothing as 119 922 employees, knitting as 14 744 (i.e. total 134 666) and textile 57 037 employees as at September 1998. The drop from 1997 to 1998 appears to be mainly in the knitting sector where the data indicates that 4 195 jobs have been lost while in the clothing sector only 679 were lost over the period 1997 - 1998. This may explain the trend better, since the knitting sector is partly textile (capital intensive) and partly labour intensive, and is also tends to be the more price sensitive area of clothing (most of the knitting products are clothing). However, it is also possible that the Stats SA sample is not including any of the transnational investors in the business of knitted clothing manufacture.

6.17 Provincial government department

Provincial government statistics on employment are annually not available. Individual databases of investors and clients are available and these indicate a large number of small and micro businesses in operation; which would most likely not be reflected in official statistics. There is a clear move to outsourcing, informalisation

and contract labour / casualisation. There is also some evidence of industrialist that relocate to neighbouring states.

6.18 **Regional profiles of the clothing sector employment**

The trend in the nature of employment appears to be very different between Western Cape (WC), KwaZulu-Natal (KZN) and Eastern Cape (EC):

Western Cape is the largest formal clothing employer with more of corporate flavour and a more fashion-oriented production. There is an increasing trend towards informalization and outsourcing, with some relocation to other SADS states. October (1996) writes that the Cape is highly segmented with developed large- and medium-sized firms combined with a weak technological and design capacity. This, as well as the concentration of employment and production, and the absence of institutional forms of co-operation, makes WC clothing industry different from industrial districts in the developed economies.

KwaZulu-Natal is the second largest formal clothing employer with a greater level of entrepreneurialism and a lower end, mass-market production and tendency towards informalisation, with close linkages to decentralised areas. The trend towards employer organisation membership is very strong, with a move to contract labour. Prinsloo (1996) writes that the Durban-based clothing industry has a greater entrepreneurial base and less of a corporate flavour. There is a greater diversification into the lower end of the market, supported by its large CMT base and its locational advantage and industry has a strong network into the informal and wholesale hawker market. These serve the local informal trade as well as the long-haul buyers from Gauteng and the former Bantustans.

Eastern Cape is the smallest formal employer with a trend towards new investment, especially from Asia. The EC manufacturing base is largely in the decentralised areas and is not linked into the urban areas, as is the case in KZN. Besides the low wages of the decentralised areas, the attraction for foreign investment is the under-utilised port (important for high export levels), with the largest incentive coming from the quota-free access to USA and EU and the now preferential trade access. This investment trend is expected to start in KZN but is unlikely to be as sharp as in the Eastern Cape.

Gauteng has the third largest formal employment in the clothing sector. Given the earning power of Gauteng's population, this tends to be a region that has strength in small upmarket boutique manufacturing.

A more detailed analysis follows on Western Cape and KwaZulu-Natal. The largest formal employers in RSA.

Data on the Western Cape's clothing sector shows the following trends:

Table 6.61. Number of Firms and Employees in the Western Cape Clothing Industry.

Date	No. of Factories	No. of Employees
1935	30	3 500
1940	40	4 772
1950	104	13 204
1960	166	19 787
1970	253	37 743
1980	332	53 421
1990	433	54 267 (highest)
1994	538 (highest)	46 868
1998*	360	39 512
May 1998***	368	41 230
April 1999***	350	38 014
May 1999***	350	37 611

Source: Industrial Council for the Clothing Industry (Cape). Note: Since 1989 firms employing less than 5 employees have been granted automatic exemption from Industrial Council Agreement since 1994.

* Source: Hood, T. "Cape Clothing Review", Pursuit Magazine, May/June 1999

*** Source: "The Clothing Link", Cape Clothing Association Newsletter May/June 1999.

Table 6.62. Average Firm Size in the Western Cape Clothing Industry.

Year	Average Number of Employees per Establishment
1935	117
1940	119
1950	127
1960	119
1970	149
1980	160 (largest)
1990	125
1994	87 (smallest)
1998*	110
May 1998**	112
April 1999**	109
May 1999**	108

Source: Industrial Council for the Clothing Industry (Cape). Note: These figures include knitting factories. Note: The figures provided by the Industrial Council have been amended to include factories with < 5 employees.

- ★ Source: Hood, T. "Cape Clothing Review". (Pursuit magazine, May/June 1999).
- ★ Source: "The Clothing Link", Cape Clothing Association Newsletter. May/June 1999.

Average clothing firm size in Industrial Council members in the Western Cape appears to have picked up according to table 8.6 above, through not as high as the highest in 1990. It is noteworthy that although employment was the highest in 1990, the size of the firms was much smaller than the largest figure, which was in 1980. This substantiates the trend from big to small and medium business in the Industrial Council members. This trend appears to be levelling out now in formal companies, while informalisation now appears to be increasing.

Hood (1999) writes that the informal clothing sector in Cape Town has mushroomed to at least 1 500 firms employing up to 40 000 workers - as much as the formal sector. Cape Metropolitan Council figures show only 16 000 employees in the clothing and textile industry in formal employment.

According to Hoods (1999) the informal clothing-manufacturing sector in the Western Cape grew rapidly in response to the following factors:

- Increasing regulation of the formal sector, encouraged by labour laws and other restrictions.
- A rise in entrepreneurialism.
- Retrenchments in the formal clothing sector.

- Retrenchments in other sectors, notably teaching, where retrenchment packages were used to set up small CMT operations.
- A need for flexibility in working time by working mothers.
- Higher labour and production cost crippling larger companies and forcing closure of factories.
- Complete labour flexibility; sharply lower wages and costs, no security for workers, no annual leave or sick pay and no income tax.

Hood classifies the informal sector of the Western Cape clothing industry into the following categories:

- Home industries (survival, work from home, often against municipal regulations with between 1 and 50 machinists).
- Small- and medium-sized enterprises (not registered with bargaining council but pay taxes, VAT and RSC levies, 5 to 20 machinists, average 15, the largest area being Mitchell's Plain).

October (1996) writes of the concept of "flexible specialisation" as being seen in the Cape in some of the largest firms:

- These are federated groups of large, loosely allied enterprises.
- Also "solar" firms holding smaller enterprises in steady orbits; and internally decentralised workshops.

He writes that there is a high exit rate of small firms even though they dominate the industry.

According to October, the small firms in the Western Cape do not participate in associations, which is important for policy-makers to take into account, due to the possible lack of representivity of the official stakeholders, especially in this sector, when engaging in consultations at NEDLAC and other forums.

In most cases, CMT's appear to be merely labour brokers. Export is rare, but they are highly competitive as compete on capacity. Since the Western Cape CMT's have largely the same wage regime as large firms, they have limited economic advantages. Their advantages are limited to production flexibility and savings on overheads.

The following are the types of operations contracted out by manufacturers:

- Operations that require highly specialised equipment and skilled labour such as printing pleating, weaving and dyeing. This allows for greater efficiencies. This trend is on the increase as in sub-contracting to other fully integrated manufacturers, indicating that firms are moving to specialisation in products.

- Operations that are simple and labour intensive (CMT). This results in savings on machinery, premises and other overheads.
- Design houses, which indicate a trend to outsourcing of design due to cost of travel for designers, fashion publications and purchasing of prototypes, volatility of fashion, the environment conducive to design and buyer interaction and economies of scale.

It is recognised that the presence of large retailers in the Western Cape, as well as manufacturers' total reliance on these distribution channels had impacted on the size and structure of firms in the industry, the state of the region's design capacity, its quality standards, the emergence of highly dependent sub-contracting relationships as well as the ability of manufacturers to build or maintain their brand names. However, this has had a positive effect on fashion and quality, but negative effects on profit levels and the growth of small manufacturing.

Prinsloo (1996) writes of the Durban clothing industry employment, that 4% of firms have more than 500 employees and they account for 30% of the employment in these 388 firms in the Natal Industrial Council. 77% of firms comprise of 100 employees.

Table 6.63. Size Distribution of Clothing Firms by Number of Employees in Durban (1996)

Size of firm	Number of employees	Percentage Representation
Micro	0-25	37%
Small	26-100	40%
Medium	101-250	18%
Large	251-500	2%
Very large	> 500	4%

Source: Prinsloo (1996)

Notable is that 70% of production occurs from June to December, especially October to November, therefore the need for flexibility of employment is seen to be ideal. However, with the entry into export markets, this intense reliability on local sales cycles becomes less prevalent.

Firms have developed strategies to tailor the demand for labour due to the local retail cycle reliance, and they include:

- Overtime work during peak times (costly and inconvenient).
- Hiring on short contracts over the peak period.
- Putting staff on short time during quiet periods.

