

https://dspace.org/

Industrial policy and the clothing and textile industry in South Africa

Molekwa, Ben Thayi

2018
https://hdl.handle.net/10539/28857

Downloaded from a DSpace repository. https://dspace.org/

UNIVERSITY OF THE WITWATERSRAND

SCHOOL OF GOVERNANCE

Industrial Policy and the Clothing and Textile Industry in South Africa

by

Ben Thayi Molekwa

A thesis submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in fulfilment of the requirements for the degree of Doctor of Philosophy

12 March 2018

ABSTRACT

South Africa has had a wide range of industrial policy interventions with varied results. Many firms in the clothing and textile industry are closing down while many of those remaining continue to perform poorly in terms of production and employment. The purpose of the study is to investigate whether clothing and textile firms in South Africa are globally competitive, examine and explain why industrial policy measures have not generated expected results and reflect on possible recommendations for industrial policy measures that will make the clothing and textile industry globally competitive.

The researcher examined the past and current industrial policy measures using the qualitative research method and collected data through interviews with employers, employees, the Industrial Development Corporation as the implementing agency, the Textile Federation as an important stakeholder, government policy makers, and the workers' representative body, namely the South African Clothing and Textiles Workers' Union. The findings revealed that the clothing and textile industry is not competitive because of relatively high wages and salaries, lack of up-to-date technology in the industry, and low productivity and pay ratio. The analysis of industrial policy documents, supported by a study on clusters, suggests that there are industrial deficiencies in South Africa's manufacturing industry due to uncoordinated clusters. A cluster, in this context, refers to a group of similar firms sharing resources and best practices aimed at reducing production costs.

In contributing to existing knowledge, the study makes use of four theories that recognise the four factors of production (labour, capital, land, and entrepreneurship) as important elements of industrial policy and competitiveness. These theories are absolute advantage, comparative advantage, the Heckscher-Ohlin theory, and Porter's Diamond Framework of Competitiveness. Implicit in these theories is that to achieve competitiveness, the price of production factors must be kept to a minimum. The theories assume that the competitiveness of economies flows from

the traditional factors of production, particularly capital and labour; and that capital investment, the division of labour (labour specialisation) and free trade are the engines of growth. The main shortcomings inherent in these theories are that, firstly, they advocate for as little government interference in the economic system as possible, or a policy of *laissez-faire*. Secondly, the theories tackle the same problem by providing models that clarify competitiveness of international trade based on differences in productivity levels between countries, without explaining why these differences exist.

South Africa can learn lessons from the East Asian economies' use of the Dynamic Capacity Development Methodology of Policy Formulation, especially the roles played by the Framework and Ingredients approaches that give guidance on how to intervene in the economy and what areas are relevant for interventions that lead to industrialisation and competitiveness. A 'Coordination System' identifies the role-players in the economy as state, firms and the market. This study recommends three industrial policy measures: encouraging exports of manufactured goods; encouraging technology; and promoting education. These measures should be part of discussions during Cluster activities. Furthermore, the study recommends the introduction of the Adopt-a-Cluster model through which government trains officials to implement industrial policies and actively participate in the activities of clusters which, according to Industrial Policy documents, are not properly coordinated.

The study proposes further research into why firm owners are not keen to borrow capital and buy modern capital equipment.

Key Words:
Industrial Policy; Competitiveness, Protectionism, Liberalism, Structuralism, Neoliberalism, H-O Theorem, Coordinated System, Framework, Ingredient, Approach, Cluster, Industrialisation, Policy.

DECLARATION

I declare that this thesis is my own, unaided work. It is submitted in fulfilment of the requirements of the degree of PhD (Philosophy), in the field of Public and Development Management, at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

Ben Thayi Molekwa

12 March, 2018

DEDICATION

This research report is dedicated to my mother, Jeanette, my wife, Maggie, and my two daughters; Refilwe and Fedile, who have supported me throughout the process.

ACKNOWLEDGEMENTS

I am grateful to:

- My supervisor, Doctor Horácio Zandamela, for his guidance, support and encouragement throughout the research process.
- Mr Abisha Peter Tembo, Chief Director, and his Personal Assistant, Ms Patricia Khumalo, of the Department of Trade and Industry, Industrial Development Division: Clothing, Textile, Footwear and Leather, for their understanding and allowing me to conduct interviews at the Clothing and Textile Firms.
- Ms Elaine Smith, Director, and Mr Simon Mello, her Deputy Director, at the Department of Trade and Industry, Industrial Development Division: Clothing, Textiles, Footwear and Leather, for unselfishly sharing their knowledge of the Clothing and Textile Industry for this study.
- All the interviewees who shared their time and experiences with the researcher.

TABLE OF CONTENTS

ABSTRACT ..... **I**

DECLARATION ..... **III**

DEDICATION ..... **IV**

ACKNOWLEDGEMENTS ..... **V**

TABLE OF CONTENTS ..... **VI**

ABBREVIATIONS / ACRONYMS ..... **XI**

LIST OF TABLES ..... **XIV**

LIST OF FIGURES ..... **XV**

CHAPTER ONE **1**

INTRODUCTION **1**

1.1 Introduction 1
1.2 Background to the Problem 3
1.2.1 Industrial policies of the period before 1994 ..... *3*
1.2.2 Industrial policies for the period 1994 – 2008 ..... *5*
1.2.3 Industrial policies introduced in 2010 ..... *10*
1.3 Problem Statement 10
1.4 Purpose Statement 12
1.5 Research Questions 13
1.6 Significance of the Study 14
1.7 Structure of the Research Thesis 15

CHAPTER TWO **17**

LITERATURE REVIEW: INDUSTRIAL POLICY IN SOUTH AFRICA AND THE CONCEPT OF 'COMPETITIVENESS' **17**

2.1 Introduction 17
2.2 Industrial Policy, Productivity in Manufacturing and Competitiveness 18
2.3 Definitions of Industrial Policy 25
2.4 Approaches to Industrial Policy 33
2.4.1 The Neoliberal Approach to Industrial Policy *33*
2.4.2 The Structuralist Approach to Industrial Policy *35*
2.4.3 The Matrix Approach to Industrial Policy *37*
2.4.4 Export-oriented and Import-substitution Industrialisation Strategies *41*
2.4.5 Key issues on industrial policy *42*
2.5 Overview of Clothing and Textile Industry and Industrial Decentralisation Policy in South Africa 43
2.6 Review of South Africa's Trade and Industrial Policy 54
2.6.1 Trade and Industrial Policies *54*
2.6.2 Review of South Africa's Trade Policy (1991 – 2006) *54*
2.6.3 Review of South Africa's Industrial Policies (1994 – 2008) *56*
2.6.4 Key issues on the review of South Africa's trade and industrial policy *61*

2.7 CURRENT INDUSTRIAL POLICY DOCUMENT ANALYSIS....62
2.7.1 The nature of the problem....*62*
2.7.2 Present and past policies developed to address the problem and the outcomes....*65*
2.7.3 Key issues on the current industrial policy document analysis....*71*
2.8 SOUTHERN AFRICAN CUSTOMS UNION (SACU)....73
2.9 AFRICAN GROWTH AND OPPORTUNITY ACT (AGOA)....76
2.10 THE CONCEPT OF 'COMPETITIVENESS'....79
2.10.1 Mercantilism....*80*
2.10.2 Classical Theories....*80*
2.10.2.1 Adam Smith and the Absolute Advantage of Trade (1776)....80
2.10.2.2 David Ricardo and the Comparative Advantage of Trade (1817)....81
2.10.3 Neo-Classical Theories....*82*
2.10.3.1 The Heckscher-Ohlin (H-O) Theorem....82
2.10.4 Porter's Diamond Framework of Competitiveness....*85*
2.10.4.1 Importance of the Clusters Approach in Industrial Policy and Competitiveness....88
2.10.4.2 Key issues on industrial clusters....93
2.10.5 Competitiveness Measurement: Practical Aspects....*94*
2.10.5.1 International Institute for Management Development (IMD) World Competitiveness Yearbook (WCY)....96
2.10.5.2 The Global Competitiveness Report by the World Economic Forum....96
2.10.5.3 Shortcomings of the WCY and the GCR....98
2.10.5.4 Other Competitive Priorities....99
2.10.7 Key issues on competitiveness....*102*
2.10.8 Theoretical Framework....*104*
2.10.9 Contribution to Knowledge....*109*
2.10.9.1 Factors of specialisation and exports....109
2.10.9.2 Genesis of Competitiveness, Factor Specialisation and Exports....111
2.11 METHODOLOGY AND TOOLS IN IDENTIFYING COMPETITIVE ADVANTAGE....119
2.12 COMPETITIVENESS IN THE NEWLY INDUSTRIALISED ECONOMIES OF EAST ASIA....124
2.12.1 Support for education....*124*
2.12.2 Decisions on the allocation of capital....*125*
2.12.3 Encouraging exports of manufactures....*126*
2.12.4 Promotion of technology programmes....*127*
2.13 COMPETITIVENESS AND ECONOMIC DEVELOPMENT....128
2.14 CONCEPTUAL FRAMEWORK: A "COORDINATED SYSTEM"....129
2.15 SUMMARY....134

CHAPTER THREE....139

RESEARCH METHODOLOGY....139

3.1 INTRODUCTION....139
3.2 RESEARCH APPROACH....140
3.2.1 Research Assumptions....*140*
3.2.2 Research Paradigms/Philosophies....*140*
3.2.3 Qualitative Research....*145*
3.3 RESEARCH DESIGN....146
3.4 DATA COLLECTION....147
3.4.1 Primary Data....*147*
3.4.2 Secondary Data....*148*
3.4.3 Population....*149*
3.4.4 Sampling Method and Sampling Size....*150*
3.4.5 Interviews....*152*

3.5 DATA ANALYSIS 153
3.6 VALIDITY AND RELIABILITY 155
3.6.1 Methodological Coherence *159*
3.6.2 Sampling sufficiency *163*
3.6.3 Collecting and Analysing Data Concurrently *164*
3.6.4 Thinking theoretically *165*
3.6.5 Theory Development *166*
3.7 LIMITATIONS OF THE STUDY 167
3.8 ETHICAL CONSIDERATIONS. 169
3.9 SUMMARY 173

CHAPTER FOUR 177

CURRENT OPERATING CONDITIONS IN THE CLOTHING AND TEXTILE INDUSTRY 177

4.1 INTRODUCTION 177
4.2 SUMMARY OF PEOPLE INTERVIEWED 177
4.3 PRESENTATION OF DATA 179
4.3.1 Current prices of products *179*
4.3.1.1 (Labour) Salaries and wages cost contribution to selling price 180
4.3.1.2 (Capital) Interest cost contribution to selling price 180
4.3.1.3 (Land and Natural Resources) Rent cost contribution to selling price 180
4.3.1.4 (Entrepreneur) Profit cost contribution to selling price 180
4.3.1.5 Other comments on the contribution to selling price 180
4.3.2 Productivity of Employees/Workers *181*
4.3.2.1 What does the firm produce? 182
4.3.2.2 What activities are required to produce a finished product? 182
4.3.2.3 How long does it take to complete each activity? 182
4.3.2.4 How many employees were involved in each of these activities? 182
4.3.2.5 How long does it take to complete a finished product? 183
4.3.2.6 Do employees have the required qualifications? 183
4.3.2.7 Additional information on the competencies of employees 184
4.3.3 Models of machines *185*
4.3.3.1 What are the specifications of the machines that are used in the firm? 186
4.3.3.2 When were the machines acquired by the firm? 187
4.3.3.3 How long does it take for the machine to complete a task? 187
4.3.3.4 Are machine operators trained to operate the machines? 188
4.3.3.5 Any additional information on the quality/technology of the machines? 188
4.3.4 Profitability of the firms *189*
4.3.4.1 What was the total cost of sales in the previous year? 190
4.3.4.2 What was the total sales revenue in the previous year? 190
4.3.4.3 What was the amount of gross profit made? 190
4.3.4.4 What was the percentage of profit to sales revenue? 191
4.3.4.5 What was the gross profit percentage in the two previous years? 191
4.3.4.6 Any additional information on the profitability/losses of the firm? 191
4.3.5 Proposed Industrial Policy Measures *192*
4.3.5.1 What can be done to reduce the cost of output produced by the firm? 192
4.3.5.2 What can be done to increase the productivity of employees in the firm? 193
4.3.5.3 What can be done to increase the profitability of the firm? 194
4.3.5.4 What can be done to ensure that firms use machines that employ the latest technology available in the market? 195
4.3.5.5 What can be done to assist the firms to achieve the following? 195
4.4 INTERVIEW WITH GOVERNMENT CO-ORDINATOR OF CLUSTER 199
4.5 INTERVIEW WITH THE TEXTILE FEDERATION OF SOUTH AFRICA 199
4.6 INTERVIEW WITH AN OFFICIAL FROM THE INDUSTRIAL DEVELOPMENT CORPORATION (IDC) 202

4.6.1 Productivity of Workers *202*
4.6.2 Types of Machines *202*
4.6.3 Profits of the Firms *203*
4.6.4 Wages and Salaries of Employees *204*
4.6.5 Problem Areas Identified *204*
4.7 Interview with South Africa Clothing & Textile Workers' Union (SACTWU) Representative 205
4.7.1 Productivity of Employees in the Industry *205*
4.7.2 Types of Machines Used in the Industry *206*
4.7.3 Profit Making in the Industry *207*
4.7.4 Wages and Salaries in the Industry *207*
4.8 Summary 208

CHAPTER FIVE 209

DISCUSSIONS AND ANALYSIS 209

5.1 Introduction 209
5.2 Current Prices of Products 210
5.2.1 Interest and Rent Costs *213*
5.2.2 Cost and Availability of Labour and Materials *214*
5.3 Productivity of Employees 222
5.4 Improving Models of Machines/Technology 228
5.5 Improving Profitability of Firms 233
5.6 Reducing electricity and energy costs 235
5.7 Industrial Clusters in South Africa 238
5.8 Summary 240

CHAPTER SIX 242

CONCLUSIONS, POLICY IMPLICATIONS AND RECOMMENDATIONS 242

6.1 Introduction 242
6.2 Thematic Conclusions 243
6.2.1 Current Prices of Products *243*
6.2.2 Cost and Availability of Labour *245*
6.2.3 Productivity of Employees *247*
6.2.4 Improving Models of Machines *250*
6.2.5 Profitability of Firms *252*
6.2.6 Reducing Electricity Consumption *254*
6.3 Policy Implications 255
6.3.1 Theoretical Reflection *255*
6.3.1.1 The Current State of Clusters 257
6.3.1.2 Encouraging Technology 258
6.3.1.3 Encouraging Exports of Manufactures 261
6.3.1.4 Promoting Education 262
6.4 Recommendations 263
6.4.1 The State of Clusters *263*
6.4.2 Encouraging Technology *267*
6.4.3 Encouraging Exports of Manufactures *270*
6.4.4 Promoting Education *271*
6.4.5 Recommended for Further Research *271*

REFERENCES 273

APPENDICES 297

APPENDIX ONE: PERMISSION SEEKING LETTER AND RESPONSE 297
APPENDIX TWO: CONSENT LETTER TO PARTICIPANTS 299
APPENDIX THREE: ETHICS CLEARANCE CERTIFICATE 301
APPENDIX FOUR: PARTICIPANT INFORMATION AND STRUCTURAL INTERVIEW GUIDE 302
APPENDIX FIVE: DOCUMENTS ANALYSED 310