Typical structural linkage and specialisation of the industry include:

- A firm that takes on CMT work only.
- A firm that takes on CMT work in addition to own line of production.
- A firm that has its own production and which does not take on CMT work.
- A firm that has its own line of production, and that subcontracts some of its work to CMT firms, consciously or due to capacity limitations.
- A firm, which has a textile or clothing production, arm with or without subcontracting.
- A firm that has no production activity (a wholesaler). It finds buyers, selects styles and makes patterns, orders fabrics and trimmings, and liases with CMT operators who perform the assembly.
- A retailer with in-house production capacity, which usually accompanies the subcontracting of work to CMT's.

Firms in this region tend to be vertically disintegrated, hiring off components and specialising. Firms are mutually vulnerable because of the vertical integration and interlocking production structure. About 50% of the firms registered with the Industrial Council were members of the Natal Clothing Manufacturing Association (NCMA).

The key weakness of the Durban clothing industry, according to Prinsloo's findings, is its passivity. There is a tendency to react to changes in the environment and related crises rather than acting in line with a clear long-term strategy. There is also a lack of collaborative solutions.

Also the Isithebe industrial area is one of the success stories in decentralisation in RSA, companies are facing problems. Geared towards the low end of the market, through the incentives that kept production costs low, these firms have to compete with clothing from low-wage countries such as China (Prinsloo, 1996).

Further insight into the Durban trends in employment, can be found from the Durban Manufacturing Centre (DUMAC), who maintain a database of their clients, but it is small and NCMA is used for most statistics. Reference is made to the strong trend towards the growing membership of the Confederation of Employers of Southern Africa (COFESA) amongst the clothing companies in Durban. This is the only registered

confederation of employers (120 000 employers with a workforce of 2.4 million) and is a cross - sectoral federation providing legal advice on industrial relations issues with a special reference to employer protection under the new labour relation act. It is understood that the federation encourages companies to retrench or fire all staff and re-employ them as contract labourers. The COFESA members comprise mostly small companies, and of the total 1998 membership base, 135 clothing companies were identified (DUMAC, 1999).

There is a concern that NCMA statistics still include many companies that have actually closed down, so the federation statistics are inflated. It appears that although the trend to informalisation is strong in Durban, not enough jobs are there to absorb the losses from the closure (DUMAC, 1999).

Fakude (2000) found that a number of firms in KwaZulu-Natal have deregistered from the industry's bargaining council in the past years, but there is evidence of as many existing employers still operating as were before when the firms levels was at its peak in the bargaining council. He identified two parallel trends, which have been occurring in the sector in recent years. Formal job losses have occurred due to firm closures and retrenchments, with a simultaneous significant informalisation of employment in the sector.

6.19 **Changes in the structural profiles and strategies adopted by firms**

A study of 4 338 firms (equally split between small, medium and large) by SSA commissioned by DTI in 1999 on employment changes in the clothing, textile and leather industry, found that one-fifth of enterprises were subcontractors for other manufacturers, especially in the clothing sector and more prevalent in small to medium sized businesses. Outsourcing of production was reported by 18% of the respondents, and most common in the textile and clothing sectors, especially the larger firms (SSA, 1999).

"A total of 222 enterprises reported that they outsourced manufacturing as well as acting as subcontractors. Small- and medium-sized businesses accounted for most of the firms, which combined outsourcing and subcontracting, at 92 (41%) and 95 (43%) respectively of the total of 222. Clothing firms accounted for over two-thirds (69% of 154) of the enterprises that outsourced and subcontracted. In other words, when outsourcing "downwards" and subcontracting "upwards" are occurring simultaneously, then clothing firms are found to be involved more often in this configuration than textile and leather firms. Textile accounted for a further 62 firms and leather for only seven". (SSA, 1999).

This is evidence of what appears to have been a developing trend in the clothing sector over the past years. The reasons for the extent and nature of the structural change and the implications for the future of the sector are key in the policy-making process.

Altman (1997) writes of the Hierarchy of Production within firms. From her study of large clothing firms, it emerged that there are four basic configurations of spatial plant hierarchy in firms that decentralised:

- Some or all assembly was decentralised to one or more plants with variations in skill levels. Design, marking, grading and distribution were centrally located. Work was allocated to firms by skill content.
- Some or all assembly was decentralised to one or more plants with workers of similar skill. Design, marking, grading and distribution were handled centrally.
- Most functions were decentralised. A head office was maintained in the metropolitan centre for merchandising, customer service, etc.
- All functions, including head office, were relocated to homelands or Wage Determination Area (WDA's).

From Altman's survey, over 50% of firms adopted a hierarchy of plants, consisting with model (i). Approximately 29% adopted model (ii), having decentralised to take advantage of reduced wages, but producing similar items in each plant. In over 80% of firms that had decentralised, most high skill functions such as design, marking, grading and distribution were performed in the headquarters. Only two firms, both foreign, located all operations in a single plant in Isithebe, KZN. The conclusion can be made that the internalisation of the subcontracting function was common amongst firms interviewed.

Based on Altman's work and in viewing the current status in the sector, we conclude that the major strategies being followed by RSA clothing employers appear to be shifting.

6.20 The determinants of job losses

Altman (1997) refers to the "accounting decomposition approach" used by Cline (Altman: 1997/1996: 95 - 97) and la Torre (Altman: 1997/1984: 72) in assessing job losses causes from productivity, demand and imports. She writes of the RSA contributors to clothing and textile sector job losses as being due to

increasing labour productivity. It is, however, interesting to note the positive trend in clothing sector productivity in the most recent years, which many new counter the findings.

Also of note in Altman's work is that the discrepancy between productivity increases in industrialised countries' apparel, which rose by 26.1% between 1970 and 1989 and a productivity growth of 85,7% for all manufacturing and 51,1% for light manufacturing over the same period, was attributed by the changes in organisation of production, and more particularly to the arise in outsourcing.

Altman further states that RSA domestic demand, having grown by 9,8% between 1989 and 1992, would have contributed to employment growth (CSS: 1993). She therefore concludes that imports were the most important contributor to job loss. Import penetration rose to 43% of local market in 1991, up from 18,7% in 1988. Altman also attributes the majority of the reduction in employment to the Government's Structural Adjustment Programme (SAP), as the loss of the domestic market was not compensated by export expansion where, over the same period, export intensity by volume increased only marginally.

6.21 Relocation

The relocation of firms in the clothing sector has had an affect on employment levels, though little documented evidence exists on relocation in the clothing sector. There are examples that show certain manufacturing operations have made a strategic decision to move their factories over the border, resulting in both positive and negative results.

Altman (Altman: 1997, Tomlinson and Addleson: 1987) found that factors, which influence the decision to relocate production, are:

- Wage costs
- Incentives on inputs
- Extent and militancy of unionisation.
- Involvement in special exports agreements and market access.
- Other regulatory elements and/or incentives.

Most notably in RSA clothing sector have been factory relocations from Durban and Cape Town to Mozambique and Malawi based on the preferential access they have enjoyed in South African markets in this sector. The type of production in these firms appears to be more commodities based and local (RSA) market

oriented, but trends towards export manufacturing is becoming evident. The SADC multilateral agreement initiated in September 2000 led to greater integration of production, especially pipeline integration with countries competing according to their competitive capability in each stage of the value chain.

6.22 Policy observations based on the data analysis

The following trends have been observed with effect to 1994 as a significant quantity of clothing production took place in large and medium factories:

The industry is fragmented with large formal firms sub-contracting, significant production and/or sub-assembly to medium and small firms and households. A large proportion of production and sub-assembly occurred in medium and small firms. There has also been a significant growth in production of clothing in households. Provided it takes account of the current incentive for some of this activity to remain unrecorded, hence it can be expected that in future the manufacturing census will reflect this structural shift in production.

It appears that much of the activity of, and associated employment in, small firms and households are not recorded. This is also complicated by the fact that registration to Industrial Councils is decreasing. Apart from the exemptions that firms are obtaining from the IC's there is a large and growing body of firms that are evading the tenets of national labour legislation, by effectively firing their workers and rehiring them as "independent contractors". In doing so, there is a statistical decline in the number of employment in this sector which is misleading, because people are still employed, albeit under different contractual relations, while no real change in productive activity has taken place.

The employment losses that appear on the surface (i.e. official statistics) are therefore not always the true picture of the trends in the sector. Employment has come about as these labour intensive industries restructure and as the process popularly termed the "casualisation" of labour runs its course. In the clothing industry, it appears that the decline in formal employment in large factories has been matched in large part by the growth of smaller, unregistered businesses and by the growth of retrenched workers working from home in activities that are closely linked to formal sector activities.