ABBREVIATIONS / ACRONYMS

AGOA	African Growth and Opportunity Act
ANC	African National Congress
ASGISA	Accelerated and Shared Growth Initiative for South Africa
ATC	Agreement on Textiles and Clothing
BITs	Bilateral Investment Treaties
BLNS	Botswana, Lesotho, Namibia & Swaziland
COSATU	Congress of South African Trade Unions
CSIR	Centre for Scientific & Industrial Research
CTCIP	Clothing & Textiles Competitiveness Improvement Programme
CTCP	Clothing & Textiles Competitiveness Programme
DCCS	Duty Credit Certificate Scheme
EOI	Export-Oriented Industrialisation
ESM	East Asian Miracle
EU	European Union
FCA	Factor Content Approach
FDI	Foreign Direct Investment
FPM	Fibre Processing and Manufacturing
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GEAR	Growth Employment and Redistribution
GEIS	General Exports Incentives Scheme
GNU	Government of National Unity
GMCI	Global Manufacturing Competitiveness Index
H-O	Heckscher-Ohlin
IDC	Industrial Development Corporation
IFI	International Finance Institutions
ILO	International Labour Organisation
IMD	International Institute for Management Development
IMF	International Monetary Fund
IPAP	Industrial Policy Action Plan

ISI	Import Substitution Industrialisation
ISP	Industrial Strategy Project
ITAC	International Trade Administration Commission
JIPSA	Joint Initiative on Priority Skills Acquisition
LDCs	Less Developed Countries
LTA	Long-term Arrangements Regarding International Trade in Textiles
JIT	Just-In-Time
JMT	Japanese Management Techniques
MCC	Millennium Challenge Corporation
MEC	Minerals-Energy-Complex
MERG	Macro-Economic Research Group
MFA	Multi-Fibre Agreement
MIDP	Motor Industry Development Programme
NEDLAC	National Economic Development & Labour Council
NEF	National Economic Forum
NFC	National Finance Cooperation
NGP	National Growth Path
NICs	Newly Industrialised Countries
NIEs	Newly Industrialised Economies
NIPF	National Industrial Policy Framework
NP	National Party
NR	Natural Resources
NSF	National Skills Fund
OECD	Organisation for Economic Co-operation and Development
OPIC	Overseas Private Investment Corporation
PI	Production Incentive
RDP	Reconstruction and Development Programme
REER	Real Effective Exchange Rates
RSF	Revenue Sharing Formula
SACTWU	South African Clothing and Textiles Workers Union
SACU	Southern African Customs Union
SADC	Southern African Development Community

SAPs	Structural Adjustment Programmes
SETA	Skills Education & Training Authorities
SME	Small and Medium Enterprise
SMEDP	Small and Medium Enterprise Development Programme
SMMEs	Small Medium and Micro-Enterprises
SSA	Sub-Saharan Africa
TCIDP	Textile & Clothing Industry Development Programme
TIPS	Trade & Industrial Policy Strategies
TPSF	Trade Policy & Strategy Framework
UNECA	United Nations Economic Commission for Africa
WB	World Bank
WEF	World Economic Forum
WTO	World Trade Organisation

LIST OF TABLES

Table 1: A Genesis of Competitiveness (Traditional Classical & Neoclassical) 83

Table 1B: A Genesis of Competitiveness (Traditional Classical & Neo-classical) 86

Table 2: A Genesis of Competitiveness - Porter and Extended Models 97

Table 3: The 12 Pillars of Competitiveness 98

Table 4: A Genesis of Competitiveness - New Trade Theories 106

Table 5: A Genesis of Competitiveness - Development Economics 107

Table 6: A Genesis of Competitiveness -New Economic Growth Theory 107

Table 7: A Genesis of Competitiveness - Keynesian Economic Theory 108

Table 8A: Genesis of Competitiveness - Competitiveness Measurement: Practical Aspects 112

Table 8B: A Genesis of Competitiveness - Competitiveness Measurement: Practical Aspects 113

Table 8C: A Genesis of Competitiveness: Competitiveness Measurement: Practical Aspects 114

Table 9A: Researches Related to this Study 136

Table 9B: Researches Related to this Study 137

Table 9C: Researches Related to this Study 138

Table 10: Distinction between Positivism and Interpretivism 143

Table 11A: Brief Conceptualisation of the Research Process 174

Table 11B: Brief Conceptualisation of the Research Process 175

Table 11C: Brief Conceptualisation of the Research Process 176

Table 12: Factories and Individuals Interviewed 178

Table 13: Annual percentage change in manufacturing production (in volume) 216

Table 14: How Different Theories are linked and contribute to the Research 241

LIST OF FIGURES

Figure 1: The Links between Industrial Policy, Manufacturing and Competitiveness 24
Figure 2: Porter's Sequence of Competitiveness 27
Figure 3: Links between Competitiveness, Production (Manufacturing) and Exports 84
Figure 4: Porter's Diamond Framework of Competitiveness 88
Figure 5: Microeconomic Competitiveness 95
Figure 6: Factors of Specialisation and Exports 110
Figure 7: Genesis of Competitiveness, Factor Specialisation and Exports 118
Figure 8: Graphic Presentation of the Conceptual Framework: A 'Coordinated' System 135
Figure 9: Methodological Coherence in the Study 172
Figure 10: Labour-factors contributing to labour market efficiency 227
Figure 11: Developmental State and Competitiveness 260
Figure 12: Theoretical Reflection towards Competitiveness 265
Figure 13: Adopt-a-Cluster Approach/Model 266
Figure 14: Operations of the Adopt-a-Cluster Approach/Model 269

CHAPTER ONE
INTRODUCTION

1.1 INTRODUCTION

South Africa has had a wide range of industrial policy interventions with varied effects (Flatters & Stern, 2008). Although there has been a plethora of policy measures, and with the clothing and textile industry being under a protective regime since the early 1960s, the industry had not achieved global competitiveness and was in decline (Mohan, 1998; Breitenbach, 2007; Flatters & Stern, 2008; TIPS, 2016).

Trade policy and industrialisation of any developing country should aim at increasing the production and exports of manufactured products (Balassa, 1985; Amsden, 2001; Weiss, 2002; Shafaeddin, 2004; Gehl Sampath, 2014). Industrialisation is achieved when the share of industry in general, and manufacturing in particular, in the total economic activity is increased (Weiss, 2002; Szirmai, 2009; Zalk, 2014; Gumede, 2015; UNIDO, 2015). Economic transformation is achieved when the economy has moved away from being characterised by exports of primary products toward an economy built on knowledge-based assets (Amsden, 2001).

In East Asian economies, manufacturing capabilities were transferred to more countries through increased foreign direct investment and national industrial policies aimed at emulation (Dahlman, 2007; Whitfield, Therkildsen, Buur & Kjaer, 2015). Manufacturing activities were transferred in order to increase productivity across firms and countries since an increase in productivity is often associated with competitiveness. For instance, Porter (1990) has extensively used the concept of productivity to explain the competitive advantage of nations.

The rapid growth of manufactured exports has produced dramatic increases in the incomes of the Newly Industrialised Economies (NIEs) of East Asia, especially the

"Four Tigers" (South Korea, Taiwan, Hong Kong, and Singapore) (Smith, 1991; Stiglitz, 1996; Mody, 1999; Hernandez, 2005; Weiss, 2005). This suggests that at the heart of industrial policy is the achievement of industrial competitiveness. According to Amsden (1991), industrialisation is viewed as a process where the industry has become globally competitive in the production of manufactured goods. The firms in the manufacturing industry must sustain their competitiveness over time through upgrading (Shafaeddin, 2004).

Modern debates on industrial policy were started in the late 1970s with the rise of Japan (Chang, 2009a). However, even before the documented industrial policy successes of East Asian countries in the 19th and early 20th centuries; all of today's rich countries except for the Netherlands and, before World War I, Switzerland, practiced significant degrees of protectionism for substantial periods (Chang, 2002, 2009a, 2011; ECA, 2016). Moving beyond the late-20th century East Asian experiences, a number of European economies such as Finland, Norway and Austria pursued selective industrial policy with success (Katzenstein, 1985; Chang, 2002, ECA, 2016).

Subsequent to attaining greater development, these countries promoted free trade agreements, bilateral investment treaties and engagements through the World Trade Organisation (WTO) (Katzenstein, 1985; Chang, 2002; ECA, 2016). In South Africa, the decline of the clothing and textile industry had been attributed to the inflow of imports from other countries, mainly China and India (Dunne & Edwards, 2006; Vlok, 2006).

The aim of this study is to investigate whether the clothing and textile industry is globally competitive; to examine and explain why industrial policy measures have not generated expected results, and to reflect on possible recommendations for industrial policy measures that will make the clothing and textile industry globally competitive. Although clothing and textile industries are two distinct industries, they are normally treated as strongly linked for industrial policy purposes and this study will use the same approach.

1.2 BACKGROUND TO THE PROBLEM

South Africa's industrial policy measures were protective in nature before the 1990s under the Nationalist Party (NP) government, and many of these measures were liberalised after 1994 under the Government of National Unity (GNU) and African National Congress (ANC) administrations (Rangasamy & Harmse, 2003), while a few of the measures remain protective to protect vulnerable industries (Fedderke & Vaze, 2001; Mabugu & Chitiga, 2009).

Based on the performance of the clothing and textile industries, it can be argued that protective measures in the period before 1990 were not informed by the long term needs of the industry (Ashman & Newman, 2013; TIPS, 2016). Dunne & Edwards (2006) argue that trade liberalisation of the period since 1994 may have prematurely exposed the domestic infant industries to global competition and increased import penetration in the labour-intensive sectors that included the clothing and textile industry (Culpeper, 2005; Van der Westhuizen, 2006; Sundaram, Schwank & von Arnim, 2011; Van Zyl & Matswalela, 2016).

1.2.1 Industrial policies of the period before 1994

Before the 1990s South Africa's industrial policies were protective in approach through tariffs and non-tariff barriers (Rangasamy & Harmse, 2003, 2005). This protection was not based on the long term needs of the industry but was focused on the multiple objectives and the strategic concerns of the ruling National Party (NP) government, particularly the need to promote Afrikaner capital (Ashman & Newman, 2013; TIPS, 2016).

This objective of the Nationalist government was achieved through the creation of the National Finance Corporation (NFC) in 1949 which promoted interests in mining (Ashman & Newman, 2013). The NFC became an instrument used to channel short-term funds into the hands of government bodies (Ashman, Fine & Newman, 2012). The co-existence of 'English' mining capital and the rise of Afrikaner nationalism inevitably reflected an uneasy compromise between English

mining capital and Afrikaner capital, with a mutual interest in generating and sharing the surplus from mining as well as in the exploitation of black (migrant) labour on mines, and more generally on farms (Ashman, Fine & Newman, 2012).

Some of the strategic concerns of the NP Government included defence and liquid fuels; resources extraction and processing industries; building up of Afrikaner capital; job creation for Afrikaner workers; military objectives; evasion of international sanctions; and the satisfaction of the aspirations of the elite consumers to imitate the consumption patterns of the most advanced economies (Chang, 1998; Ashman, Fine & Newman, 2012; Ashman & Newman, 2013).

These multiple objectives and strategic concerns which were formally pursued through industrial policy undermined the viability of policies in the long term (Chang, 1998). Barnes, Kaplinsky and Morris (2003) observe that the most important characteristic of South Africa's industrial policy in the 1960s, 1970s and 1980s was the promotion of selected industries including the clothing and textile industry. The clothing and textile industry was protected through import substitution which focused exclusively on the domestic market (Rangasamy & Harmse, 2005; Vlok, 2006).

This protection of the clothing and textile industry allowed inefficiencies to go unchecked and resulted in a failure to become internationally competitive; a failure to develop export capacity; and a concentration of production in low value-added products (Chang, 1998; Vlok, 2006). Furthermore, the protection of the period before 1990 led to two unintended consequences (Salinger, Bhorat, Flaherty & Keswell, 1999). Firstly, it made domestically produced and imported goods more expensive in South Africa than they would have been in the absence of these policies. Secondly, it made South African exports more expensive on international markets, because of the higher cost of inputs (Salinger et al., 1999). During the early 1980s, the large number of protective tariffs and non-tariff barriers became firm-specific as the protective regime became more complex, and this led to two major changes (Barnes et al., 2003). Firstly, attempts were made to improve the protective

regime by replacing non-tariff barriers with tariffs which were simplified. Secondly, exports were promoted through a subsidy scheme based on the degree of value added (Barnes et al., 2003).

These policy measures had a negative impact on South Africa's manufacturing sector whose performance has subsequently not been satisfactory with regard to either productivity or employment (Breitenbach, 2007). Growth of the manufacturing sector in the 1990s was slightly higher than in the 1980s but was well below that of developed countries, the world, and the developing economies (Kaplan, 2003a). This decline in growth of the manufacturing sector of the 1990s may have been a result of earlier protection measures.

Protection during the period from 1925 to 1975 created a capital-intensive production structure (Moritz, 1994); while for the period from 1975 to 1984, growth of Gross Domestic Product (GDP) per capita stagnated at around zero per cent and was negative from 1990 to 1993 (Van Dijk, 2002). By the mid-1990s, South Africa was faced with a need for substantial industrial restructuring in the clothing and textile industry (Nattrass, 1994a; Flatters & Stern, 2008).

1.2.2 Industrial policies for the period 1994 – 2008

The 1990s brought changes in the global policy environment through the World Trade Organisation's (WTO) trade liberalisation policies that reduced 'policy space' for developing economies (Weiss, 2005; ECA, 2016). South Africa's approach to industrial policy also changed in line with WTO requirements from protectionism to liberalism (Roberts, 2006; Shafaeddin, 2006). There was also a fundamental change in the orientation of industrial policy in South Africa – "from a policy of import substitution to one that sought to integrate the South African economy into the global economy" (Valodia & Velia, 2004, p. 12).

The changes in the global policy environment created new opportunities as well as challenges for the developing world (Weiss, 2005; ul-Haque, 2007). These included the rapid flow of knowledge; large capital movements; new emerging patterns of

international trade, the International Monetary Fund (IMF) and the WTO rules and disciplines; and the rise of bilateral/regional trade agreements between countries and regions (ul-Haque, 2007).

In 1994, the ANC-led Government of National Unity (GNU) took over from the National Party government and implemented new industrial policy measures. The first policy document of the ANC-led GNU was the Reconstruction and Development Programme (RDP) in 1994. The RDP emphasised the centrality of the planning process in both meeting the country's basic needs and empowering the country to drive its own development process (Saul, 2001).

The RDP was ambitious, pro-poor, and aimed at developing human resources and building the economy, among other aims. It was premised on the view that education and training should not only happen in schools and colleges, but also in all areas of society such as homes, workplaces, public works and youth programmes, and in rural areas (RDP, 1994). The RDP document acknowledged the existence of racial and gender-based inequalities in ownership, employment and skills, and proposed measures to address these disparities. These measures included linking reconstruction and development; industry, trade and commerce; resource-based industries; upgrading infrastructure; labour and workers' rights, as well as efforts aimed at addressing the challenges in Southern Africa (RDP, 1994). However, many changes were made to the original RDP document, substantially altering its original intentions, the changes being described by Adelzadeh and Padayachee (1994, p. 2) as "a very significant compromise to the neoliberal 'trickle-down' economic policy preferences of the old regime".

The Growth, Employment and Redistribution (GEAR) policy was introduced in 1996 and was premised on the neoliberal structural adjustment policies of the IMF and the WB which formed part of the structures that came to be known as the "Washington Consensus" (Bond, 2000; Padayachee, 2005; Sundaram et al., 2011; Stiglitz, Lin & Monga, 2013; TIPS, 2016; Ketels, 2017). According to Williamson (1990) who had originally coined the term 'Washington Consensus', the ten

principles of the Washington Consensus included fiscal discipline; reorientation of public expenditure; lower marginal tax rates and broadening the tax base; interest rate liberalisation; unified and competitive exchange rates; trade liberalisation; liberalisation of Foreign Direct Investment (FDI) inflows; privatisation; deregulation; and secure property rights.

GEAR was a macroeconomic strategy that was expected to transform South Africa into a "competitive outward-oriented economy" (Chang, 1998; Weeks, 2000; Edwards & Golub, 2002; Padayachee, 2007). Some of the attributes inherent in neoliberal policies which were found in the GEAR document include faster fiscal deficit reduction, counter-inflation, gradual relaxation of exchange controls, reduction in tariffs, replacing quantitative restrictions, enhanced industrial innovation support, introduction of an accelerated depreciation scheme, and a tax allowance programme (GEAR, 1996).

GEAR proved to be inappropriate in that the non-negotiable attitude embedded within the document undermined the importance of policy coordination in industrial development (Chang, 1998; Weeks, 2000; Mhone, 2003; Padayachee, 2007). Neoliberal policies and their restrictive conditions which characterised GEAR were not suitable for a developing country with high levels of poverty and inequality as South Africa was. GEAR was not appropriate for South Africa's prevailing economic conditions at that time, mainly because of its "implicit assumption that monetary, and to a somewhat lesser extent fiscal, policy objectives were 'non-negotiable', and that other policies will have to be subject to the constraints set by such objectives" (Chang, 1998, p. 65).

GEAR did not have the objective of reducing inequality as a policy goal but emphasised decreasing unemployment (Weeks, 2000), stopping short of stating that its goal was not necessarily to reduce inequality. A careful reading of the GEAR document suggests that its recommended growth scenario implied an increase in inequality because it recommended growth rates where the share going to

employees would likely reduce and that employment growth would be at wages below the prevailing market average (Weeks, 2000).

Mhone (2003, pp. 30-31) argues that by predicating its hopes on economic liberalisation and outward orientation, while having an ambiguous development programme that is constrained by the very policy framework that has been adopted in the form of GEAR, it can be expected that South Africa would be unlikely to succeed in reviving its economy. Even state bureaucrats admitted that "an orthodox macroeconomic policy was central to GEAR" (Padayachee, 2005, p. 556). The implementation of GEAR led to the removal in 1997 of the General Export Incentives Schemes (GEIS) measures which were aimed at assisting certain strategic sectors. The GEIS measures were considered to be inconsistent with the requirements of General Agreement on Trade and Tariffs (GATT) and the WTO, but a special dispensation was granted to sensitive products such as the textiles and vehicle sectors (Mabugu & Chitiga, 2009).

Other sectors, including the clothing and textile industry, continued to be protected from foreign competition by the ANC government even after 1994 (Chang, 1998; Roberts, 2006). Despite reductions in overall protection and tariff protection, when measured using scheduled rates, they remained high in the wearing apparel, tobacco and footwear sectors, with average nominal and effective protection exceeding 20% and 50% respectively for the period 1993 to 2002 (Cassim, Onyango & Van Seventer, 2002; Dunne & Edwards, 2006).

Trade liberalisation has the potential to impact on firms in different ways. For instance, lower tariffs have the potential to increase foreign competition in the domestic market while also potentially benefiting from lower input costs and allowing them to compete more effectively (Valodia & Velia, 2004). In South Africa reductions in overall protection led to increases in import penetration in the labour-intensive sectors of textiles, wearing apparel and footwear, and rises in export-oriented products concentrated in many of the chemical and metal production sectors (Dunne & Edwards, 2006).

Increased trade led to growth in sectors in which South Africa had a comparative advantage, mainly due to its resources base and the historical support of government (Roberts, 2006). South Africa's trade liberalisation since 1994 prematurely exposed the clothing and textile industry to global competition (Dunne & Edwards, 2006). Since 2002, the appreciation of the Rand and the substantial liberalisation of trade over the decade since WTO accession have made possible a rapid and sustained surge in imports, particularly from China and India (Dunne & Edwards, 2006; Vlok, 2006).

This rapid and sustained surge in imports resulted in an unprecedented crisis in the clothing and textile industry, characterised by large-scale loss of employment (Vlok, 2006). While trade liberalisation is a necessary condition in changing the relative economic experience of firms and lowers the anti-export bias, it is not a sufficient condition to develop a broad-based and internationally competitive manufacturing industry (Roberts, 2006).

In 2004, the South African government introduced the Accelerated and Shared Growth Initiative for South Africa (ASGISA) which proposed sector strategies aimed at promoting private sector investment. The clothing and textile industry was amongst the priority sectors which were less advanced in development and were identified for support (ASGISA, 2004). To support ASGISA, the government introduced the Joint Initiative on Priority Skills Acquisition (JIPSA) in 2006 which focused on identifying and addressing the skill challenges in order to meet the objectives of ASGISA.

The National Industrial Policy Framework (**the dti**, 2007), was introduced in 2007. A review of the country's industrial policy for the period from 1994 to 2008 by Rustomjee and Hanival (2010) indicates that three of the four manufacturing and tradable services sectors, such as automotive, resource-processing and tourism which government had actively supported since 1994 have become leading sectors.

The fourth sector, the clothing and textile industry, had been under severe strain from intense global competition, particularly from China and India (Dunne & Edwards, 2006; Vlok, 2006; Rustomjee & Hanival, 2010). The challenge faced by the clothing and textile industry may be an indication that the industry has not achieved global competitiveness, despite a range of industrial policy measures.

1.2.3 Industrial policies introduced in 2010

The South African government introduced the Industrial Policy Action Plan (IPAP) and the New Growth Path (NGP) in 2010. IPAP (2010) aims to scale-up and broaden interventions in the existing NIPF (**the dti**, 2007) sectors which included the clothing and textile industry. The NGP (2010) is premised on the consensus that creating decent work, reducing inequality and defeating poverty can only happen through a new growth path founded on a restructuring of the South African economy to improve its performance in terms of labour absorption, as well as the composition and rate of growth (NGP, 2010).

1.3 PROBLEM STATEMENT

The clothing and textile industry in South Africa has long been protected against foreign competition (Chang, 1998; Barnes et al., 2003; Roberts, 2006). Despite this protection, some firms in the industry are closing while many others continue to perform poorly in both production and employment (Breitenbach, 2007; Flatters & Stern, 2008). The poor performance in the industry is often attributed to a rapid and sustained surge in imports, particularly from China and India (Dunne & Edwards, 2006; Vlok, 2006). This raises the question of whether the past and present industrial policy measures adopted are suitable for making the clothing and textile industry globally competitive.

The protection against foreign competition has allowed inefficiencies to go unchecked, resulted in failure to develop export capacity, and contributed to the concentration of production in low value-added products (Chang, 1998; Rangasamy & Harmse, 2003, 2005; Roberts, 2006; Vlok, 2006). Barnes et al., (2003) suggests

that the ANC government lacks the capacity to define and implement selective industrial policies (Nattrass, 1994, 2013; Blumenfeld, 1996; Chang, 1996; Bond, 2000; Luiz, 2002; Mhone, 2003; Kaplan, 2007) that could make the industry globally competitive. This may be true to some extent, because the ANC government was relatively new, having started to govern in the GNU with the NP in 1994 before becoming the ruling party in 1998. Nattrass (1994) reminds us that the "Freedom Charter" (adopted by the ANC in 1956) was the most important statement of the ANC's pre-1990 economic intentions.

In the Freedom Charter, "redistribution was an unmistakable theme, yet it was far from being an operational blueprint grounded upon or compatible with only one mechanism or form of economic organisation" (Nattrass, 1994, p. 344). While the Freedom Charter demanded that mines, banks and monopoly industry be nationalised, the responses to the uproar were uncoordinated, often contradictory and generally unimpressive (Nattrass, 1994). "Like the Freedom Charter, the 1990 Discussion Document on Economic Policy (DDEP) stressed redistribution and state intervention while remaining ambiguous in key areas" (Nattrass, 1994, p. 346).

According to Kaplan (2007, pp. 98-99), in South Africa "industrial policy was never consolidated under one arm of the state but remained scattered". Industrial policy was also overloaded and expected to address too many strategic concerns, including regional development; racial transformation in hiring; skills development; moving up the value chain; promoting labour-intensive growth; and BEE (Nattrass, 2013, TIPS, 2016).

Luiz (2002) argues that the implementation of RDP and its replacement with GEAR illustrate misplaced action by the ANC government. "The RDP assumed the existence of state capacity, instead of prioritising the need to build this capacity" (Luiz, 2002, p. 596; Mhone, 2003; Bond, 2000). Blumenfeld (1996) identifies reasons for the apparent failure of the RDP as being conceptual uncertainties; funding; institutional uncertainties; ideological struggles; and implementation failures amongst others.

Luiz (2002) observes that although funding is often cited as one of the failures for RDP, in some cases it is underspending that contributed to the failure of RDP. According to Luiz (2002, p. 595), "of the R2.5 billion allocated to the fund in its first year, only R1.1 billion was actually transferred to the relevant spending departments, and not all of this was actually spent". The replacement of RDP with GEAR further illustrates inappropriate measures by the ANC government (Luiz, 2002).

The replacement of RDP with GEAR meant that South Africa was replacing state-led development with market-regulated development. Chang (1996, p. 6) emphasises the enormity of the scale of industrial restructuring required by South Africa during the following decade, and that there are many reasons to believe that such large scale industrial restructuring is unlikely to be achieved by market forces alone.

Understanding the nature of the challenges facing the clothing and textile industry is a precondition to reflecting on alternative policy measures that could make the industry globally competitive.

1.4 PURPOSE STATEMENT

The purpose of this study is to investigate whether the clothing and textile firms in South Africa are globally competitive, to examine and explain why industrial policy measures have not generated the expected results, and to reflect on possible recommendations for industrial policy measures that will make the clothing and textile industry globally competitive. The investigation focuses on the period from 1994 to 2013, and examines the performance of post-apartheid South Africa's industrial policy measures.

This study is exploratory in nature and aims to provide an explanation of South Africa's industrial policy measures, the competitiveness of the clothing and textile industry and to identify key success factors that led to the successful industrialisation of developed economies, in particular the developmental states of

East Asia. The investigations into whether the clothing and textile firms are globally competitive, examining and explaining why industrial policy measures have not generated expected results, are complicated by the debates on what constitutes competitiveness, and also by the different approaches to industrial policy.

This study explores the various theories of 'competitiveness' and uses some elements in these theories to explain the global competitiveness of the clothing and textile industry. The study moves from the premise of defining competitiveness as the sum of competitive pricing; use of existing technology; productive workers; diversified production; profitability of firms; and reinvestment of some of the profits into the firms, and argues for a 'coordinated system' where the market, government and firms each have a role to play in improving economic conditions in a country (Shafaeddin, 2004).

1.5 RESEARCH QUESTIONS

According to Maree and Westhuizen (2007), the research question is a reformulation of the statement of purpose so that it forms a question. Good research questions also refer to the relationships among a small number of variables (Neuman, 2006). The main question in this research report is: "How can South Africa make the clothing and textile industry globally competitive"? The sub-questions contributing towards answering the main questions are informed by the concept of "competitiveness" as defined above and which implies the sum of competitive pricing, use of existing technology, productive workers and profitability of firms.

The sub-questions contributing towards answering the main question are:

- What are the current prices of products produced by local firms? (Competitive Pricing)
  (*Selling price per unit of output)*
  (Compare this with the price of global competitors)
- How productive are workers employed by local firms? (Productive Workers)

(Calculate the average output per worker per hour)

(Compare with global competitors' norms and practices)

- What degree of profitability is achieved by the firms? (Profitability)

  (Comparative income statements, balance sheets, and cash flow statements, figures for the previous three years)

  (Find out if the firms have been consistently making operating profits)
- Which kinds/types/models of machines are currently being used by local firms? *(*Technology)

  (The most common latest machinery and equipment currently being used by firms)

  (Find out if the firms are using up-to-date state-of-the-art machinery).
- Which industrial policy measures could be appropriate to make the clothing and textiles industry globally competitive?

1.6 SIGNIFICANCE OF THE STUDY

The majority of studies in industrial policy and the outcome, which is competitiveness, do not define what competitiveness means or what constitutes competitiveness. These studies refer to competitiveness as if it is common knowledge and assume that its components are known. Studies that attempt to define competitiveness do so in a business management context and use concepts such as corporate strategy and marketing strategy. This study approaches competitiveness from a microeconomic point of view, 'the price of a product', which is also the same as an accounting point of view, with its components being the actual cost of production and how these costs can be reduced to achieve price competitiveness and profit.

This study investigates whether clothing and textile firms in South Africa are globally competitive or not. The study explains the concept of industrial policy and also looks into how industrial policy was used in South Africa; explains industrial policy measures used in the Newly Industrialised Countries (NICs) of East Asia with the aim of identifying lessons that South Africa could learn from the

experiences of these countries; explores various theories of the evolution of the concept of ‘competitiveness’; and formulates proposed industrial policy measures.

The study further contributes to industrial policy debates by making industrial policy recommendations that may contribute in making the clothing and textile industry in South Africa globally competitive. Stakeholders who will benefit from the study include government policy makers and implementing agencies because the study will improve their understanding of industrial policy and they may take cognisance of the industrial policy measures recommended in this study. The study will produce insights that can assist owners of firms and their representatives to understand the importance of clusters and also consider growth identification strategies.

Employees and their representatives will be provided with a better understanding of the importance of increasing productivity and the role they are supposed to play in increasing productivity. Likewise, the Textile Federation will derive insights into the importance of technology and why it is necessary to narrow the gap between themselves and firms in developed countries. The study recommends industrial policy measures that will lead to a reduction in the cost of production and improvement in the quality of products. As a result of these recommendations, consumers will be able to buy quality products at lower prices from the firms.

1.7 STRUCTURE OF THE RESEARCH THESIS

While Chapter One introduced the study and provided the background, Chapter Two is the literature review and explores concepts and theories related to industrial policy and competitiveness. The link between industrial policy and competitiveness is explained.

Chapter Three explains the methodology that is used in this study. The study is qualitative due to the nature of the object of this study which is industrial policy.

There is evidence to suggest that there is methodological coherence throughout the chapter.

Chapter Four provides data collected from interviews with the relevant stakeholders that included employers, employees, workers' representatives, government policy makers, implementing agencies, and a federation.

Chapter Five provides discussion and analysis in which explanations of linkages in literature, industrial policy documents and data collected from interviews are provided. Throughout the discussions in the study, there are illustrations of the lessons that South Africa could learn from the East Asian economies.

Chapter Six presents conclusions, policy implications and recommendations. The chapter makes recommendations that are based on the findings of this research. The chapter concludes with recommending issues for further studies.

CHAPTER TWO
LITERATURE REVIEW: INDUSTRIAL POLICY IN SOUTH AFRICA AND THE CONCEPT OF 'COMPETITIVENESS'

2.1 INTRODUCTION

This chapter focuses on literature review. Literature review in this study revolves around the two concepts of 'industrial policy' and 'competitiveness'. The purpose of undertaking a literature review is to identify information that relates to the conceptual focus of the research problem (Marshall & Rossman, 1989; Fraenkel & Wallen, 1990; Wiersma, 1995; Newman, 2006; Badenhorst, 2007; Du Plooy, 2009). Before addressing any question, it is logical to establish what is already known about the question and review the accumulated knowledge about a question (Neuman, 2006). Literature review provides the background and context of the research problem and reflects the need for the research (Wiersma, 1995).

The limitations of existing knowledge are discussed and current research becomes clear and visible to the reader (Badenhorst, 2007). Literature review indicates that the existing stock of knowledge does not adequately address the problem raised in the question and should demonstrate that the researcher is knowledgeable about the area of research (Wiersma, 1995). It also updates the reader about the results of other studies that are closely related to the current research problem (Fraenkel & Wallen, 1990). It shows how the current research is linked with the larger ongoing dialogue in the literature about the topic, filling in gaps and extending prior studies (Marshall and Rossman, 1989).

The concept of 'industrial policy' is at the core of this study. Policy analysis is a "process of multidisciplinary inquiry designed to create, critically assess, and communicate information that is useful in understanding and improving policies" (Dunn, 2008, p. 1). Its multidisciplinary nature implies that policy problems are real world problems that come in complex bundles, such as, amongst others, political, social, economic, administrative, legal, or ethical (Dunn, 2008). Inquiry refers to a

process of examining, probing, investigating or searching for solutions to practical problems.

The purpose of industrial policy is to promote the competitiveness of selected priority industries in a country and to thereby contribute to industrialisation. This chapter explores the concept of industrial policy and explains various definitions of industrial policy, reviews South Africa's trade and industrial policies, explores the theoretical foundations of the concept of competitiveness and associated theories of competitiveness, explains the usefulness of these theories in this study, and provides a theoretical framework for this research thesis.