The majority of the unrecorded economic activity in the clothing sector is for the domestic market. Most export production appears to be done in house by large- and medium-sized formal firms. This is because of a number of factors, in particular the requirement that foreign buyers maintain tight auditing of the

production process. The high export volumes and complex export delivery logistics are also more difficult to achieve with outsourced production.

Because of their lack of export experience, mind-set, marketing, management and worker skills and relationships with supply chain partners, not all large integrated domestic firms will be in position to massively expand exports in the short-term. A large portion of Government's supply-side support measures is indeed structured to support the needs of the manufacturing sector and have been in place now for some time. Major changes to policy and strategy should not be necessary to provide the support that this sector requires to take advantage of the export markets.

It does not seem likely in the short-term that small informal and unregistered firms can sustain massive employment growth in garment production. Taking the degree of unrecorded activity into account, total employment may have actually increased during the 1990's. However, the quality of jobs, as measured by remuneration, has been lowered. Membership of trade unions in this sector has been declining, as larger firms shed jobs and outsourced production to firms, many of which may not be unionised and/or registered.

A market development is the increase in investment by, and employment in, foreign owned clothing firms, mainly Asian ownership, which are using South Africa as an export platform due to the quota free access into the large USA market.

6.23 **The race to the bottom**

This term is used to refer to the trend which appears to have already begun in this sector in South Africa, whereby firms engaged in a price war precipitated by rapidly rising competitive pressure in the local market, exacerbated by low total retail sales growth. Prices are driven down by retail demands, given retail's historical power in South African retail/manufacture relationship.

Within the context of this downward pressure, manufacturing firms then choose to make structural changes to adjust their operating costs to accommodate the new price levels or to sustain no price increases year on year from buyers in the local retail sector. Some manufacturers are also engaged in importing the complement-manufacturing turnover and achieve the type of prices retailers are demanding.

At the same time, the retail sector also appear to be engaged in a type of "price war" due to lower consumer demand and alternate routes for cheap imports being utilised to undercut competitors in the market and set new benchmarks for prices of goods. Retail has been forced into restructuring of their own activities very much like the manufacturers, in order to survive.

The following two situations can cause a price war (Rao: 2000):

- When one seller as too high sees prices in a market.
- When one seller is willing to buy market share at the expense of current margins.

Price wars are mere common because managers see it as an easy, quick and reversible action to increase sales dramatically in a stagnant market. In South Africa, with the choice of imports being increasingly more real to retailers, and with alternate routes for cheap commodity imports being exploited, the setting in ripe for this type of activity. An increasing development that serves to support this observation is the growing export orientation of South African retailers to search out new markets beyond the borders.

Dunne's (2000) study of South African clothing retailers' perceptions of the local manufacturers serves to provide insight into the criteria retailers use in choosing between imports and local merchandise. She concludes by stating: "Retailers are having to redefine their focus to compete in increasingly pressurised markets, and at the same time are having to take cognisance of customer demands for better prices and quality, all this within the environment of greater consumer awareness of rapidly changing fashion."

The effect is a fragmentation of the manufacturing sector, characterized by lowering of formal employment levels and a growth of household industries and small, unregistered factories.

6.24 **Employment and wage**

Employment performance over the past decade, despite a slight aggregate improvement in GDP growth rate, has been far from satisfactory and constitutes one of the major challenges for the development of the country. Official employment data indicates a strong decline in total non-agricultural employment between 1990 and 1993, stagnation from 1994 to 1996 and further job losses in 1997. Available data indicates that job losses continued during 1998. The extent of relative employment losses during 1994 - 2002 varied heavily across sectors.

They were the largest in mining (-9,5 percent), followed by manufacturing sector (-6,0 percent), while employment in the rest of the economy (mainly non-tradeable) increased by 3,0 percent. It is important to note that employment fell at a faster rate before the start of trade liberalisation than since then (Hayter, 1999: 2).

As a result of poor employment performance, the already high unemployment rate increased between 1994 and 1997. South Africa now has unacceptable high unemployment levels, estimated between 23 and 38 percent depending on the definition used. Despite high and increasing unemployment levels, average real wages continued to increase between 1994 and 1997 at an average annual-rate of 2,6 percent. Average labour productivity, however, increased at a faster rate (an average 2,9 percent) so that the unit labour costs did not increase in real terms.

6.25 Employment and wage implications in textile and clothing sector

As with manufacturing overall in South Africa, the textile sector has undergone significant restructuring in the past decade under progressive liberalisation. Production has stagnated and employment has fallen significantly. There were particularly sharp reductions in employment in the last three years of the 1990's with over 30 000 jobs having been lost. Employment has fallen in all the main textile sub-sectors, with the largest losses being spinning, weaving and finishing where employment in 2001 was more than 45 percent lower than in 1996 (Table 5.1). Spinning, weaving and finishing is the most capital intensive of the textile categories (Roberts, 2002).

Real wages declined in textiles slightly until 1996 and then rose sharply in 1998. The coincidence of this rise with a large reduction in employment suggests employment losses were predominantly of lower wages employees. This interpretation is consistent with the reduction in average wages in the last two years, during which employment stabilised somewhat. The reduction in real wages is an indication of downward pressures due to high levels of unemployment and import competition.

Average salaries in spinning, weaving and finishing are significantly higher than in other textiles and knitted / crocheted articles sub-sectors. This is consistent with the higher capital: labour ration in spinning, weaving and finishing and the reports of upgrading of capital stock by firms in this sector in the mid 1990's. Average all-manufacturing remuneration is well above that of textile and clothing industries. This reflects the

orientation of South African industry, with above average wages in very large-scale industry, which is significant in South Africa, such as chemicals, basic metals, as well as in machinery and motor vehicles (Roberts, 2002).

Note, however, that the decline in textile employment did not start only from trade liberalisation. After growth in the 1970's under import substitution, textile output and employment both declined sharply in the 1980's with particular sharp contractions between 1982 and 1985, when employment fell from approximately 114 000 to 95 000, due to weak domestic demand. In the early 1990's performance weakened still further, with employment in 1992 of around 80 000, and capacity utilisation of 74 percent (Roberts, 2002). Most of the earlier growth in output in the 1970s was achieved through growth in labour productivity rather than increased employment, while the contraction in employment in the 1980's meant that labour productivity levels were maintained.

To reinforce the point that contractions in employment have not been associated with downward pressure on wages in textiles, results showed that firms did not view wage rates as hindrance to their competitiveness. This includes area firms producing relatively standardised products such as cotton yarn, for which labour costs are only 12 to 15 percent of costs. For such a firm, export competitiveness depends to a greater extent on infrastructure, access to an international port, a cheap and reliable power supply and the availability of technicians to deal with mechanical problems.

Firms were not generally constrained in terms of the availability of skills. Most firms relied on experience being build up in-house, with training in using the machines by the workforce, and viewed a stable workforce as very important in this. Given the high number of closures and redundancies, firms have had difficulty retaining experienced and trained workers. The AIDS epidemic in South Africa though, besides the personal tragedies that it creates, is a problem and a cost for firms, which lose workers they may have trained in-house.

With regard to labour costs, the textile sector differs considerably from garments. Established garment firms have been relocating to peri-urban and rural areas where wages are very much lower than in unionised urban areas like Cape Town, Eastern Cape and KwaZulu-Natal, downward pressure on wages has been intense and minimum wage legislation has been ignored (Roberts, 2002). New and existing investors in garments, particularly foreign investors from Taiwan and Hong Kong, have been locating in rural areas and in countries such as Lesotho in order to use lower wage and generally non-unionised labour. Lesotho now has more

garment exports to the USA under AGDA than does South Africa. By comparison, one textile company that had experimented with locating a plant outside of its urban base reversed the decision after experiencing problems with infrastructure and the unwillingness of skilled workers and managers to locate in a relatively remote area.

Informalisation in the garment sector, including established unionised areas like Cape Town, leads to further downward pressure on wages, in a country where unemployment average 43 percent, according to definition (Kingdom and Knight, 2000). Informalisation also leads to serious understatement of the size of employment in garments in official statistics, which has certainly risen since the early 1990's (House and Williams, 2000). One effect of the expansion of garment employment relative to textiles has been to increase the already high proportion of the workforce that is female. An effect of informalisation is that it has become difficult to track falls in wages in garments in the official statistics.

6.26 **Summary**

The chapter has attempted to present a broad view of key trends, which emerged in South Africa since the introduction of the liberalisation trade policies in the textile and clothing sectors.

There has been closure of firms, downsizing and retrenchments by companies in the formal sector. Some of this is in the line with global trends; other is an indication of firms' reaction to import competition and an inability to grow exports rapidly to counteract the loss of market share experienced by the change in historical local buying patterns. Behind this is a significant rearrangement of firm-level strategies such as casualisation, outsourcing, subcontracting, informalisation, relocation and an increasing export-led investment flow, in particular from large transnational corporations establishing in the rural areas.