2.2 INDUSTRIAL POLICY, PRODUCTIVITY IN MANUFACTURING AND COMPETITIVENESS

There are strong links between the concepts of 'industrial policy' and 'competitiveness'. Hanekom, Matoo and English (1992) define "industrial policy" as being government efforts to alter industrial structure to promote productivity-based growth. Industrialisation is normally interpreted as a process whereby the share of industry in general, and of manufacturing in particular, in total economic activity is increased (Weiss, 2002; Szirmai, 2009; Zalk, 2014; UNIDO, 2015).

There are several ways in which productivity can be increased. Some improvement in efficiency or any reduction in the cost of production factors notably labour (salaries and wages), capital (interest), entrepreneur (profit), land/natural resources (rent), and utilities (electricity and water costs) will make additional resources available for producing additional units of output, thereby increasing productivity. Power (2008, p. 7) provides three reasons why industrialisation should be favoured as a strategic development objective. Firstly, industry is characterised by rapid technological change and productivity growth. In many cases, the rapid technological change leads to productivity growth in a cause-and-effect relationship. Secondly, there are important technological and learning spillovers in and from industry which change overtime and accelerate the process of production. Thirdly, the terms of trade have historically turned against commodities and in

favour of manufactures (Power, 2008; Stiglitz et al., 2013; Altenburg, Kleinz & Lütkenhorst, 2016; Dietsche, 2017; Ketels, 2017).

In developing countries, a substantial part of growth arises from closing the technology (or knowledge) gap between themselves and those at the frontier and within any country, since there is enormous scope for productivity improvement simply by closing the gap between best practice and average practice (Fagerberg, 1988; Stiglitz et al., 2013; Dietsche, 2017; Ketels, 2017). The logic of a cause-and-effect relationship could be used in explaining how the changes in other factors of production such as labour could lead to productivity increase. Improving skills development and training is likely to increase the productivity of labour. Surplus on wages and salaries coming from an increase in productivity of labour, as well as surplus on time as a result of technology that speeds up the process of production, can be used to produce additional units of output.

According to Porter (1990), nations are said to have achieved competitiveness if they increase their productivity overall (Krugman, 1994; Dickerson, 1995; Salinger et al., 1999; Porter, 2004). Amsden (1991) views industrialisation as a process where the industry has become globally competitive in the production of manufactured goods. Therefore, while Porter (1990) defines competitiveness as the nation's overall increase in productivity, Amsden (1991) goes a step further to explain that industrialisation, which is achieved through industrial policy, is an indication that global competitiveness in the production of manufactured goods has been achieved. It is important to address the questions of why the manufacturing sector is a target of industrial policy, and why it is viewed as a benchmark for economic development and industrialisation.

Regarding capital accumulation as an engine of growth, Stiglitz (1996, p. 153) observes that, "Once one identifies the engine of growth, one tries to make the engine stronger". There are four reasons why industrial policy should focus on manufacturing and these reasons emanate from manufacturing as an 'engine of growth' and as being 'central to technological change' (Kaplan, 2007). Firstly, all

development “successes” are associated with manufacturing growth. Secondly, manufacturing enjoys stronger dynamic economies of scale. Thirdly, manufacturing improves profitability throughout the economy (Kaplan, 2007). Manufacturing tends to be the strongest driver of paid employment and also diversifying towards more manufacturing tends to reduce the macroeconomic risks associated with dependence on primary production (ECA, 2016). Fourthly, manufacturing is a site of major technological innovation. Focusing on late developers, Amsden (2001) puts firms and their technological capacity at the centre of development.

This is supported by Lall’s (2003) argument that industrialisation successes in LDCs depend essentially on how they are able to manage the process of mastering, adapting and improving upon existing technologies. The importance of technology in manufacturing provides the rationale for government intervention to support manufacturing growth. The reason for government intervention is that among the ‘commodities’ which the market is imperfect in providing are those associated with knowledge and information which include learning and technology (Stiglitz, 1989, 1996; Stiglitz et al., 2013). Stiglitz (1996, p. 158) argues that “private markets have inadequate incentives for investing in the production and acquisition of technology, largely because it is difficult to appropriate returns to knowledge”.

Developing countries typically operate at a level of technology far below that of industrial economies. Therefore, development is, to a large extent, the process of acquiring and adapting existing technologies (Stiglitz, 1996; Stiglitz et al., 2013). Technology encourages and promotes competition among products and forces entrepreneurs to continually search for what products could and should be produced, how they should be produced, and how technology should be used in their production process (Stiglitz, 1989). According to Lin and Monga (2010), incentive-creating government interventions can be justified, particularly those that reduce entrepreneurial search costs through the provision of risk-reducing information, the creation of hard and soft infrastructure in line with new capital,

skill requirements, and direct support to risk-taking entrepreneurs to reward their first-mover role.

There is a positive correlation between diversification and industry performance (Prahalad & Hamel, 1990; Barnley, 1991; Imbs & Wacziarg, 2003). Diversification is often preceded by innovation, normally as a result of information, knowledge and technology from entrepreneurs. Entrepreneurship and entrepreneurship development are crucial to the industrialisation of economies. Development and technological innovations make entrepreneurship development an ongoing process.

Investment, incentives, institutions, organisational development, infrastructure, skilled labour and technology are important in establishing supply capacity (Shafaeddin, 1998; 2004). These factors were found to be important for industrialisation in both Great Britain and the United States (Shafaeddin, 1998). Therefore, if the right industrial policy measures are implemented correctly, they should lead to industrialisation, and this will mean that global competitiveness has been achieved and that firms will export value-added manufactures.

Assuming that the quality of the product remains the same across countries, the reduction in the cost of production or the introduction of new technology and/or innovation is likely to reduce the price of a product relative to competitors, making the industry or nation globally competitive. The explanations above inform competitiveness in this study in response to the question: “How can South Africa make the clothing and textile industry globally competitive”?

This study moves from the premise of defining ‘competitiveness’ in the clothing and textile industry as the sum of competitive pricing; use of existing technology; productive workers; diversified production; profitability of the firms; and reinvestment of some of the profits into the firms. If the clothing and textile firms achieve competitive prices, use existing technology, employ productive workers, diversify production, make profits, and reinvest some of the profits; those firms in the industry would have achieved global competitiveness.

Ketels (2017) argues that the concept of competitiveness has both an output component, i.e. the level of productivity and ultimately prosperity reached, which is the competitiveness that Krugman (1994) refers to, and an input component, i.e. the set of factors (of production) that causally drives these outcomes. It is the latter that this study focuses on because it is "particularly important for policy since it defines where changes have to be made in order to achieve sustainable improvements in prosperity outcomes" (Ketels, 2017, p. 5).

According to Ketels (2017), the competitiveness approach focuses on understanding the role of different aspects of microeconomic competitiveness and proposes a wide range of business environment conditions as being relevant, ranging from the availability and quality of input factors such as skills, knowledge, capital and infrastructure to the openness of markets and the costs imposed by rules and regulations. Porter's (1990) Diamond Framework of Competitiveness provides a conceptual framework to combine these different factors and emphasises the interplay between them.

The Diamond Framework of Competitiveness comprises Factor Conditions (land, labour and capital, including human capital), Demand Conditions, Related and Supportive Industries, and Firm Strategy, Structure and Rivalry. In economic literature, 'competitiveness' has often been associated with international trade (i.e. international trade competitiveness). In this study, the concept of 'competitiveness' is used in an international trade context and with the aim of answering the following question: 'Why do South Africans prefer to import clothing and textile from other countries when these are locally produced and available'?

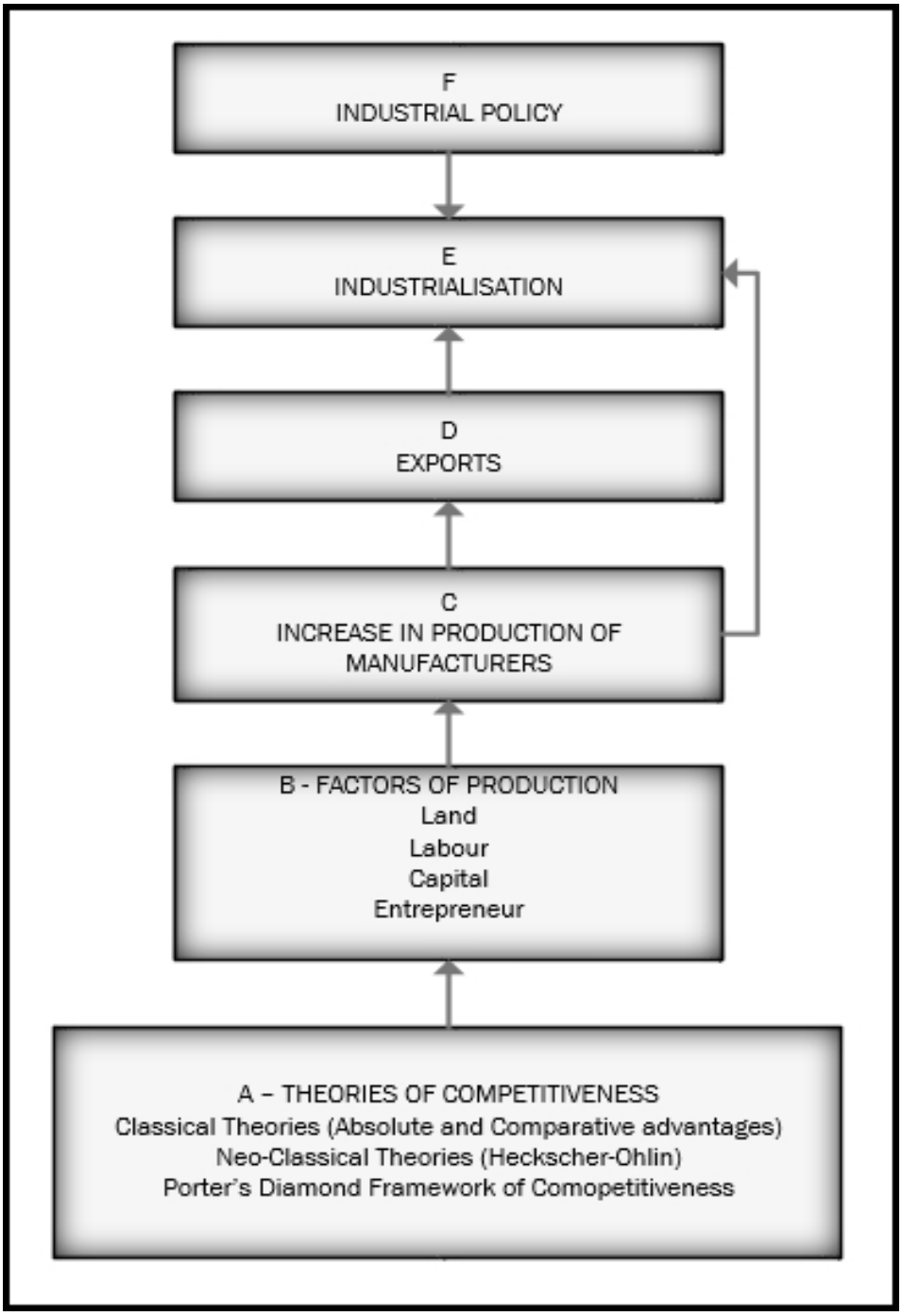
It is in this context that the theories of competitiveness such as Absolute and Comparative advantages, the Leontief Paradox, Vanek's Natural Resources, Webster's Factor Content Approach, Heckscher-Ohlin, Porter's Diamond Framework of Competitiveness and New Economic Geography become relevant in explaining the importance of the factors of production, their costs and efficiency, especially in relation to labour, capital, entrepreneurship and land. Figure 1 below

explains the interrelationships between Theories of Competitiveness, Factors of Production, Production of Manufactures, Industrialisation and Industrial Policy.

In Figure 1 below, starting at Box F, industrial policy is described by Chang (2004) as the idea that some activities are more desirable than others and therefore deserve government support. Suitable and sound industrial policy measures which are properly implemented are supposed to lead to industrialisation at Box E (i.e. a point where the industry has become globally competitive in the production of manufactured goods (Amsden, 1991)). Whitfield et al., (2015, p. 17) argue that "in order for a government to successfully implement industrial policy, three conditions have to exist: mutual interests, pockets of efficiency, and learning for productivity".

In Box A, according to the Heckscher-Ohlin theory, a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factors of production (as mentioned in Box B) and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factors (those mentioned in Box B) (Salvatore, 1995, pp. 118-119). In other words, relatively abundant/scarce and cheap/expensive factors of production determine both exports (at Box D) and imports of a country.

Figure 1: The Links between Industrial Policy, Manufacturing and Competitiveness



Source: Own, 2017

Theories of competitiveness help to identify the sources of competitiveness, and these sources of competitiveness inform the targets and forms of industrial policy measures that must be implemented. It is thus imperative that industrial policy measures are focused on these sources of competitiveness if industrialisation and

global competitiveness are to be achieved. Therefore, the theoretical framework of this research thesis will be informed by the theories of competitiveness and literature on industrial policy.

2.3 DEFINITIONS OF INDUSTRIAL POLICY

Industrial policy refers to the role of government in promoting industrial development beyond what would be achieved without such intervention (Lall, 1996). This study concludes that industrial policy measures are informed by government's overall strategy aimed at changing the industrial structure that includes the mining, agriculture, manufacturing, financial and other sectors.

Traditional debates on industrial policy have been characterised by what the role of government should be and the extent to which government intervention in the economy should be permitted. This study moves beyond arguments of whether the government should intervene or not, and the extent of government intervention, and focuses on what industrial policy measures are relevant to change the industrial structure from being in favour of minerals, the so-called mineral-energy-complex (MEC), towards the other productive sectors of the economy such as manufacturing, and specifically the clothing and textile industry.

The Handbook of the World Bank prescribes a working definition of "industrial policy" as government efforts to alter industrial structure to promote productivity-based growth (Hoekman et al., 1992). The definition is useful in that it defines industrial policy as being aimed at the economy-wide factor productivity growth rather than merely changing the structure for industrial output (Hoekman et al., 1992). The definition also tacitly assumes that the objective of industrial policy should be to promote growth that results from increased factor productivity. In other words, increased factor productivity should be achieved before economic growth is achieved.

The concept of productivity has been used extensively by Porter (1990) and Krugman (1994) to explain the competitive advantage of nations. Nations are said

to have achieved competitiveness if they increase their overall productivity (Porter, 1990). This implies that the competitiveness of a particular nation emanates from the factors that increased productivity in the following sequence: (A) factors that increase productivity; (B) Increased Productivity; (C) Increased Growth and (D) Competitive Nation as depicted in Figure 2 below.

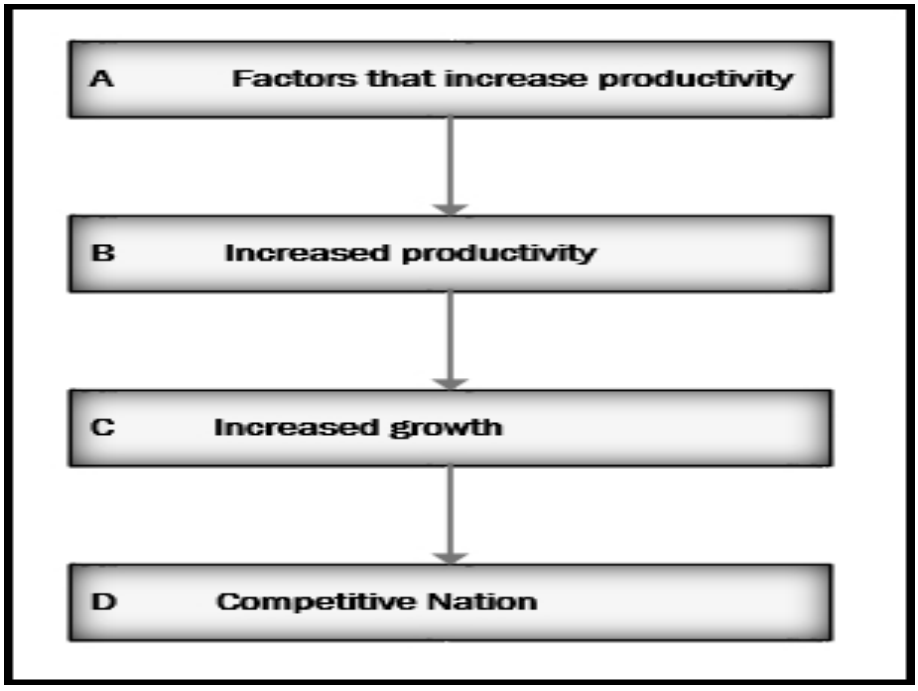
As presented in Figure 2, a competitive country will have productive factors of production and increase overall productivity which will lead to increased growth. However, in this study, increased productivity is the outcome of competitiveness. If workers are trained, they become skilled, competitive and productive and will increase productivity, and such increased productivity will lead to economic growth. Therefore, high productivity is the outcome of competitiveness of the factors of production and not the cause of competitiveness. This logic is consistent with the definition of competitiveness which is competitive pricing, productive labour, profitability and latest technology.

The World Bank assumes that the purpose of industrial policy should be to make targeted industries globally competitive. In this context, industrial policy could be defined as government intervention that is "aimed at particular industries, with firms as their components, to achieve outcomes that are perceived by the State to be efficient for the economy as a whole" (Chang, 1996, p. 60). Chang's definition of industrial policy assumes that the purpose of industrial policy is overall efficiency in the economy, which is also a competitive element. The definition also brings another important dimension in acknowledging that government actions are not always objective and rational.

Industrial policy, like all other policies, is always influenced by the articulation of vested interests and sometimes leads to rent-seeking when forces with power influence the actions of government in their favour, even if such actions are not what is desirable to address the problem (Haberler, 1950; Krueger, 1978). Chang's definition (1996) also contains three key elements that provide important context for policy analysis as identified by Memis and Montes (2008). Firstly, the definition

provides room that the State's 'perception' justifying the intervention in a specific sector could be erroneous. Secondly, the use of the concept 'industrial' implies that the objective of efficiency takes precedence over equity. This perception of industrial policy and its analysis tends to underestimate the role that equity plays in encouraging industrialisation. Thirdly, when there is conflict between the achievement of efficiency of a particular sector and the achievement of efficiency of the economy as a whole, the achievement of efficiency in the whole economy should be pursued (Memis & Montes, 2008). This suggests that industrial policy should pursue 'national interest' even if it is in conflict with 'sectoral interest'.

Figure 2: Porter's Sequence of Competitiveness



Source: Own, 2017

Unjustifiable sectoral interests or faulty sectoral interventions are likely to be the results of 'rent seeking' (Haberler, 1950; Krueger, 1978). In practice, the concept of industrial policy is often not a well-defined one in relation to the objectives, the industries that are covered and the instruments that are used (Bora, Lloyd & Pangestu, 2000) and different observers, analysts and practitioners provide various definitions, each to suit their particular purpose (Chang, 1998; Pack & Saggi, 2006). Chang (1994, 1998) further suggests that with regard to debates on industrial policy,

there is often a lack of consensus about the definition of industrial policy, both amongst those who share similar views, as well as amongst those who hold opposing views.

Lowitt (2011) uses the concepts of universal, broad and horizontal for broad industrial policy definition; and narrow, targeted, sectorally-specific for narrow industrial policy definition. However, irrespective of whether industrial policy is narrow or broad, the scope of these policies is still constrained by the framework aspects which regulate the functioning of the internal market, such as competition policy, freedom of movement of capital, goods and services. In many countries, industrial policy comprises a combination of "some universal and some sectoral targeting" (Lowitt, 2011, p. 10).

Transnational Corporations (TNCs) often provide challenges for industrial policy makers. While they have been a target of considerable hostility and criticism in recent years and have been accused of political interference, corrupt and restrictive business practices, thwarting the goals and policies of governments and challenging the sovereignty of nation states in the countries in which they operate, they remain sources of technology, capital and management (Paul, 1979). There are three main issues that industrial policy makers need to engage with in connecting with transnational companies (ECA, 2016, p. 157).

Firstly, they need to identify the 'right' industries, finding out which industries have the greatest potential for generating economy-wide productivity growth, given domestic constraints (such as whether the country has the right kinds of infrastructure or skills), and global conditions (for example, how quickly the overall demand is expanding, or where the niches are).

Secondly, industrial policy makers need to induce foreign firms to create linkages with the domestic economy and create incentives for those firms to strengthen links with domestic suppliers. These linkages between foreign and domestic firms have the potential of promoting leverages of each other's strengths.

Thirdly, industrial policy makers should pay attention to the possibility of upgrading, not just through the development of capabilities to physically produce goods but also through the development of producer services such as design, marketing and branding (ECA, 2016). Scholars who argue for a systematic approach to industrial policy and relate it to restructuring (Rodrik, 2004, 2007a; Bianchi & Labory, 2011; Lall, 2004; Aiginger, 2012; Giannitsis & Kastelli 2014) propose that in the context of globalisation and economic crisis, policy initiatives should aim to do the following:

- improve the structural competitiveness of the economy and in particular enhance technological capabilities;
- shift production towards more knowledge-intensive activities;
- promote new linkages and interconnections among actors;
- secure resources to boost investment and redress activities in regions that were severely affected by the crisis; and
- create new employment opportunities.

Di Maio (2014, p. 242) makes an important contribution to what constitutes industrial policy, moving beyond the aims of industrial policy mentioned above and argues that "industrial policy naturally includes policies belonging to different domains". These are innovation and technology policies, education and skills formation policies, trade policy, targeted industrial support measures, sectoral (competitiveness) policies, and competition regulation policies (Di Maio, 2014).

In South Africa, Bezuidenhout (2001, p. 381) defines industrial policy as "a set of broad principles and objectives devised by government, or through negotiations between state, business and labour to promote the viability and/or competitiveness of a country's industries or a segment thereof". Although this definition accepts a philosophy of development through capitalism (Streeten, 1981), it also recognises the importance of labour and government to reduce rent-seeking, slave wages and other market failures.

There are three groups of industrial policy definition and these groups can be classified into categories (Chang, 1998). At one end is the first category of those who define industrial policy very broadly and include in the definition every government policy that affects industrial performance, including macroeconomic, infrastructural and education policies. At the other end is the second category of those who define industrial policy very narrowly and equate it to a sector-specific 'targeting' exercise.

A broad definition of industrial policy is, firstly, likely to present problems of implementation due to command structure, accountability and coordination (Chang, 1998). One of the institutional and governance requirements for effective industrial policy is coherence (Kaplan, 2007). Coherence in industrial policy is important for both goals and objectives as well as for responsibility within government (Kaplan, 2007). Secondly, an overloaded industrial policy may lose its analytical edge (Chang, 1998). Although broad definition may be broad enough to include all aspects of industrial policy, it may also accommodate government intervention even in areas where such intervention may not be productive, in the guise of 'national interest'. Conversely, a narrow definition of industrial policy is likely to exclude other important areas that may warrant government intervention. In between, there are those who see the main aim of industrial policy as targeting (or "selective" or "sectoral" industrial policy) but include other non-sector-specific policies such as generalised support for Research & Development or industrial training in the definition (Chang, 1998).

According to Dietsche (2017, p. 1), many development economists (Esteban & Stiglitz, 2013; Felipe, 2015; Moran, 2015; Oqubay, 2015; Stiglitz, 2015; ODI, 2016) are arguing for a new approach to industrial policy to achieve economic and social development in low- and middle-income countries. The reasons for these calls are that firstly, the pro-poor development agenda of the 2000s has been criticised for failing to develop a sustainable private sector. Secondly, international climate policy is an impetus for a new approach to industrial policy. Thirdly, there is rising disappointment with economic liberalism and globalization, and its social

outcomes, on both sides of the Atlantic (Bailey, Cowling & Tomlinson, 2015; Rodrik, 2016a, 2016b, 2017; Smart, 2017).

Proponents of new approaches to industrial policy argue that investing in productive knowledge and technological capabilities is the key to achieving sustainable economic and social development (Dietsche, 2017). The new approaches define industrial policy in broader terms than either the old import-substitution policies or the inward-looking policy ideas of the new national populism (Dietsche, 2017). For instance, Felipe (2015) associates industrial policy with structural transformation characterised by diversification, increased product and service sophistication, and the transfer of resources towards more productive economic activities.

Stiglitz (2015) suggests including any policy that affects the sector composition and the technological choices of an economy, including corporate governance, antitrust and competition policy, monetary and bankruptcy policy, and tax and expenditure policy. Lütkenhorst, Altenburg, Pegels and Vidican (2014) describe industrial policy as any intentional measure taken by public authorities to steer the structure of the economy into a desired direction, irrespective of what that direction may be.

Aiginger (2015) proposes that to achieve greater resources and energy efficiency will require an integrated 'systemic' industrial policy that can deliver 'beyond GDP' goals, in contrast to the current unsustainable growth path that relies on exploiting low energy prices. Aiginger (2007) describes 'systemic industrial policy' as that which supports basic education, training and entrepreneurship; promotes FDI and exports in catching-up economies; and merges with innovation strategies, cluster policy and dynamic competitiveness in higher income countries. From these definitions, it is clear that the new approach regards industrial policy as a solution to overarching and broad economy problems.

Aiginger (2007) argues that industrial policy goes beyond combating market failures, acknowledges limited knowledge of policy makers, and prescribes mutual learning and co-operation between firms, institutions and government. Therefore,

commonly adopted definitions of industrial policy are too narrow and suggest a need to recognise that 'good practice' industrial policy is more holistic in its approach as it focuses simultaneously on both demand and supply factors of industrial development (Aiginger, 2007).

Many people engaged in the debate on industrial policy define it as what has been commonly known as 'selective industrial policy' or targeting, and as a policy that deliberately favours particular industries, or even firms, over others against market signals, usually to enhance efficiency and to promote productivity growth for the targeted industry and for the whole economy, as well as to manage the industry decline smoothly (Chang, 2009a; ECA, 2016).

Industrial policy in this sense is usually associated with the development experiences of Japan and other East Asian economies (South Korea, Taiwan, and Singapore) in the post-World War II period and has been observed among the scholars of post-war French economic policy in the 1960s as part of the broader exercise of "indicative planning" (Chang, 2009a). The common understanding is that there is no one correct definition of industrial policy.

Chang (1998, p. 54) believes in using a relatively narrow definition which defines "targeting (mainly, but not exclusively, at the sectoral level) as the core of industrial policy". This definition is adopted in this study because there is selectivity and targeting involved in almost every industrial policy measure, even though industrial policy is referred to or defined as 'general' measures (Chang, 2009a; ECA, 2016). The 'general' measures are in line with the views on industrial policy of many development economists such as Felipe's (2015) association of industrial policy with structural transformation. This view of industrial policy is consistent with 'developmentalism' and the active intervention of the developmental state in the market.

2.4 APPROACHES TO INDUSTRIAL POLICY

According to Lall (2004), the two main traditional approaches to industrial policy are Neoliberal and Structuralist. These two approaches emanate from the two traditional schools of thought regarding the role of the state versus the market. However, in recent times, the European Community, which initially fully subscribed to the market mechanism, a period of protectionism followed as a response to the oil shock and to the pressure of competition on international markets, especially coming from large American and Japanese companies (Dachin, 2006).

The emergence of countries, mainly those from South-East Asia, ensured that the European Community realised the importance of competitiveness and its sustainability. According to Aiginger and Sieber (2006, p. 573), a new paradigm of industrial policy has recently been developed by the European Commission in a document that first calls for measures improving the competitiveness in all sectors in terms of somewhat broader measures, and subsequently acknowledges sector differences in the impact of these measures, calling for complementary sector-specific measures.

The new paradigm of industrial policy is called the 'matrix approach' to industrial policy because it combines horizontal and vertical measures (Aiginger & Sieber, 2006). This should be seen as a move away from the traditional neoliberal approach that advocates that countries should do nothing irrespective of their different situations. These approaches to industrial policy are discussed below.

2.4.1 The Neoliberal Approach to Industrial Policy

The Neoliberal approach to industrial policy is commonly expressed through the 'Washington Consensus' and is facilitated through the Structural Adjustment Programmes (SAPs) of the IMF, the WB and the WTO (Stewart, 1991; Bond, 2000; Stiglitz et al., 2013; Duričin & Vuksanovič, 2014; Ketels, 2017). According to the Structural Adjustment Programme, if resources are allocated by the market, all

countries will realise their 'natural' comparative advantage and achieve sustainable growth rates (Lall, 2004). According to this doctrine, the best strategy for all the countries, irrespective of their different situations, is to do nothing (Lall, 2004).

There has, however, been some recognition by neoliberals of the important role that governments can play in industrial upgrading. For instance, Lin (Lin & Chang, 2009, p. 484), argues that industrial upgrading and technological advance are best promoted by a facilitating state, "a state that facilitates the private sector's ability to exploit the country's areas of comparative advantage". According to Lall (2004) and Lin (Lin & Chang, 2009), proponents of neoliberal policies differ in the extent to which they allow government intervention. They could be classified using government intervention criteria (Shafaeddin, 2004).

Firstly, there are those who believe that there should not be any government intervention at all in the economy, such as Haberler (1950) and Krueger (1978). This group assumes the market is perfectly competitive as it punishes and corrects mistakes in the allocation of resources. No government intervention will optimise the dynamic advantage and ensure countries realise the sustainable growth attainable, but will only serve to reduce welfare (Lall, 2004). The neoliberal approach advocates for industrial and trade policy liberalisation, deregulation, the promotion of Foreign Direct Investment (FDI), and the dismantling of policy and administrative measures designed to promote industrial development (Bond, 2000; Barnes et al., 2003; Gerring & Thacker, 2005; Duričin & Vuksanovič, 2014).

Secondly, there are those who are against government intervention in trade, but allow it in other types of interventions, such as Corden (1974). The only legitimate role for the government is to ensure a stable macroeconomy, develop the rules of the game, human capital, and infrastructure; and allow the private sector to lead the economic development of the country (Lall, 2004). Over the past 25 years, the dominant development paradigm has limited the role of government to providing macroeconomic stability, protection of property rights, and the provision of public goods (Chang, 2009b).

This paradigm was largely influenced by the view that government intervention through industrial policies which most developing countries pursued in the 1960s and the 1970s, contributed to inefficiencies, corruption and slow growth (Streeten, 1981; Chang, 2009b). However, "the prescription made by International Financial Institutions (IFIs) that free, open and competitive markets were to provide a better future, and that structural adjustment would be the way to construct them, must be placed in a more specific context" (Bracking, 1999, p. 214).

The argument was presented as universally applicable when it more accurately reflected a response to a historical circumstance (Elson, 1994; Loxley & Seddon, 1994; Bracking, 1999). In fact, the context relates to the excess liquidity of the 1970s which was important for the rapid industrialisation in South East Asia and parts of Latin America which rapidly shifted to a generalised situation of money scarcity after 1982 (Bracking, 1999).

The IFIs claimed that the strategic state economic intervention which was attributed to the successful growth in East Asia could not be replicated in Africa (Loxley & Seddon, 1994). Instead, it was the ever increasing conditionalities attached to the loans of the IFIs which would lead to growth in Africa, rather than industrial policy (Elson, 1994). However, the state of underdevelopment and limited development that most countries in Africa find themselves in today are as a result of these loans from the IFIs.

2.4.2 The Structuralist Approach to Industrial Policy

Economic conditions in less developed countries (LDCs), which were characterised by inflexibilities in which change was inhibited by obstacles, bottlenecks and constraints, convinced 'structuralists' that the world provides a reason for distrusting the price mechanism (Arndt, 1985). LDCs were characterised by lack of entrepreneurship, poor communication and production structures which were different from those of developing countries, and for industrialisation to occur, these conditions needed to be changed in other ways (Arndt, 1985).