The new emerging strategies appear to be aggressively export-oriented aimed at maximizing the new preferential market access to Europe and USA, and some regional integration to maximise the SADC Free Trade Agreement of concern is the ability of the traditional manufacturers, who have structurally changed to survive local market competition to embrace and supply the very high volumes of production required by the USA markets.

This is likely to entail one or both of the following strategic actions by local RSA clothing manufacturers:

- (i) A pulling back of subcontracted operations to resources and manage the growth of the formal exporting base and / or
- (ii) A large additional expansion and investment by the local firms without any change to the local market outsourcing patterns and subcontracting arrangements in order to maintain local market supply levels.

CHAPTER 7

SHORT AND LONG RUN FACTORS EFFECTING CHANGE IN THE CLOTHING AND TEXTILE INDUSTRY

7.1 Introduction

Although the dissertation is mainly based on a literature survey, it was decided to test the impact of some of the independent variables in the production function, using quantitative techniques. This chapter identifies factors that have an impact on the production of clothing and textiles in South Africa, using co-integration techniques (Engle Granger approach). Time series data for the clothing sector after 1996 is incomplete while time series data for the textile sector was available up to 2004. For this reason, this chapter will only use the textile sector as a proxy for evaluating the industry.

On the supply side, factors determining the level of output were identified in Chapter 3. From this earlier analysis the factors that impact on supply decisions in the industry are: the structure of consumer and industrial demand (both local and foreign) and the prices faced by suppliers (e.g. export subsidies, tariff changes and nominal exchange rates). Ultimately, the result of the supply responses in the industry was changes in the demand for labour, which is derived from the demand for locally produced clothing and textiles.

The model that is used to analyse the impact of structural change would therefore first have to identify those variables that affect the production function. The functional form of the production function is discussed in section 7.2.

7.2. Co integration methodology (Techniques used)

In order to determine both the short and long run factors affecting the textile industry, co integration techniques (short and long run models) by estimating a single equation (O.L.S.). To use time series data, it is important to understand the underlying properties of the processes that have generated time series variables. In fact, models containing non-stationary variables will often lead to a problem of spurious regression, whereby the results obtained suggest that there are statistically significant relationships between the variables in the regression model when in fact all that is obtained is evidence of contemporaneous correlations rather than meaningful causal relations (see appendix, test 1, 2 and 3).

7.2.1. Co integration (Long-run equation)

The number of times (d) needed to difference a series before it becomes stationary, determine its unit roots and order of integrations (integrated of order d). The economic interpretation of co integration is that if two (or more) series are linked to form an equilibrium relationship spanning the long run, then even though the series themselves may contain stochastic trends (i.e., be non-stationary) they will nevertheless move closely together over time and the difference between them will be stable (i.e., stationary). Thus the concept of co integration mimics the existence of a long run equilibrium to which an economic system converges over time, and the error term can be interpreted as the disequilibrium error (i.e., the distance that the system is away from the equilibrium at time t).

Thus, following directly from the identification of co integration with equilibrium, it is possible to make sense of regressions involving non-stationary variables. If these are co integrated then regression analysis imparts meaningful information about long-run relationship, whereas if co integration is not established we return to the problem of spurious correlation.

7.2.1.1. The Engle Granger approach (single equation approach)

When two or more series are integrated of the same order, I (d) then, in general any linear combination of the two (or more) series will also be integrated of the same order [I (d)]; that is, the residuals obtained from regressing the dependent variable on the independent variable are I (d). If, however, there exists a vector β , such that the disturbance term from the regression is of a lower order of integration, I (d-b), where $b > 0$, then Engle and Granger (1987) define the two or more series as co integrated of order (d-b). This implies that if we wish to estimate the long-run relationship between these variables it is only necessary to estimate the static model:

$$Y_t = \beta X_t + \varepsilon_t$$

Estimating the above equation using O.L.S. achieves a consistent estimate of the long-run steady-state relationship between the variables in the model, and all dynamics and endogeneity issues can be ignored asymptotically. This arises because of what is termed the 'super consistency' property of the O.L.S. estimator when the series are co integrated.

7.2.2. Short-run models (Error Correction Models)

Assuming that it is possible to estimate the long-run model directly, it is also of interest to consider the short-run evolution of the variables under consideration, especially since equilibrium may rarely be observed. This is important from a forecasting perspective, as is the economic information that can be obtained from considering the dynamics of adjustment. The major reason why relationships are not always in equilibrium centres on the inability of economic agents to adjust to new information instantaneously.

There are often costs of adjustment which result in the current value of the dependent variable, Y , being determined not only by the current value of some explanatory variable, X , but also by past values of X . In addition, as Y evolves through time in reaction to current and previous values of X , past values (lagged) of itself will also enter the short-run (dynamic) model.

7.3. Model

7.3.1. Theoretical model

The production function takes the functional form $\log Y = c + \log X + \log W + \epsilon$ which is the Engle Granger co integration approach (single equation) as series of variables chosen according to the economic theory are linked to form an equilibrium relationship spanning the long-run, even though the series themselves may contain stochastic trends (i.e., be non-stationary) (Harris, 1995).

Figure 7.1: Unit labour cost -
1980-2004

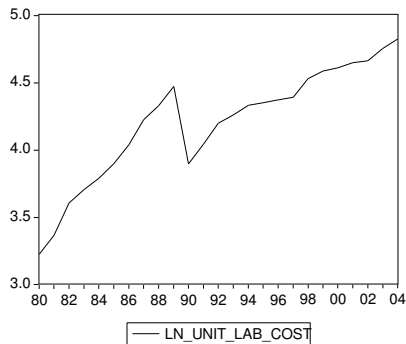
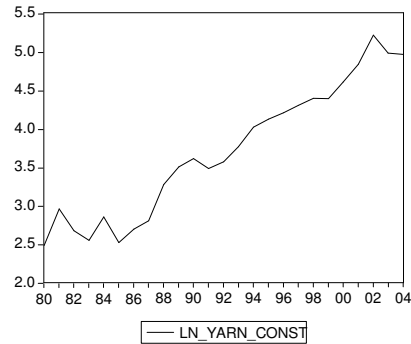


Figure 7.2: Yarn prices –
1980-2004



Source: Constructed using Texfed, 2005.

The increasing labour cost since 1980, as reflected by the above graph, has led firms to shift from using more labour to relatively more capital (machines), as indicated by the dynamic short run equation (employment as explanatory variable in the short run equation) with a corollary of increasing imported inputs.

The combined effect of weaker rand (1995-2002) and increased import of inputs (fibres, yarn) led to increased cost of production in the textile industry.

Figure 7.3: Fibre prices –
1980-2004

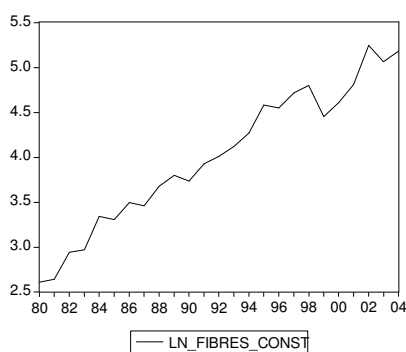
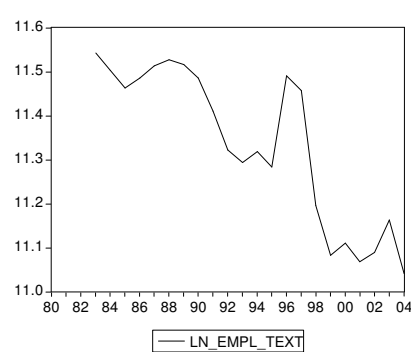


Figure 7.4: Employment (Textiles) –
1980-2004



Source: Constructed using Texfed, 2005.

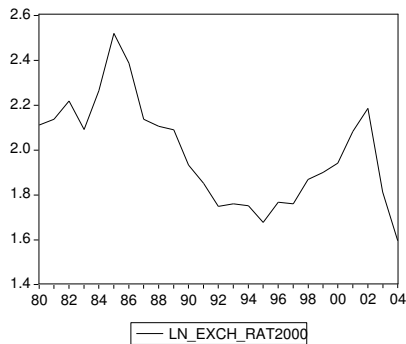
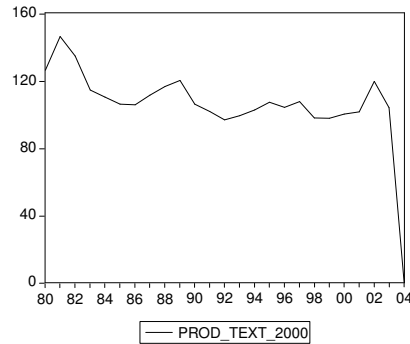
Figure 7.5: Nominal exchange rates –
1980-2004

Figure 7.6 Production in Textile industry



Source: Constructed using Texfed, 2005

The choice of variables is in accordance with the economic theory that states that production function is dependent on the level of inputs used, both local and imported (fibres, yarn).