The motivating factors behind the push to industrialise included the secular deterioration in the terms of trade for poor countries' raw material and agricultural exports, differing income elasticity of demand for agriculture and industry, and high productivity growth which was only attributable through industrialisation strategies amongst other interventions (Shapiro, 2007). Industrialisation creates a platform through which raw materials are converted into manufactured products for the export market.

The stance that government intervention was inefficient, corrupt and promotes slow growth was countered by the experiences of some countries in East Asia and others in Latin America which have challenged the neoliberal school of thought since the 1960s (Stiglitz, 1989; Rodrik, 1994; Mhone, 2003; Hernandez, 2005; Weiss, 2005). Evidence of industrialisation experiences in these countries points to the importance of government intervention in the process of industrialisation and economic development (Stiglitz, 1989; Rodrik, 1994; Mhone, 2003; Hernandez, 2005; Weiss, 2005; Chang, 2009a). There are few successful countries whose industrialisation process did not include government intervention (Chang, 2002).

Except for Hong Kong, no country has managed to industrialise without prior infant industry protection (Shafaeddin, 1998). Chang (Lin & Chang, 2009) argues that there are few, if any, examples of governments that have succeeded with a purely *laissez-faire* approach that does not try to address market failures, but many more examples of rapid growth in countries whose governments have led effectively.

The successful industrialisation experiences of countries in East Asia illustrated that the view that governments are less efficient than markets has less to do with economics than with ideology (Lall, 2004). The use of industrial policy in East Asian economies is an example of government-supported industrialisation. The experience of Great Britain illustrates that certain complementary measures were essential to accelerate industrialisation (Shafaeddin, 1998). For instance, the increase in demand for agricultural products created new opportunities for innovation, and the government protected the sector from import competition

(Shafaeddin, 1998). Neoliberal and Structuralist approaches to industrialisation gave rise to export-orientated and import substitution industrialisation strategies, respectively.

2.4.3 The Matrix Approach to Industrial Policy

At the beginning of the 1990s, it appeared that industrial policy had matured, and a consensus emerged according to which industrial policy was interpreted as a horizontal policy, where the main goal was to increase European competitiveness while focusing on innovation and the information society (Aiginger & Sieber, 2005, p. 17). However, the renewed interest in industrial policy that emerged at the turn of the millennium coincides with a basic philosophical change (Aiginger & Sieber, 2005, 2006; Aiginger, 2007).

The emphasis of the new industrial policy remains on horizontal measures. It is, however, increasingly acknowledged that the impact of horizontal policies varies from industry to industry, and that factors defining the competitive edge will differ across industries (Aiginger & Sieber, 2005, 2006; Aiginger, 2007). Industrial policy therefore has to refine the horizontal instruments according to sector need or even devise complementary measures that can be implemented on the industry level, and this combination of the horizontal and the vertical (industry-specific) dimension led to the suggested term 'matrix type of industrial policy' for this new paradigm (Aiginger & Sieber, 2006, p. 594).

Aiginger and Sieber (2006, p. 582), in the absence of a definition of industrial policy in the matrix industrial policy context, tentatively proposed defining industrial policy as "activity that creates a favourable environment for European business in general as well as for the manufacturing sector and its industries in specific". To improve on existing EU strengths, the Commission services have undertaken a detailed screening of the competitiveness of 27 individual sectors of the manufacturing and construction industries (European Commission, 2005). Screening would determine to what extent their performance is or could be

influenced by the instruments of industrial policy. The following policy areas were selected for the screening of 27 individual sectors of manufacturing:

- Ensuring an open and competitive Single Market, including competition;
- Knowledge such as research, innovation and skills;
- Better regulation;
- Enduring synergies between competitiveness, energy and environmental policies;
- Ensuring full and fair participation in global markets; and
- Facilitating social and economic cohesion (European Commission, 2005; Aiginger & Sieber, 2006).

Screening has resulted in individual sectors that have been grouped into four broad categories as explained below:

- Food and life science industries: This sector combines the more traditional food and drink industry with pharmaceuticals and biotechnology. It comprises one fifth of the value added of European manufacturing and is said to be 'characterised by medium to high growth rates'. General challenges specifically important to this sector include knowledge and better regulation. Sector-specific challenges are a 'fully competitive single market for pharmaceuticals and environmental and market access issues related to the food and drink industries.
- Machine and systems industries: This sector includes information and communication technologies (ICT) and mechanical engineering. It makes up one third of value added and is also characterised by medium and high growth rates. Important general challenges are innovation, property rights and skills. Sector-specific challenges have to do with standards and the updating thereof. Better access to international markets is specifically important to some sub-sectors, as is environmental performance to vehicles in particular.
- Fashion and design industries: This sector comprises textiles and footwear, accounts for 'just 8%' of value added and has 'experienced low or negative output growth and relatively low R&D spending over recent years'.

Successful structural adjustment is the key challenge. Improving innovation, property rights and skills are the preconditions for a quality upgrade. Better access to the heavily protected world market is 'also a key policy requirement'.

- Basic and intermediary industries: These include chemicals, steel, pulp and paper, and account for some 40% of the value added of European manufacturing. Growth rates range from medium to low but are high in chemicals and the rubber industry. The main challenges relate to energy and the environment, and key challenges to this sector are regulation and the legislative simplification of the construction sector.

It is important to consider the implications of these industrial policy approaches. One of the most debated questions in industrial policy issues has been the role of government in East Asia. For the period 1950–1995, eight East Asian economies achieved extraordinary rates of growth, and income per capita increased more than tenfold in Japan and the "Four Tigers", and more than doubled in Malaysia, Indonesia and Thailand in the two decades after 1973 (Hernandez, 2005, p. 2). Although there is consensus on extensive government intervention in most East Asian economies, with the exception of Hong Kong, there has been extensive debate about the contribution of industrial policy to growth in these economies and the desirability of similar policies in other countries (Ranis & Fei, 1975; Balassa, 1982; World Bank, 1993; Mody, 1999; Hernandez, 2005).

The World Bank added credibility to the East Asian industrial policy stance with its study in 1993 of the East Asian Miracle (EAM). Even critics of the "Miracle" study welcomed the belated and qualified recognition of the role that the state had played in fostering industrial growth (Mody, 1999). Although there were those who questioned the existence of government intervention in Korea and Taiwan and insisted these were free markets with little industrial policy (Ranis & Fei, 1975; Balassa, 1982), from the early 1980s extensive research emerged that questioned this orthodoxy and emphasised the role of industrial policy in the economic success

of these countries (Sakong & Jones, 1980; Evans & Alizadeh, 1984; Amsden, 1985; Luedde-Neurath, 1986).

The economic development of East Asian economies could not have come as a result of the market alone because of the presence of inefficiencies and failures in the market. Arrow and Debreu (1954) identified several conditions that must be satisfied if markets are to yield efficient outcomes. These include first, the absence of externalities (external economies or diseconomies that affect the activity in question) and of public goods (commodities or services that, once provided, can be obtained without payment by others); second, the presence of perfect competition; and third, a complete set of markets, including markets extending infinitely far into the future and covering all risks (Arrow & Debreu, 1954). If these conditions are not satisfied, market failure is likely to occur. These conditions are not satisfied in many developing countries and markets do not yield efficient outcomes; this is also the case with South Africa.

The research in this study argues that the presence of market failures justifies government intervention to correct these failures and therefore in South Africa the Structuralist Approach to industrial policy is the most appropriate because active government intervention is required to refocus attention and resources away from minerals and energy complex (MEC) sectors to other manufacturing sectors, including the clothing and textile industry. The country needs to encourage exports of manufactures and provide the necessary assistance to important but declining sectors such as the clothing and textile industry. The South African economy needs to move away from exporting commodities and to begin to add value to these commodities and export value-added manufactures.

2.4.4 Export-oriented and Import-substitution Industrialisation Strategies

Lindert and Kindleberger (1982) define Export-Oriented Industrialisation (EOI) as those strategies that are outward-looking and aimed at increasing exports. EOI strategies are favourable in conditions that support openness to international trade and are neoliberal in approach. Import Substitution Industrialisation (ISI) strategies promote industrialisation by restricting imports of manufactures (Lindert & Kindleberger, 1982).

Import Substitution Industrialisation (ISI) strategies are inward-looking and favourable in conditions that restrict international trade in manufactures and are mainly Structuralist in approach. Schmitz (1984) examines the history of industrialisation in the LDCs and concludes that ISI has not worked, especially during its early stages. ISI has been found to lead to both substantial inefficiencies and foreign exchange problems (Schmitz, 1984, 2007; Alavi, 1996; Krueger, 1997; Pahariya, 2008). However, the alleged superiority of EOI could not be attributable to the adoption of market-oriented policies, but to a combination of cyclical and horizontal factors together with substantial discriminatory state intervention (Schmitz, 1984, 2007).

In the era of globalisation and limited policy space, South African industries should strive for global competitiveness. This could be achieved through the expansion of manufactured exports of high quality. Exports have the added advantage of attracting foreign currency and reserves. Therefore, the research in this study argues for outward-looking export-oriented industrialisation strategies. The study also argues for a 'coordinated system' of economic activities by important players in the economy that include firms, government and the market (Shafaeddin, 2004, 2006a, 2006b, 2006c; Hall & Soskice, 2001).

Substantial discriminatory state intervention aimed at industrialisation (namely, a 'coordinated system') that will support the competitiveness of domestic exports can lead to increased exports. Shafaeddin (2004) examined the limitations of the market, such as market failure and the risk of failure by government and came up

with a ‘coordinated system’ (Shafaeddin, 2004, 2006a, 2006b, 2006c; Hall & Soskice, 2001). In a ‘coordinated system’, “economic activities are coordinated by the market, firms, and government and require the availability of “non-price factors” such as infrastructure, institutions, and organisations” (Shafaeddin, 2004, p. 1).

A ‘coordinated system’ is practical, country-specific and dynamic (Shafaeddin, 2004). It is practical because it is based on the realities of the world economy and the situations of developing countries; country-specific because the relative role of each coordination mechanism (i.e. market, government and firms) changes from one country to another; and dynamic because in each country, the relative role of each mechanism changes over time during the course of economic development of that country (Shafaeddin, 2004). For instance, industries may require more government intervention support in their initial stages of industrialisation and less or no government support when the industries have become self-reliant and independent.

2.4.5 Key issues on industrial policy

The new approach to industrial policy defines it in broader terms and associates it with structural transformation characterised by diversification, increased products and service sophistication, and the transfer of resources towards more productive economic activities. The new approach proposes industrial policy as a solution to overarching and broad economy problems and suggests that it can deliver ‘beyond GDP’ goals. This view of industrial policy is consistent with ‘developmentalism’ and the active intervention of a developmental state in a market, together with private firms in a ‘Coordinated System’.

The view also signals a move away from the neoliberal approach to industrial policy. The view that government intervention in the market was inefficient, corrupt and promotes slow growth was diminished by evidence of industrialisation of some countries in East Asia and others in Latin America. The developmental successes in these countries provides evidence that development is, to a large extent, the

process of acquiring and adapting existing technologies. Training and skills development, knowledge and information, including learning and technology, are important in facilitating the mastering, adapting and improving of technologies.

Scholars who argue for a systematic approach to industrial policy and relate it to restructuring propose that in the context of globalisation and the economic crisis, policy initiatives should aim at the following: improving the structural competitiveness of the economy and in particular to enhance technological capabilities; shifting production towards more knowledge-intensive activities, promoting new linkages and interconnections among actors; and securing resources to boost investment and redress activities in regions that were severely affected by the crisis and create employment opportunities.

This study explains how improvements in the traditional factors of production (labour, capital, land and natural resources, and entrepreneurship) can assist in increasing the productivity of manufactures for exports and facilitate industrialisation.

2.5 OVERVIEW OF CLOTHING AND TEXTILE INDUSTRY AND INDUSTRIAL DECENTRALISATION POLICY IN SOUTH AFRICA

The clothing and textile industry in South Africa is concentrated in particular geographical areas, especially provinces like the Western Cape, KwaZulu-Natal, the Free State and Gauteng, and in cities like Cape Town, Durban and Johannesburg, as well as in certain rural areas in former homelands such as Babelegi industrial area in Hammanskraal and Rosslyn industrial area in Ga-Rankuwa (Vlok, 2006). In some rural and former homeland areas, the clothing and textile industry is the only source of employment. In its traditional geographic concentrations, the industry has existed for many decades and is rooted in the unique history and cultural traditions of these areas and provides a significant proportion of employment. In its rural concentrations, the industry is often the only source of formal employment and many families depend on it for survival.

According to Statistics South Africa (as cited in Edwards & Morris, 2006), employment in the clothing, textiles and footwear industry dropped from 206 946 in January 2003 to 142 203 in June 2006, a loss of 64 743 jobs. The textile industry can be segmented into fibre production, spinning, weaving, knitting, non-wovens, carpet production, and fabric coating. These include a wide range of other consumer and industrial converting sectors such as apparel, home fabrics, woven and knitted packaging, tyre and belting packaging, webbing and narrow hose manufacturing, cordage filtration fabrics, tarpaulins, geotextiles sewing, thread sleeping bags, and fibre production.

Major fibre types used are cotton, staple filament polyester, acrylic, nylon, polypropylene, PP/HDPE, raffia, viscose and jute/sisal. In the mid-1990s, the government rejected the Swart Panel's proposals for a wide variety of subsidy schemes to support the industry despite a clear need for substantial restructuring (Flatters & Stern, 2008). Mohan (1998) argues that in many countries, including South Africa, the clothing and textile industry has been under protective regime since the early 1960s through instruments such as the Multi-Fibre Agreement (MFA) and its predecessors, which helped to regulate trade in the industry.

The textiles, clothing and footwear industry is well established but has been under severe pressure for some time (Flatters & Stern, 2008), despite a number of policy measures over the years to address problems in the industry. Key issues for the industry include the negative impact of cheap imports, illegal imports, discontinuation of export expenditure, and under-invoicing (IPAP 2, 2010).

The current concentration of the clothing and textile industry in South Africa is partly a product of industrial decentralisation policies of the past. Pretorius, Addleson and Tomlinson (1986a) observe that industrialisation of the South African economy commenced around Kimberley with the exploitation of diamond deposits between 1867 and 1871. This was followed by large-scale gold mining in the Witwatersrand in 1886 which provided the economic base for this process to continue and for the manufacturing industry to eventually dominate the

composition of output in the structure of the South African economy (Pretorius et al., 1986a).

The economic activity created first by diamond mining, and soon thereafter by gold mining, generated the necessary demand to begin the development of transport infrastructure to service the rapid inland growth. Pretorius et al., (1986a, p. 38) traces the "history and origins of the concentration of economic activity which occurred primarily in four regions: Western Cape/Cape Peninsula; Port Elizabeth/Uitenhage; Durban Pinetown; and Pretoria/Witwatersrand/Vereeniging (PWV) complex". The powerful historical forces that brought about this particular regional economic structure are important and will be briefly explained below, because it is against these forces that the industrial decentralisation policy is positioned.

Cape Town is the oldest centre of organised, Western-style, market-related economic activity in South Africa. It was established in 1652 by the Dutch East Indian Company (DEIC) to provide fresh provisions for its ships sailing to and from the Far East. Various factors contributed at a later stage to Port Elizabeth's potential, where "… permanent military presence was established in Algoa Bay as early as 1790" (Moore, 1978, p. 626), and "a magistracy was established at Uitenhage in 1803" (Davenport, 1977, p. 23). Furthermore, "provision of fresh meat to shipping depended greatly on raising sheep in preference to cattle, as sheep could endure long treks to the Cape Town market better" (Wickens, 1983a, p. 56). As the population grew, assisted by Somerset's immigration policy, market-related activities became more sophisticated in Graaff-Reinet and the newer settlement of Grahamstown (Pretorius et al., 1986a).