The production in textile industry is function of the unit labour cost, employment in the textile industry and the exchange rate.

$$\text{Prod_text_Indus} = \log_unit_lab_cost + \log_emplo_text - \log_exch_rates + \epsilon$$

Where ϵ is the error term.

7.3.2. List of variables

- LN_PROD_TEXT_IND = Logarithm of production in textile industry
- LN_UNIT_LAB_COST = Logarithm of unit labour cost
- LN_EMPL_TEXT = Logarithm of employment in textile industry
- LN_EXCH_RAT2000 = Logarithm of nominal exchange rate
- RES_NEW (-1) = Lagged residuals of the co integration equation
- D_LN_PRO_TEX_IN = Differences of the logarithm of production in textile industry
- D_LN_EXC_RAT2000 = Differences of the logarithm of nominal exchange rates
- D_LN_EMP_TEX_IND = Differences of the logarithm of employment in textile industry
- LN_PPI_TEXT2000 = Logarithm of producer price index in the textile industry
- LN_YARN_CONST = Logarithm of yarn input in the textile industry
- LN_FIBRES_CONST = Logarithm of fibers input in the textile industry

7.3.3. Description of variables

All the variables used are expressed at constant 2000 prices. The nominal exchange rate is defined as the number of local currency (Rand) per unit of US \$.

7.4 Results of Empirical model (cfr. Appendix)

a) Long run equation

$$\text{LN_PROD_TEXT_IND} = 0.1293288512 * \text{LN_UNIT_LAB_COST} + 0.298845598 * \text{LN_EMPL_TEXT} + 0.1325538047 * \text{LN_EXCH_RAT2000} + 0.4542317588 +$$

b) Short run equation

$$\text{D_LN_PRO_TEX_IN} = 0.1433525568 * \text{D_LN_EXC_RAT2000} + 0.3558120377 * \text{D_LN_EMP_TEX_IND} - 1.000106388 * \text{RES_NEW} (-1) + 0.003983727649$$

7.4.1. Model evaluation of the long run equation

The null hypothesis of non-stationary is rejected at 10% establishing co-integration of the long-run equation's variables (see appendix). As stated above, some reservation on the signs of explanatory variables in establishing their conformity to the prediction of theory of production is expressed.

7.4.2. Model evaluation and interpretation of the short run equation

The E.C.M. passes positively the diagnostic test with more than 59 % of the short-run changes explained by the nominal exchange rates and employment in the textile industry in South Africa, and a Durbin Watson of 2.22 indicating a very low serial correlation between variables (11 %) with a very strong coefficient of adjustment (-1).

7.4.2.1. Comments

According to the co-integration equation, unit labour cost, employment in the textile industry and the nominal exchange rates explain 49 % of the estimated production in the textile industry while other factors, which affect the production, are included in the error term of the empirical model. As the form of the production function is not explicitly examined, there is some reservation over the correctness of the sign of some of the explanatory variables:

- **Engel Bert J. Dockner** and **Kazuo Nishimura** in their article entitled “Capital accumulation games with a non-concave production function” establish the need of taking into account the form of the production as stated in the traditional optimal growth theory for instance, in which the production function of the economy is concave and preferences of the consumer exhibit decreasing marginal utility. In such economy there exists a unique long-run steady state capital stock that is globally stable.
- **Gregory Tassej** in its article entitled “ The disaggregated technology production function: A new model of university and corporate research” explains that in assessing the resulting applied technology’s impact on economic growth, both the general and partial equilibrium literatures enter the technology variable into a production function with the common “production” assets (physical capacity and labour). By so doing, such models obscure an important distinction between technology and these production assets namely, the fact that technology is primarily a “demand-shifting” asset. As such its role is correctly specified only when combined with the other major demand-shifting asset, marketing.
- The importance of knowing the functional form of any production function, in order to predict the behaviour of that function in simulating explanatory variables, is clearly expressed by the work of **Pedro Cavalcanti Ferreira, Joao Victor Issler** and **Samuel de Abreu Pessoa** entitled “ Testing production functions used in empirical growth studies”.
- **Richard Kneller & Philip Andrew Stevens** have considered the impact of the specification of production technology on technical efficiency in their article entitled:” The specification of the aggregate production function in the presence of inefficiency” and have rejected the Cobb-Douglas specification of aggregate production in favour of a more general translog form.

7.5. Summary and conclusions

The fact that the nominal exchange rates affect both the short and long term behaviour of the production in this sector establish the vulnerability of the South-African economy (emerging market) which still remain highly dependent of development outside its economy. The other factor influencing both the short and the long-term production of the textile industry in South Africa is the employment.

From the empirical model, three co integrated variables namely unit labour cost, employment in the textile industry and nominal exchange rates explain the structure of the production function in the long run.

The higher cost of producing led to changes in the labour demand as this latter is determined by production (textile industry).

7.6 Model Limitations

The co integration model applied in this chapter has certain limitations. Only three variables were chosen to represent the independent variables affecting the production function. The reason for this is that the other variables were not co integrated or did not have stationary residuals of the linear combination. Running more models and applying econometric techniques to solve for the stationary of the residuals does however fall beyond the scope of this dissertation, which is essentially a literature study.

Unfortunately, data around variables that may potentially have another huge impact on the sector namely export subsidies and tariff amendments were found to be integrated in the balance sheets of firms. This problem may be solved if a study is conducted of a single firm in the industry, if it is assumed that they would fully disclose all information around subsidies and tariffs, alternatively simulating the impact of these factors using dummy variables.

CHAPTER 8

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

In this summary chapter, a brief summary from each of the chapters is provided together with the overall conclusions and some recommendations that flow from the study together with recommendations for further research. For convenience, the reader is reminded that all sources used are quoted by way of complete references in the chapters and those references are therefore not included in the summary chapter.

8.2 Summary

CHAPTER 1

Chapter 1 is the introduction. It sets the stage for the dissertation by setting out the research methodology and the research problem. The aim of the research is given as “to analyse how structural adjustment in the clothing and textile industries has affected the demand for labour in South Africa. Once this is done, solutions are offered in the form of recommendations for trade and investment policies”.

Secondary objectives relate to the investigation of all the factors that may have been responsible for structural adjustment in the sector and how it has had an impact on the sector, specifically the sector’s performance in production and employment. The research considers that any strategy or policy that would improve employment and output in production will simultaneously have to be a strategy of international competitiveness for the South African clothing and textile industry.

CHAPTER 2

This chapter starts with a brief historical overview of the developments that shaped the South African clothing and textile industries up to the eighties and a more detailed description of developments in the industry over the last two decades. The earlier development of the textile industry is discussed at the hand of developments in the sub-sectors knitted fabrics and woven fabric mainly for women’s and men’s wear and

synthetic fibres. The developments since the eighties are then discussed by indicating the growth in production and employment, investment and technology and the value added through productivity changes.

The purpose of this chapter is to give a historical perspective of the conditions that helped to shape the textile and clothing industry. The chapter also describe the development and employment of the South African textile and clothing industry from the turn of the century up to the current level of activities and performance. The number of firms in the textile clothing industry has declined between 1993 and 2004 and this has led to the drop in the employment level of the industry.

It is shown how employment has been changing from 1993 to 2004. The decline in employment for the period 2003 and 2004 is 4,6 percent while the average remuneration has been increasing for the same period. The restructuring process has been a painful one for the textile and clothing industry. For the ten-year period from 1994 to 2004 there has been a decline in the number of firms in this industry and this had a negative effect on the production and employment. The modernisation of capital equipment is also important but has an effect on labour although it allows the country to build a competitive and modern clothing and textile industry.

CHAPTER 3

This chapter concentrates on why some nations succeed and others fail in international competition. Another question to ask is why a nation becomes the home base for successful international competitors in an industry. A large body of literature exists in which economists attempt to test various aspects of the theory of comparative advantage. In this chapter an attempt is made to review a small subset of the most important studies.

The principal economic goal of a nation is to produce a high and rising standard of living for its citizens. The ability to do so depends not only on the amorphous notion of “competitiveness” but also on the productivity with which a nation’s resources are employed.

The role of international trade and the gains from trade discussion is followed by the new trade theories that played a big part in providing the rationale for intra-industry trade and the implementation of strategic

trade policy. This chapter examines whether South Africa is able to apply lessons from the new growth theory, particularly in the clothing and textile industry.

The enhanced internationalisation of trade has two opposite economic welfare implications for South Africa. On one hand, the increase generates standard competitive advantage gains (specialisation and exchange) and non-competitive advantage gains (pro-competitive, exploitation of economies of scale, increased variety and lower factor market adjustment costs of trade).

Additionally, liberalisation of trade could be consistent and complementary to sustainable development in the context of the Doha Development Agenda (DDA). On the other hand, the increased tradability may lead to higher factor market and adjustment along the lines of Stolper-Samuelson or vertical differentiation model of Flam and Helpman.

With few exceptions, most models point strongly to the conclusion that a country in a state of free market likely enjoys substantially higher welfare than it would in isolation. This view is shown in the classical and Heckscher-Ohlin models, in which the ability to trade at world prices allow nations to specialise their resources along the lines of comparative advantage and allow consumers to benefit from cheaper import prices in those goods in which comparative advantage is absent. Additional gains from trade come from rationalisation of industry, greater economies of scale, improved quality, and enhanced competition.

CHAPTER 4

This chapter shows the policy framework for industrial development and defends the rationale behind industrial support, which is a pre-requisite of trade reform. It also examines the liberalisation processes to which the clothing and textile industry is subjected. This is followed by an examination of the role of the Government in the new trade regime and labour market regulations. The role of the Government in industrial development is examined with specific reference to sector planning, co-ordination, promotion and technological development. This is then finally followed by an outline of the experience of economic management and industrial performance in the 1990s.

This chapter examined a number of key policy interventions of relevance to the industrial sector in adjusting economies and the changing role of the state in the management of monetary and fiscal policy, privatisation,

trade reform, labour institutions and infrastructure provision. In each case, the chapter has examined the specific policy changes associated with a more liberal industrial environment in an attempt to understand the implications of such changes on the roles and responsibilities of those organisations charged with policy implementation. The chapter further considered how industry performed in response to the changing institutional environment and more specifically, how clothing and textiles performed as a leading industrial sector, given a decline in direct state involvement. The chapter showed that the economic adjustment process involves more than just the implementation of certain macroeconomic reforms designed to limit the role of government in industry.

The most important result of the literature review in this chapter is that evidence suggests a new role for the state in managing business in the current globalising and liberalising environment, with the sole purpose of increasing a nation's welfare from international trade. This new role of the state is that of a strategic partner possible sole purpose it is to create an enabling environment for business in its country through selective and flexible interventions; some of which may involve the labour market, education and training, multi- and bi-lateral trade affairs, domestic structural adjustments, and competitiveness and R & D issues.

CHAPTER 5

The purpose of this chapter is to provide an overview of what structural adjustment is and how trade liberalisation development strategies were implemented in the South African clothing and textile industry. Attention is be paid to the government's investigations under the chairmanship of McCrystal into the development and structural adjustment programme (SAP) of the apparel textile and clothing industries in South Africa (RSA, 1988 (a)) and Swart into a long-term strategic plan for the South African textile and clothing industries. The first section addresses the General Agreement on Tariffs and Trade (GATT). This is followed by the structural adjustment assistance as well as the main objectives for the programme as been submitted by the clothing and textile industries in their separate submissions. Government introduced the structural adjustment programme in 1986 and various elements of the programme is addressed as well as the impact of the programme.

The chapter is concluded with some factors that are necessary to make adjustment programmes successful. Without these factors, Government cannot expect that optimal results are achievable. Future programmes should also give more thought to issues of technological capabilities and institutional efficiency so that

world-class products could be produced and the country could compete with the rest of the world. The World Bank asserts the importance of developing government capability so that effective policy programmes can be designed and implemented.

Shepley, an international textile consultant, reports to the IDC in 1994 that the structure of the South African textile industry must be considered fragile with no evidence of a common policy or objective throughout the manufacturing chain. “The type of machinery used in the factories and the technology it offered is not seen as a major contributory factor to the difficulties facing the spinners. What is more relevant has been the lack of product focus, cost engineering and insufficient appreciation of what yarn types could be sold profitably into the market”.

CHAPTER 6

This chapter strives to gain a better perspective and understanding of the South African clothing and textile industry; the structure and composition of the sectors are discussed. This chapter is divided in two main components, viz. a detailed historic analysis of each of the sectors and sub-sectors in the clothing and textile industry for the period from 1996, at the time projected to the year 2001 (Part I) and Part II, which considers some of the more recent dynamics of the clothing and textile industry.

With regard to Part I, it is important to note that at the time of doing this literature research, the most detailed analysis of the sector was found in Republic of South Africa, official yearbook of the Republic of South Africa. At the time the 1998 yearbook was the most recent providing such detailed analysis of the structure of the industry under discussion. Even though the data on the different sectors and sub-sectors may be outdated, it provides a solid foundation on which to build further discussion and analysis of the sector for purposes of the limited scope of this particular study.

PART I

Important structural changes are currently filtering to the South African clothing and textile industries as they adapt to the dictates of the global economy. These are reflected in fiscal and monetary policy adjustments, whilst in the real economy the quest for international competitiveness forces industries to achieve efficiency gains of exceptional nature. An important outcome of these structural changes is the

increased emphasis on productivity as companies endeavour to conform to standards set by international competition. This has led to some short-term job losses, particularly in the textile and clothing industry.

Moderate job gains are possible in the clothing and textile industry. These job opportunities is possible based on the following macro-economic underlying determinants:

- *The continued redressing of inflation by suitable monetary policies.*
- *Continued fiscal discipline.*
- *Consistency in trade policy to lower protection and enhance external market access.*
- *Refined supply-side measures to assist industrial adjustment toward international competitiveness.*

The textile industry in South Africa has had several boosts of late and expanding into the global market in some unusual ways. Mainstream producers are making good gains on finished product exports.

The South African Textile Industry Export Council (SATIEC) has been formed to aggressively grow finished product exports for members in the clothing and textile industry. According to SATIEC international clients are well aware of the strong industrial and financial infrastructure in the country and the good port and air facilities; also the potential for further development.

On May 18, 2000 when the African Growth and Opportunity Act (AGOA) was enacted in the USA, it opened up major opportunities for local industries. At the time, Bryan Brink, the executive director of the South African Textile Federation was very optimistic about the future of the textile industry and its positioning in the global market. According to him, in 2001 the industry did about R791 million worth of exports to the USA under AGOA or about 12 percent of total production and believed this could reach 30 percent within three of four years. The agreement allows duty-free access for many types of clothing, but at that stage excluded yarns, fabrics and household textiles. There was also lack of quota restrictions to the USA, Europe and other places and this benefited South Africa's exports, saving many textile factories from closing down.

There are many companies, which are interested in relocating and investing in South Africa. This will be done through outsourcing some of their work to South African companies and also opening up subsidiaries in the country. This will help empowering local small and big companies in the country.

Growth in production as a result of demand from new niche markets and extended export sales to traditional markets, especially in the upper end market for clothing and textiles, is possible. It is however, a fact that the lower end of the market is currently being lost to the Far East, and especially so to China.

PART II

The chapter has attempted to present a broad view of key trends, which emerged in South Africa since the introduction of the liberalisation trade policies in the textile and clothing sectors.

There has been closure of firms, downsizing and retrenchments by companies in the formal sector. Some of this is in the line with global trends; other is an indication of firms' reaction to import competition and an inability to grow exports rapidly to counteract the loss of market share experienced by the change in historical local buying patterns. Behind this is a significant rearrangement of firm-level strategies such as casualisation, outsourcing, subcontracting, informalisation, relocation and an increasing export-led investment flow, in particular from large transnational corporations establishing in the rural areas.

The new emerging strategies appear to be aggressively export-oriented aimed at maximizing the new preferential market access to Europe and USA, and some regional integration to maximise the SADC Free Trade Agreement concern is the ability of the traditional manufacturers, who have structurally changed to survive local market competition to embrace and supply the very high volumes of production required by the USA markets.

This is likely to entail one or both of the following strategic actions by local RSA clothing manufacturers:

- (i) A pulling back of subcontracted operations to resources and manage the growth of the formal exporting base and / or*
- (ii) A large additional expansion and investment by the local firms without any change to the local market outsourcing patterns and subcontracting arrangements in order to maintain local market supply levels.*

CHAPTER 7

Although the dissertation is mainly based on a literature survey, it was decided to test the impact of some of the independent variables in the production function, using quantitative techniques. This chapter identifies factors that have an impact on the production of clothing and textiles in South Africa, using co-integration techniques (Engle Granger approach). Time series data for the clothing sector after 1996 is incomplete while time series data for the textile sector was available up to 2004. For this reason, this chapter only uses the textile sector as a proxy for evaluating the industry.