In Durban/Pinetown, early settlement patterns indicate that the south-eastern seaboard of Africa (as far north as the Zambezi River) was populated by black tribes whose economic activities included active trading that extended as far as modern-day western Transvaal and the eastern Cape (Davenport, 1977). However, "it was not until the British established a trading post at Port Natal aimed at participating

in its lucrative trade" (Davenport, 1977, p. 85), and only after the demise of the (Voortrekker) Republic of Natalia (1838–1843) and subsequent development that finally established Natal as a British colony in 1856 that any meaningful economic development occurred in and around Durban (Pretorius et al., 1986a).

"The discovery and exploitation of large diamond deposits in the Kimberley district (1867–1871) initiated the development of the mining industry in South Africa, in addition to providing the seeds for industrialisation" (Lumby, 1983, p. 195). There was explosive growth in the inland market for food, services and equipment, and for the first time a railway transport system became economically feasible (Pretorius et al., 1986a). In the early 1870s, Kimberley became the second most populous urban centre in the subcontinent after Cape Town (Webb, 1983). "The gold mining industry became the sustaining growth force of the South African economy, ultimately supporting Johannesburg and the whole Witwatersrand from exogenous to endogenous economic growth" (McCrystal, 1969, p. 53).

Large-scale importation of goods and services necessitated by the Johannesburg/Witwatersrand core benefitted the ports, and this time Durban stood to benefit most, despite initial preference given to Delagoa Bay (Mozambique) (Solomon, 1983). At the same time, the economic core of the country moved from Cape Town to Johannesburg (Lumby, 1983) and soon regional economic activities became dominated by the demand for goods and services generated by vigorous growth on the Witwatersrand.

According to Pretorius et al., (1986a, p. 43), "the increasing dominance of the four main metropolitan areas in the South African regional economic structure was therefore the natural reinforcement of a structure that was defined by the commencement of industrialisation". This natural development in regional economic structure was not interfered with for almost a century, until the South African Government began a policy of industrial decentralisation in 1960 (Pretorius et al., 1986a). This was the first attempt to break down the existing regional

economic system, although the forces that brought this structure about were clearly still present.

Whilst there have been many attempts to rationalise decentralisation on sound economic grounds, and therefore to see it as a solution to both alleged metropolitan diseconomies and the underdevelopment of the periphery, it was clear from the outset that the genuine economic cause for decentralisation was subordinated to the requirements for separate development (Ratcliffe, 1979; Wellings & Black, 1986a). Decentralisation was seen as a means for stabilising the state's system of influx control by providing alternatives to metropolitan employment within the Bantustan sub-economies (Wellings & Black, 1986a, 1986b).

Although the origins of decentralisation policy date from the 1930s, it was not until the late 1950s that the government established a system of decentralisation to "growth points" in "border areas" next to the then "Native Reserves" (Wellings & Black, 1986a). According to Bell (1973, pp. 401–402), the function of the growth points was two-fold:

- to provide people in the surrounding labour supply areas of the Bantu homelands with the opportunity of commuting to jobs in manufacturing industry in the growth centres; and
- to diffuse benefits throughout the surrounding areas via some sort of income and employment multiplier mechanism.

The colonial land policies were characterised by two conflicting approaches: firstly, division of landownership into exclusive racial areas, reflecting both altruistic and xenophobic motives (in various extreme forms); and secondly, approaches seeking to destroy existing patterns of tribal landholdings in order to create a single landownership pattern, where all races could enjoy equal access to ownership of land (Wickens, 1983b, p. 10). As Pretorius et al. (1986a, p. 44) explains, "This led to different racial land ownership criteria applicable to Blacks in the four provinces at the time that the Union of South Africa was formed (1910)".

The introduction of the Natives Land Act of 1913 entrenched the division of the country into different areas for exclusive ownership by Africans and non-Africans, with the African areas consisting mostly of the then existing scattered Black Reserves – namely, land areas set aside through the years by colonial authorities and the two Voortrekker Republics for exclusive African tribal (and in some cases individual) ownership (Pretorius et al., 1986a, p. 45). The area thus set aside for Africans by this Act totalled approximately 7.3% of the country's total area (and no non-African could own land in these areas), while the rest of the country, 92,7 percent of the total area, was for the exclusive ownership of non-Africans (Surplus People Project Reports (SPPR), Vol. 1, 1983).

The National Party gained power in 1948 during a time of rapid industrial growth and urbanisation, when economic interaction made it difficult for any South African government to justify continued black exclusion from political expression (Pretorius et al., 1986a). Government policy was now aimed at providing the infrastructure to make the Reserves the basis for an ethnically based policy of separate development, ultimately leading to political independence of the Reserves. The first step was the Bantu Authorities Act (1951) that provided the administrative machinery to achieve limited local self-government in the Reserves. This was followed in 1959 by the Promotion of Bantu Self-Government Act (SPPR, Vol. 1, 1983).

The appointment (1950) and Report (1954) of the Commission for the Socio-Economic Development of the Bantu Areas within the Union of South Africa (Tomlinson Commission) was principally two-fold: firstly, to justify ideologically the policy of separate development and secondly, to suggest means to achieve it (Pretorius et al., 1986a, p. 47). According to Pretorius et al. (1986a, p. 47), "It was suggested that the Reserves be developed into economically viable units in order to stem the flow of work-seekers to the White areas and this could be achieved through industrial decentralisation into the Reserves". The Commission also suggested certain agricultural reforms in the Reserves which were rejected.

The Government "accepted a proposed 'border area' industrialisation policy, which suggested industrialisation of areas bordering the Reserves, in order to provide homeland inhabitants with the facility to live in a homeland and commute to a border area industry" (Tomlinson, 1983, p. 546). Official assistance was also proposed for investment in these areas and although the industrialisation policy was accepted in principle, economic factors affecting the establishment of industries in the border areas were still to be investigated (Pretorius et al., 1986a).

The first measures applied to implement the policy were positive. These inducements were intended to act as positive incentives to industrialists who intended to establish a new industry or extend an existing one, and the incentives applied if such a new industry or extension was located in a border area. For purposes of implementation, "a border area was defined as an industrial centre located within thirty miles of a homeland" (Kotzenburg, 1973, p. 142).

The 1960 incentives included assistance with transport costs; assistance with cost of provision and consumption of water, electricity and housing; and financial incentives on industrial land and buildings, plant, relocation costs, customs tariff and loans (Pretorius, Addleson & Tomlinson, 1986b). Although "the incentives were administered principally through tax concessions, and were applicable in the border areas generally, Rosslyn (Pretoria) and Hammarsdale (Pietermaritzburg) were specifically favoured in granting incentives" (Dewar, Todes & Watson, 1982, pp. 102–108).

Periodic changes were made to the policy. In 1962 increased tax concessions to manufacturing concerns in border areas were announced: investment allowances on new or unused plants were increased to a maximum of 30%, and in certain circumstances, investment allowances up to a maximum of 15% were allowed on unused plant (Bell, 1973, p. 209). Despite the added incentives, the Government realised by mid-1963 that a more attractive package of incentives would be required to achieve satisfactory results. A revised package was announced in May 1964.

During 1967 it was decided to concentrate maximum decentralisation efforts on a reduced number of decentralisation areas (Dewar et al., 1982).

The following areas were singled out for greater assistance following this approach: East London/King William's Town, Queenstown, Kokstad, Ladysmith/Colenso, Empangeni/Richards Bay, Phalaborwa, Tzaneen, Pietersburg, Brits/Rustenburg and Mafeking. It was further decided to shift emphasis in granting incentives from growth points relatively close to metropolitan areas (such as Rosslyn and Hammarsdale) to more remote growth points (such as Brits, Rustenburg and Pietersburg (Lombard & Van der Merwe, 1972, p. 19). However, no marked improvement in industrialisation of border areas was noticeable despite the improved incentives. Instead, "it seemed as if industrial development in the metropolitan areas accelerated" (Pretorius et al., 1986b, p. 239).

In September 1968 further changes were made to the incentive measures under the policy. Industrialists were now also offered the opportunity of choosing a five-year tax holiday in lieu of the tax incentives (Bell, 1973). "At the same time, it was announced that incentives would be available to White industrialists who wished to invest within homelands, as was suggested by the Tomlinson Commission" (Pretorius et al., 1986b, p. 240).

From 1979 onwards, various bodies were instituted that were to investigate regional development and industrial decentralisation (Pretorius et al., 1986b). These deliberations resulted in the proposal of a new industrial decentralisation strategy at the Good Hope Conference in 1981, followed by a White Paper in 1982 on the 'Information about the promotion of industrial decentralisation as an element of a coordinated regional development strategy for Southern Africa' (Pretorius et al., 1986b, p. 243).

The White Paper announced a new industrial decentralisation incentive package, which was a revision of the proposals put forward at the Good Hope Conference in 1981 (Pretorius et al., 1986b). The proposed new incentives reflected a change in

approach from previous policies. Firstly, they aimed at improving decentralised companies' cash flow through cash incentive payments rather than tax concessions, and secondly, the economic interdependence of the various regions was recognised (Pretorius et al., 1986b, p. 243). The 1982 incentives also favoured labour-intensive industries, as well as attempting to provide the framework of informal business to be eligible for incentives (Pretorius et al., 1986b).

Pretorius et al. (1986b, p. 248) explains that, "From 1960 to 1980, applications for decentralisation assistance never exceeded 300 and were mostly at a much lower level". However, "in 1982 and 1983, interest expressed was much higher than any previous year, totalling 861 applications in 1982/83" (Board for the Decentralisation of Industry, 1983, p. 17) and "1 190 applications in 1983/84' (Board for the Decentralisation of Industry, 1984, p. 4). It is no surprise that this coincided with the announcement of the most favourable industrial decentralisation incentive package in April 1982, after consultation between the Government and representatives of business at the Carlton and Good Hope Conferences of 1979 and 1981 respectively (Pretorius et al., 1986b).

General business conditions were not very supportive as great interest was being displayed in the incentives and therefore, it is not unreasonable to assume that industries may have investigated the industrial decentralisation incentives as a survival strategy (Pretorius et al., 1986b). Addleson, Pretorius and Tomlinson (1984, pp. 22–27) provide more detailed information on decentralised companies' dependence on incentives for profitability. The majority of the surveyed companies indicated that they would not have chosen the decentralised location in the absence of incentives, but 75 percent of the companies indicated that the incentives did sufficiently compensate them for location disadvantages (Addleson et al., 1984).

When taking the incentives into account, 56 percent of the companies felt that their location did not place them at a competitive disadvantage in relation to their metropolitan-based competitors. Furthermore, the companies indicated that the 'short term incentives' (mostly cash incentives applicable to cost of labour and

capital) were most widely enjoyed and were regarded as most important. Although it is frequently argued that new firms in 'infant areas' may have to be subsidised until the areas generate agglomeration economies, the decentralised firms attached greater importance to short term incentives in their location decisions (Addleson, Pretorius & Tomlinson, 1985, p. 197).

Furthermore, whereas 58 percent of the companies felt they might be able to operate at a profit if the incentives were withdrawn, 75 percent responded that in this event price increases would be necessary to maintain margins due to higher effective cost of production (Addleson et al., 1984). In addition to the fact that profitability of a number of firms was dependent on their receiving incentives, the importance of the short-term incentives also suggested the possibility of relocation, or even closures, once these incentives were terminated (Addleson et al., 1985). From the limited detailed information that is available concerning the financial situation of decentralised firms, it appears that in spite of the incentives, many were in an unsound financial position (Addleson et al., 1985).

It can be argued that industries were not decentralising to gain competitive advantages, and that furthermore, it appears that profitability of a substantial proportion of decentralised companies is due to subsidised margins resulting from incentives obtained under the industrial decentralisation policy (Pretorius et al., 1986b). Addleson et al. (1985, p. 199) "argue with appropriate qualification that profits could serve to indicate economic efficiency and for firms which depend on subsidies for their continued existence, by implication the 'value added in production is negative". The value of output created in the production process is less than the combined value of the inputs into that stage of production.

Ward (1980, p. 17) argues persuasively about the Ciskeian situation in that,

> the logic of growth centre approach, with its emphasis on promoting dynamic internal economic change, is fundamentally inconsistent. It is in conflict with the necessity to meet the needs of those left behind in the economic growth process. Indeed, it may well be that growth centres

> succeed only when they evolve without government intervention. If an area has failed to develop without outside help or official support, then there would appear to be little reason for assuming that it will ever succeed as a growth centre as a result of deliberate government action. There is even less reason for believing, especially in a "homeland" context, that there will be desirable "spread effects".

During the 1970s, the decline of the regional clothing economy of the Witwatersrand was accelerated further by the introduction in 1968 of the Environmental Planning Act which restricted the number of black workers that could be employed by the majority of factories located in the region. This apartheid-inspired legislation was particularly targeted at discouraging the growth of labour-intensive production activities such as clothing in South Africa's major metropolitan region (Rogerson & Kobben, 1982). The current conditions in South Africa's clothing and textile industry thus have roots in some of the apartheid legislation of the past.

During the apartheid period, a segment of clothing producers relocated their production from the metropolitan areas, either fully or partially, to cheap labour locations, primarily peripheral growth points in or close to the Bantustans which received generous government decentralisation incentives (Altman, 1989, 1996; Harrison & Dunne, 1998). As explained by Altman (1996), during the early 1990s, wage differentials between formal clothing factories in metropolitan as opposed to decentralised locations were observed as anywhere between three and six, even to nine times greater.

2.6 REVIEW OF SOUTH AFRICA'S TRADE AND INDUSTRIAL POLICY

2.6.1 Trade and Industrial Policies

Edwards and Schoer (2002) make use of a dynamic approach to analyse South Africa's trade performance in the 1990s. The findings of the study reveal that although "competitiveness, as measured by the Real Effective Exchange Rates (REER) and unit labour costs increased during the 1990s, the structure of trade has remained relatively capital and technology intensive compared to other middle income countries" (Edwards & Schoer, 2002, pp. 1039–1040).

These findings are supported by a ten-year review of industrial development and industrial policy in South Africa for the period 1994–2004 by Roberts (2006). According to Roberts (2006), although industrial policy was functional and non-targeted, it was mainly large capital-intensive firms that benefited from government incentives and development finance. The bias of trade and industrial policies in favour of mainly large capital-intensive firms, and the minerals-energy complex (MEC) have resulted in low manufacturing products and low export growth for South Africa's products.

According to Golub (2000), during the 1990s export growth was lower than that of the most dynamic emerging economies. Alves and Kaplan (2007, pp. 3–5) observe in a study that for the period 1992 to 2002, "South Africa's manufactured export growth has been somewhat slower than global growth, slower than Latin American and significantly slower than developing country growth". Edwards and Schoer (2002) conclude that South Africa was not able to make good use of its abundant labour.

2.6.2 Review of South Africa's Trade Policy (1991 – 2006)

Gonzales-Nunes (2010) was commissioned by the Presidency to provide a 15-Year (1991–2006) Review of Trade Policy in South Africa. According to the Review, since becoming a democracy South Africa had pursued liberalisation of its economy on various levels, including the removal of the dual exchange rate. In addition to

substantially liberalising its trade regime, South Africa also engaged at a multilateral level and became a founder member of the WTO in 1995. The government further negotiated bilateral agreements with the EU, Mercosur and the European Free Trade Association (EFTA), and also undertook some unilateral liberalisation which exceeded WTO requirements (Gonzales-Nunes, 2010).

South Africa's trade policy approach had, for the period under review, changed from import substitution towards export orientation industrialisation (Gonzales-Nunes, 2010). The 15-Year Review document divides South Africa's trade reform into four facets: nominal tariffs, particularly manufacturing which was historically the most protected sector, were reduced; the number of tariff bands and categories were reduced; surcharges and quantitative controls, particularly related to agriculture, were reduced; and there was a phased unilateral reduction of tariffs. During the 1990s South Africa replaced its general export subsidies under the General Export Incentives Scheme (GEIS) with WTO compliant supply-side incentives.

However, two sectors; clothing and textile, and motor vehicles and components still received export subsidies in the form of the Textiles and Clothing Industry Development Programme (TCIDP), which replaced the Duty Credit Certificate Scheme (DCCS), and the Motor Industry Development Programme (MIDP) (Gonzales-Nunes, 2010). Tariffs were reduced substantially except in a few commodities that included sugar, while import tariffs were abolished and the tariff structure was simplified in accordance with WTO requirements (Gonzales-Nunes, 2010).