On the supply side, factors determining the level of output were identified in Chapter 3. From this earlier analysis the factors that impact on supply decisions in the industry are: the structure of consumer and industrial demand (both local and foreign) and the prices faced by suppliers (e.g. export subsidies, tariff changes and nominal exchange rates). Ultimately, the result of the supply responses in the industry was changes in the demand for labour, which is derived from the demand for locally produced clothing and textiles.

The fact that the nominal exchange rates affect both the short and long term behaviour of the production in this sector establish the vulnerability of the South-African economy (emerging market) which still remain highly dependent on development from outside its economy. The other factor influencing both the short and the long-term production of the textile industry in South Africa is the employment.

From the empirical model, three co integrated variables namely unit labour cost, employment in the textile industry and nominal exchange rates explain the structure of the production function in the long run.

The higher cost of production led to changes in the labour demand as this latter is determined by production (textile industry).

Model Limitations

The co integration model applied in this chapter has certain limitations. Only three variables were chosen to represent the independent variables affecting the production function. The reason for this is that the other variables were not co integrated or did not have stationary residuals of the linear combination. Running

more models and applying econometric techniques to solve for the stationarity of the residuals does however fall beyond the scope of this dissertation, which is essentially a literature study.

Unfortunately, data around variables that may potentially have another huge impact on the sector, namely export subsidies and tariff amendments were found to be integrated in the balance sheets of firms. This problem may be solved if a study is conducted of a single firm in the industry, if it is assumed that they would fully disclose all information around subsidies and tariffs, alternatively simulating the impact of these factors using dummy variables.

8.3 Conclusions

The study has left no stone unturned insofar as the investigation into the structural adjustment in the clothing and textile sectors in South Africa is concerned. The historical investigation into the factors that helped shape the industry shows clearly that even though the global markets had been substantially different in structure from what it is at present and even though phenomena like globalisation that came to turn the whole industry upside-down, were not present during the early development of the industry in South Africa, South Africa has almost always been unable to compete internationally in this sector.

The clothing and textile industry seems to be in a constant state of flux. In Chapter 2 it is already indicated how there has forever been some or other intervention by government in the industry; always accompanied by a decline in the level of employment in the industry. Chapter 2 already indicates for example: “The decline in employment for the period 2003 and 2004 is 4,6 percent while the average remuneration has been increasing for the same period”.

On an investigation into the different trade models that may be considered for the South African clothing and textile industry, it was found that no unique model exists for this purpose. It is also concluded that South Africa was never able to successfully mimic best practice models for the industry as found in winning nations. What does seem viable for South Africa, is a unique strategy developed for the South African industry, taking due consideration of its strengths and weaknesses. Suffice to say at this juncture is that South Africa may never be able to compete successfully with large labour surplus and technology superior nations such as China when it comes to the manufacture of lower-end product.

Even though follow-up studies are required to confirm this, the study gives a rather complete picture regarding the interventionist policies by government and its mixed results. Even though a country like China can compete with any other in the global arena in the absence of any preferential treatment in the international market for clothing and textiles, it is the exception rather than the rule. As a rule, the playing fields are uneven insofar as WTO and other bilateral arrangements are concerned. Further to this, the outcome of a 40 percent effective subsidy on the export of clothing and textile product for a number of years and recently a maximum effective export subsidy of around 25 percent has all lead to even further job-losses in clothing and textile manufacturing.

The type of structural adjustments that are taking place are given a boost with the sustained export subsidy in the form of Duty Credits to clothing and textile manufacturers. It seems an ill thought through programme that reward clothing and textile exporters by subsidising the import of new product lines, and having little control over the actual use of the certificate at hand, it leads to a further subsidy on the importation of final product from countries like China that already has a competitive advantage before the subsidy. This way, government is sure to accelerate the closure of local manufacturing enterprises that are marginal producers.

It should however be added that those jobs lost in the clothing and textile manufacturing sector is probably more than compensated for by increases in employment in the secondary and tertiary sectors i.e. retail and service sectors that are involved in the importation and the selling of imported product in the sector.

Finally, the model developed in Chapter 7, applies data from 1980 to 2004. It clearly indicates that clothing and textile production is driven largely by production costs, which in turn, determines profitability, and that in the long run, increases in input costs (mainly imported raw material cost) and unit labour cost is accompanied by decreases in production of textiles. With the onset of globalisation, this has led to a cost-price squeeze, leading to decreases in profit levels and the level of production and resulting in long run labour shedding in the sector.

It is not hard to realise why the clothing and textile sector lobbied so hard for export subsidies at the time. These subsidies served to compensate producers for the profit margin lost to the cost-price squeeze outlined above. Because subsidies in the form of GEIS and DCCS were discounted in profit margins, it may easily be inferred that the with the discontinuation of GEIS in 1997, profit margins came under pressure and lead to a sharp drop in textile output. This is clearly visible from Figure 7.6, if one looks at what happened to textile

output after 1997. It is concluded then that it was the manufacturers that gained with the subsidies by having profit margins subsidised. Labour were the losers by only seeing their jobs lost through these subsidies (again refer to Figure 7.4 that shown the level of employment from 1980 to 2004).

8.4 Recommendations

The following recommendations follow from the results of the study:

- South Africa should have a comprehensive trade strategy for its clothing and textile sector.
- The comprehensive trade strategy should be accompanied by a strong strategic partnership with the department of Trade and Industry and contain strong elements of management, marketing and branding support.
- Current market intelligence from sources such as the International Trade Centre (ITC) and the Economic Intelligence Unit at the department of Foreign Affairs should further support the trade strategy.
- Due consideration should be given to the discontinuation of the Duty Credit Certificate Scheme. The scheme, in its current form, serves to subsidise imports of clothing and textile products and is counterproductive when it comes to saving jobs. It merely serves to enhance bottom-line profits of export firms.
- The international trade playing field is not yet even with regard to tariff and non-tariff barriers. This needs to be addressed as part of the overall trade strategy for the sector.
- An aggressive international marketing campaign should be followed, accompanied by market access support from the department of Trade and Industry, and
- South Africa should consider as part of an overall strategy for the sector, and based on further research, an import-export product mix strategy that would allow for certain lower-end product, for which South Africa does not show any comparative advantage, to be imported without abnormally high import tariff barriers. This is important in order to allow the poor to have access to affordable clothing and textile product and would also allow job creation in the distribution supply chain. Any trade restriction on the lower end of the market should be accompanied by quota, rather than tariff, should consideration be given to import restriction as a result of severe external disequilibrium. On the upper-end of the market, luxury clothing and textile goods should carry marginally higher import

tariffs and it is here that South Africa should strive to maintain and grow a balance of trade surplus with the rest of the world.

8.5 Recommendations for further research

Much research is needed in order for South Africa to get a foothold in the international market for clothing and textiles. Some recommendations for further research include the following:

- Data is required in respect of the current DCC benefit paid to exporters of clothing and textiles. Further to this, data is required in respect of measuring the outcome of the impact of the DCC on labour, labour productivity, capital and capital productivity and training objectives in the sector.
- Research is required to ascertain for which tariff line items South Africa has a comparative advantage in order for South Africa to draft a comprehensive trade strategy.
- More econometric models are required for the sector, especially for the clothing sector that was not modelled in this study. These models should extend the analysis of the production function to more independent variables. Also, it is recommended that a labour demand model be constructed for the sector. A more optimal econometric model suggested for the industry would be a partial equilibrium model that would model both the supply and demand dynamics of the sector and incorporate the dynamic spatial impacts in the sector.
- It is recommended that the import distribution supply chain be investigated in order to establish with more certainty the positive benefits to the welfare of South African society of the value added locally as well as the jobs created downstream in the imported clothing and textile product sector.

APPENDIX**Co integration equation (Long run equation)**

Dependent Variable: LN_PROD_TEXT_IND

Method: Least Squares

Date: 09/13/05 Time: 09:32

Sample (adjusted): 1983 2003

Included observations: 21 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_UNIT_LAB_COST	0.129329	0.058310	2.217960	0.0405
LN_EMPL_TEXT	0.298846	0.100583	2.971136	0.0086
LN_EXCH_RAT2000	0.132554	0.052907	2.505391	0.0227
C	0.454232	1.341582	0.338579	0.7391
R-squared	0.485220	Mean dependent var		4.661914
Adjusted R-squared	0.394377	S.D. dependent var		0.065025
S.E. of regression	0.050604	Akaike info criterion		-2.959938
Sum squared resid	0.043533	Schwarz criterion		-2.760981
Log likelihood	35.07935	F-statistic		5.341279
Durbin-Watson stat	1.640153	Prob (F-statistic)		0.008911

ADF Test Statistic	-4.205261	1% Critical Value*	-3.8572
		5% Critical Value	-3.0400
		10% Critical Value	-2.6608

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D (RES_NEW)

Method: Least Squares

Date: 09/13/05 Time: 09:38

Sample (adjusted): 1986 2003

Included observations: 18 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RES_NEW (-1)	-1.716617	0.408207	-4.205261	0.0009
D (RES_NEW (-1))	0.663925	0.327113	2.029653	0.0618

D (RES_NEW (-2))	0.679407	0.254595	2.668583	0.0184
C	-0.006604	0.009807	-0.673404	0.5117
R-squared	0.654905	Mean dependent var		0.002891
Adjusted R-squared	0.580956	S.D. dependent var		0.060422
S.E. of regression	0.039113	Akaike info criterion		-3.451581
Sum squared resid	0.021418	Schwarz criterion		-3.253720
Log likelihood	35.06423	F-statistic		8.856172
Durbin-Watson stat	2.534997	Prob (F-statistic)		0.001530

With $n=4$, critical values from Mackinnon response surface calculations are:

- a) 1% $-4.6493-17.188/25-59.20/625=-5.43154$
- b) 5% $-4.1-10.745/25-21.57/625=-4.564312$
- c) 10% $-3.811-8.317/25-5.19/625=-4.151984$

7.3.2.2. Model evaluation of the long run equation

The null hypothesis of non-stationary is rejected at 10% establishing co-integration of the long-run equation's variables. As stated above, we have expressed some reserves on the signs of explanatory variables in establishing their conformity to the prediction of theory of production.

7.3.3. Error correction model (E.C.M.)

Dependent Variable: D_LN_PRO_TEX_IN

Method: Least Squares

Date: 09/13/05 Time: 09:57

Sample (adjusted): 1984 2003

Included observations: 20 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D_LN_EXC_RAT2000	0.143353	0.075859	1.889712	0.0771
D_LN_EMP_TEX_IND	0.355812	0.130981	2.716521	0.0152
RES_NEW (-1)	-1.000106	0.236472	-4.229288	0.0006
C	0.003984	0.011043	0.360743	0.7230
R-squared	0.597247	Mean dependent var		-0.004873
Adjusted R-squared	0.521731	S.D. dependent var		0.068911
S.E. of regression	0.047657	Akaike info criterion		-3.072736
Sum squared resid	0.036338	Schwarz criterion		-2.873589
Log likelihood	34.72736	F-statistic		7.908867
Durbin-Watson stat	2.220728	Prob(F-statistic)		0.001851

7.3.3.1. Diagnostic testing**Normality test**

J.B: 3.66 (probability: 0.16)

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.257942	Probability	0.314473
Obs*R-squared	3.046624	Probability	0.217989

ARCH Test:

F-statistic	0.446021	Probability	0.513196
Obs*R-squared	0.485750	Probability	0.485829

White Heteroskedasticity Test:

F-statistic	0.426661	Probability	0.848412
Obs*R-squared	3.290449	Probability	0.771608

White Heteroskedasticity Test:

F-statistic	0.427947	Probability	0.891426
Obs*R-squared	5.561154	Probability	0.782908

Ramsey RESET Test:

F-statistic	0.015561	Probability	0.902384
Log likelihood ratio	0.020737	Probability	0.885498

d) At 1% $-4.6493-17.188/25-59.20/625=-5.43154$ e) At 5% $-4.1-10.745/25-21.57/625=-4.564312$ f) At 10% $-3.811-8.317/25-5.19/625=-4.151984$ **TEST 1**

Dependent Variable: LN_PROD_TEXT_IND

Method: Least Squares

Date: 03/24/06 Time: 09:44

Sample (adjusted): 1983 2003

Included observations: 21 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_EXCH_RAT2000	0.138803	0.061482	2.257637	0.0374
LN_GFCF_MANU	0.074962	0.055868	1.341757	0.1973
LN_EMPL_TEXT	0.205225	0.090409	2.269965	0.0365
C	1.303885	1.446569	0.901364	0.3800
R-squared	0.399817	Mean dependent var		4.661914
Adjusted R-squared	0.293902	S.D. dependent var		0.065025
S.E. of regression	0.054640	Akaike info criterion		-2.806442
Sum squared resid	0.050755	Schwarz criterion		-2.607485
Log likelihood	33.46764	F-statistic		3.774892
Durbin-Watson stat	1.459950	Prob(F-statistic)		0.030412

ADF Test Statistic	-3.222795	1% Critical Value*	-3.8067
		5% Critical Value	-3.0199
		10% Critical Value	-2.6502

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RES_TEST1)

Method: Least Squares

Date: 04/21/06 Time: 10:00

Sample (adjusted): 1984 2003

Included observations: 20 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RES_TEST1 (-1)	-0.733522	0.227604	-3.222795	0.0047

C	-0.000425	0.011426	-0.037188	0.9707
R-squared	0.365894	Mean dependent var		0.000260
Adjusted R-squared	0.330666	S.D. dependent var		0.062449
S.E. of regression	0.051091	Akaike info criterion		-3.015759
Sum squared resid	0.046986	Schwarz criterion		-2.916186
Log likelihood	32.15759	F-statistic		10.38641
Durbin-Watson stat	1.854764	Prob(F-statistic)		0.004720

TEST 2

Dependent Variable: LN_PROD_TEXT_IND

Method: Least Squares

Date: 03/24/06 Time: 09:47

Sample (adjusted): 1980 2003

Included observations: 24 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_UNIT_LAB_COST	-0.129012	0.101172	-1.275171	0.2169
LN_IMPORT_TEXT	0.020937	0.069540	0.301083	0.7665
LN_PROD_PRICES	0.216032	0.303181	0.712552	0.4844
C	5.106143	0.379546	13.45328	0.0000
R-squared	0.406781	Mean dependent var		4.692605
Adjusted R-squared	0.317798	S.D. dependent var		0.105055
S.E. of regression	0.086771	Akaike info criterion		-1.900075
Sum squared resid	0.150584	Schwarz criterion		-1.703733
Log likelihood	26.80090	F-statistic		4.571447
Durbin-Watson stat	1.015497	Prob(F-statistic)		0.013536
ADF Test Statistic	-2.642592	1% Critical Value*		-3.7497
		5% Critical Value		-2.9969
		10% Critical Value		-2.6381

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RES_TET2)

Method: Least Squares

Date: 04/21/06 Time: 10:03

Sample (adjusted): 1981 2003

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RES_TET2(-1)	-0.507749	0.192140	-2.642592	0.0152
C	0.000798	0.015416	0.051795	0.9592
R-squared	0.249552	Mean dependent var		0.001910
Adjusted R-squared	0.213817	S.D. dependent var		0.083349
S.E. of regression	0.073903	Akaike info criterion		-2.289192
Sum squared resid	0.114694	Schwarz criterion		-2.190453
Log likelihood	28.32571	F-statistic		6.983294
Durbin-Watson stat	1.520371	Prob (F-statistic)		0.015223

TEST 3

Dependent Variable: LN_PROD_TEXT_IND

Method: Least Squares

Date: 03/24/06 Time: 09:53

Sample (adjusted): 1983 2003

Included observations: 21 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_IMPORT_INPUT	0.015448	0.019614	0.787584	0.4418
LN_GFCF_MANU	-0.010783	0.068132	-0.158264	0.8761
LN_EMPL_TEXT	0.272672	0.137916	1.977087	0.0645
C	1.553591	1.764637	0.880403	0.3909
R-squared	0.247333	Mean dependent var		4.661914
Adjusted R-squared	0.114510	S.D. dependent var		0.065025
S.E. of regression	0.061189	Akaike info criterion		-2.580054
Sum squared resid	0.063650	Schwarz criterion		-2.381098
Log likelihood	31.09057	F-statistic		1.862118
Durbin-Watson stat	1.270674	Prob (F-statistic)		0.174335
ADF Test Statistic	-3.118324	1% Critical Value*		-3.8067
		5% Critical Value		-3.0199
		10% Critical Value		-2.6502

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RES_TEST4)

Method: Least Squares

Date: 04/21/06 Time: 10:10

Sample (adjusted): 1984 2003

Included observations: 20 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RES_TEST4 (-1)	-0.666807	0.213835	-3.118324	0.0059
C	-0.003141	0.012063	-0.260351	0.7975
R-squared	0.350742	Mean dependent var		-0.003099
Adjusted R-squared	0.314672	S.D. dependent var		0.065166
S.E. of regression	0.053947	Akaike info criterion		-2.906972
Sum squared resid	0.052386	Schwarz criterion		-2.807399
Log likelihood	31.06972	F-statistic		9.723948
Durbin-Watson stat	1.939422	Prob (F-statistic)		0.005936

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