In the recent past, South Africa had to face severe competition from China and India within the clothing and textile sector (Dunne & Edwards, 2006; Vlok, 2006). High levels of cheap imports from China lead to calls from the local industry to restrict such imports by increasing tariffs and also implementing a quota system. However, this measure was not to the benefit of either China or South Africa (Gonzales-Nunes, 2010). The reason for this is that cheap imports from China meant that South

African consumers could afford clothing, while China's rapid growth resulted in enormous demand for resource-based goods which have benefited South African exports (Gonzales-Nunes, 2010).

The clothing and textile sector was already one of the most protected sectors, with tariffs of up to 30% to 40%. Some of the recommendations from the 15-Year Review by Gonzales-Nunes (2010) are that South Africa's clothing and textile sector needs to compete on more than price if it is to succeed. Therefore, the focus of industrial policy measures should be partly on improved quality and better design in order for the industry to compete more effectively.

According to Roberts and Thoburn (2004), the high levels of protection in the textile industry in South Africa has meant that firms tend to produce a variety of products to satisfy the domestic market, making them relatively uncompetitive in more commodity-type products such as basic fabrics, but being quite flexible in responding to different customer needs. The domestic orientation of textile firms in South Africa also meant that firms had not upgraded their capital stock, and many of these firms were using machinery from the early 1990s, with looms 20 years old or more (Roberts & Thoburn, 2004).

2.6.3 Review of South Africa's Industrial Policies (1994 – 2008)

A Review of South Africa's industrial policy, instruments, and support programmes from 1994 to 2008 was prepared for the Presidency by Rustomjee and Hanival (2010). This was a contribution to the Presidency's 15-year Review of Government Performance. In 2003, as part of the Presidency's review of the 10-year period from 1994 to 2003, the impact of trade and industry policy was assessed. The findings indicate certain achievements regarding economic policy and trade and industry policy, as well as a number of challenges that required prioritised attention after 2003.

The 1994–2003 review was extended to include the five years that followed, namely 2003–2008, thus making the review period fifteen years (Rustomjee & Hanival,

2010). The findings of the review indicate that for the period from 1994 to 2003, industrial policy had shifted focus after 2001, extending incentive programmes beyond traditional manufacturing sectors. Certain key sectors such as automotive and tourism and cross-cutting sectors such as information and communication technology had been identified for special attention.

The findings revealed that as a result of policy interventions, the competitiveness of the South African economy had improved since the early 1990s as reflected by the improvement in, and diversification of, exports as well as significant improvement in labour productivity (Rustomjee & Hanival, 2010). However, there was some indication that the availability of skilled labour remained a key constraint to further growth, together with poor performance in the manufacturing sector during the 1980s and significant volatility up to 1994.

The restructuring of the manufacturing sector between 1996 and 2000 was accompanied by low growth rates, dragging down overall growth of the economy. During the period 2004 to 2006, almost all manufacturing sectors were growing. However, of concern was that many of the fastest growing sectors were resource or capital intensive. Although the fastest growing sectors did not lead to substantial employment creation, they collectively accounted for more than 50% of the total manufacturing output, and strong growth performance easily outweighed the decline in relatively small sectors (Rustomjee & Hanival, 2010).

The review (Rustomjee & Hanival, 2010) offers the following guidelines which are useful for future incentives:

- Incentives should not have more than one major target objective and in the case of DCCS, there was a confusing amalgam of export, investment and employment targets that made it difficult to assess the value of the programme, much less the unintended consequence of it subsidising retail sector profitability;
- If the DCCS was being reviewed, consideration should be given to removing the investment objective because existing investment incentive

programmes such as the Small and Medium Enterprise Development Programme (SMEDP) appeared to cover the requirements adequately; and

- The programme did not seem to have achieved its trade facilitation role and if this was the case, then it could be better to view the DCCS programme as a peri-urban employment retention instrument and then to recraft it as such, and perhaps relocate the programme to the Department of Labour, if this was viewed as appropriate (Rustomjee & Hanival, 2010).

In the context of globalisation and economic crisis, policy initiatives should aim at the following:

- improving the structural competitiveness of the economy and in particular to enhance technological capabilities;
- shifting production towards more knowledge-intensive activities, promoting new linkages and interconnections among actors; and
- securing resources to boost investment and redress activities in regions that were severely affected by the crisis and create employment opportunities (Giannitsis & Kastelli, 2014, p. 223).

Chang (2010, p. 82) narrowly defines a developmental state as "one that derives political legitimacy from its record in economic development, which it tries to achieve mainly by means of selective industrial policy". It is possible to broaden this definition by dropping the condition of 'deriving legitimacy from economic development' to mean "a state that intervenes to promote economic development by explicitly favouring certain sectors over others" (Chang, 2010, p. 83).

According to Murakami (1992), in countries where there is unequal distribution of wealth, 'developmentalism' would mean the simultaneous achievement of industrialisation through industrial policy and redistribution of income through other policies that are designed to promote education and achieve social and political goals. Chang (2009) further suggests that the industrial policy of targeting particular industries over others, i.e. 'selective industrial policy' is defined in the sense usually associated with the development experiences of Japan and other East

Asian economies such as South Korea, Taiwan and Singapore in the post-World War II period and was also observed among scholars of post-war French economic policy in the 1960s as part of the broader exercise of “indicative planning”.

These comprehensive measures are justified, especially in developmental states and not in a ‘facilitating state’ as proposed by Lin (Lin & Chang, 2009, p. 484). Supply-side interventions are not sufficient to recapture the lost market taken by imports from foreign countries in the clothing and textile industry. According to Chang (1997), supply-side measures have to work with demand-side measures in order to be successful because there are many industries where, without some guarantee of demand, investment will not occur and as a result, productivity will be negatively affected.

Current conditions in the South African clothing and textile industry are highly discouraging to prospective investors, and prospective investors would require courage to consider the risks inherent in investing in the sector that is facing the kind of pressure found in the industry. “Industrial policy makers need to induce foreign firms to create linkages with the domestic economy and create incentives for those firms to strengthen links with the domestic suppliers” (ECA, 2016, p. 157). Therefore, active government intervention by the ‘developmental state’ is required in the market.

According to Mkandawire (2001), the ‘developmental state’ could be divided into two components which are ‘ideological’ and ‘structural’. The ideological part of a developmental state is its ‘developmentalist’ nature and conceives as its ‘mission’ as being that of ensuring economic development which is said to have been achieved when there are high rates of accumulation and industrialisation (Evans, 1995; Mkandawire, 2001, 2010; Edigheji, 2010). The state-structure of the developmental state emphasises capacity to implement economic policies wisely and effectively (Mkandawire, 2001).

Capacity includes factors such as institutional, technical, administrative and political (Evans, 1995; Mkandawire, 2001, 2010; Edigheji, 2010). Also important is the element of autonomy of the state from social forces that will enable the 'strong state' and active (*dirigisme*) state that advocates for a positive role of state intervention to devise long-term economic policies unhindered by the claims of myopic private interests (Mkandawire, 2001). Evans (1995) refers to this as 'embedded autonomy', a relationship between bureaucrats and business, wherein, although the bureaucrats and private business individuals are embedded and have good working relationships, bureaucrats remain autonomous in their actions in relation to government policies without being influenced by private business interests.

The success of Japan's industrialisation was no accident but was a result of the efforts of a 'plan rational' state or 'developmental state' (Johnson, 1992). Evans (2010) argues that a developmental state must encourage and offer support in distributing basic rights that would encourage people to invest in their potential and capabilities – it should provide social support for healthcare, education and other social amenities. In addition to the traditional role of providing social amenities, it must also provide an enabling environment that serves as an incentive for voluntary private investment to strategic sectors of the economy (Evans, 2010; ECA, 2016).

An enabling environment in this study refers to those factors that contribute to competitiveness but are not within the control of the firm and are mainly located outside the firm, such as economic performance, government efficiency, financial market development, macroeconomic environment, health and education, labour market efficiency, innovation, infrastructure, institutions, market size, technological readiness, and goods market efficiency among others.

In addition to providing an enabling environment as described above, the developmental state, through industrial policy makers, should pay attention to the possibility of upgrading, not just through the development of capabilities to physically produce goods but also through the development of producer services

(ECA, 2016). Such producer services include design, marketing and branding, and market development as some of the demand-focused activities to recapture the lost market in the clothing and textile industry. One of the recommendations by Gonzales-Nunes (2010) is that the clothing and textile sector needs to compete on more than price and that measures should also focus on improved quality and better design.

2.6.4 Key issues on the review of South Africa's trade and industrial policy

The findings of South Africa's trade performance in the 1990s reveal that although competitiveness as measured by the Real Effective Exchange Rates (REER) and unit labour cost increased, the structure of trade has remained relatively capital and technology intensive compared to other middle income countries. Trade and industrial policy was biased in favour of large capital-intensive firms and the minerals-energy complex (MEC). As a result of this bias, manufacturing export was lower than that of the most dynamic emerging economies.

South Africa has, since becoming a democracy in 1994, pursued the liberalisation of its economy on various levels that exceeded WTO requirements including the removal of the dual exchange rate; nominal tariffs, number of tariff bands and categories were all reduced; quantitative controls related to agriculture were reduced; and there was phased unilateral reduction of tariffs. General export subsidies under the General Export Incentive Scheme (GEIS) were replaced with WTO compliant supply-side incentives. However, the clothing and textile and motor vehicles and components sectors continued to receive export subsidies.

A 15-Year Review of industrial policy (1994–2008) by Rustomjee and Hanival (2010) reveals that as a result of policy interventions, the competitiveness of the economy had improved since the early 1990s as reflected by the improvement in and diversification of exports, as well as the significant improvement in labour productivity. Although all manufacturing sectors were growing, the fastest growing sectors were resource and capital intensive which did not lead to substantial employment creation.

The findings by Rustomjee and Hanival (2010) further reveal that the availability of skilled labour remained a key constraint to further growth. The continued export subsidies did not prevent high levels of clothing and textile imports from China which indicated that the industry needed to compete on more than price if it were to succeed. The high levels of protection in the textile industry meant that firms tend to produce various products to satisfy the domestic market and remain unable to upgrade their capital stock.

This study explains that there are various advantages derived from producing for the export market as illustrated by East Asian economies and that governments in East Asian economies simultaneously promoted education. Private firms had inadequate incentives to train and educate the labour force because once an employee is trained and skilled he or she can easily move to another firm. This implies that the government should intervene where markets are failing.

2.7 CURRENT INDUSTRIAL POLICY DOCUMENT ANALYSIS

Document analysis explores the measures outlined in the documents and whether these measures are translated correctly into action in practice. Policies are then analysed to identify uniformity and consistencies. The following industrial policy documents were analysed:

- National Industrial Policy Framework (NIPF) – **the dti** – January 2007
- Industrial Policy Action Plan (IPAP) – **the dti** – August 2007/8
- Industrial Policy Action Plan (IPAP) – **the dti** – 2010/11 – 2012/13
- Production Incentive Programme FY2013/2014 – Version 3 – April 2013
- Competitiveness Improvement Programme for Clusters in the Clothing, Footwear, Leather and Leather Goods Industries for the 2013/14 financial year.

2.7.1 The nature of the problem

The South African economy faces a number of problems that include inequality, unemployment, low growth, poverty and the exclusion of the majority of people

from participating in the economy. In addition, there have been complaints from policy makers that South Africa was exporting commodities and other raw materials to its trading partners instead of processing these raw materials and commodities into value-added manufactures that would increase both value and prices.

The purpose of this study is to investigate whether the clothing and textile firms in South Africa are globally competitive (competitive pricing, productive labour force, high technology equipment, profit-making firms, high quality products, competent entrepreneurship and management, and overall cost-competitiveness), examine and explain why industrial policy measures have not generated expected results and reflect on recommendations for industrial policy measures that will assist the clothing and textile industry to become globally competitive. The clothing and textile industry in South Africa has been challenged by a rapid and sustained surge in imports, particularly from China and India (Dunne & Edwards, 2006; Vlok, 2006).

One of the reasons for the influx of imports of clothing and textiles into South Africa may be lack of competitiveness of locally produced products in relation to foreign goods. The vision of the National Industrial Policy Framework (NIPF) (**the dti,** 2007) outlines some of the problems identified. In order to contribute towards Government's goals for 2014 and beyond, the National Industrial Policy Framework (NIPF) vision for South Africa's industrialisation trajectory is as follows:

- To facilitate diversification beyond the current reliance on traditional commodities and non-tradeable services (tradeable – both exportable and import of competitive goods and services). This requires the promotion of increased value-addition per capita characterised particularly by movement into non-traditional tradeable goods and services that are competitive in both export markets and the domestic economy.
- To ensure the long-term intensification of South Africa's industrialisation process and movement towards a twenty-first century knowledge economy.

- To ensure the promotion of a more labour-absorbing industrialisation path with particular emphasis on tradeable labour-intensive goods, services and economic linkages that act as catalysts for employment creation.
- To ensure the promotion of a broader-based industrialisation path characterised by greater levels of participation by historically disadvantaged economic citizens and marginalised regions in the mainstream of industrial economy.
- To contribute to industrial development in Africa, with a strong emphasis on building regional productive capabilities.

Implicit in these is the goal of making some of the industries in South Africa including the clothing and textile industries globally competitive through the promotion of a more labour-absorbing industrialisation path. Although the problem of competitiveness is not outlined in the vision, the NIPF document alludes to the importance of government intervention in the economy. The market mechanism is constrained at resolving coordination problems that require large-scale changes (Chang, 1998). First, the countries that have uncritically embraced the Washington Consensus have demonstrated disappointing growth and development results (Stewart, 1991; Bond, 2000; Stiglitz et al., 2013; Ketels, 2017). Second, it is precisely the NICs that did not follow this route that have demonstrated the highest levels of economic development (NIPF, **the dti,** 2007; Stiglitz et al., 2013; Ketels, 2017).

2.7.2 Present and past policies developed to address the problem and the outcomes

According to NIPF (**the dti,** 2007), three of the four manufacturing and tradeable service sectors which Government has actively supported since 1994 have become leading sectors, namely: the automotive sector, resource-processing industries; and the tourism sector. The fourth sector is the clothing and textile sector, which, despite the support provided through the Duty Credit Certificate Scheme (DCCS), has not become a leading sector and has instead been under severe strain from intense global competition.

According to NIPF (2007), the DCCS has been partially successful. It was originally introduced in 1993 as a bridging measure when the Structural Adjustment Programmes (SAPs) were discontinued. Exporters of certain prescribed textile and clothing products could earn credits based on exports of these products during the 12-month periods ending 31 March 2001, 31 March 2002, 31 March 2003, 31 March 2004 and 31 March 2005. A duty certificate indicating the value of the duty credits granted the participant credit to this value on duties payable by them on the importation of certain prescribed textile and clothing products (NIPF, **the dti**, 2007).

The current industrial policy put in place to address challenges in the clothing and textile industry is outlined in the IPAP (**the dti**, 2007/8). According to this document, clothing and textile are amongst the most labour-intensive industries in South Africa, employing approximately 127 000 people – which is 11% of total manufacturing employment – and contributing around 0.6% to GDP. The sector has been under intense pressure since the mid-1990s and was negatively impacted by periods of currency strength and fierce import competition, particularly from China. The sector contributes to regional employment and has built a strong core of capabilities, and should therefore be supported to ensure its continued survival.

Recent government efforts have been aimed at arresting the decline of the sector. However, the medium-to-long-term challenge for the industry is to undertake the

upgrading and restructuring that the industry needs to become fully sustainable. This will require adaptation of current support measures, particularly the DCCS by Government, but also a strong commitment by business and labour to make the necessary adjustments.

However, an added level of complexity that needs to be taken into consideration in revising the DCCS is that it is an instrument that applies across the entire Southern African Customs Union (SACU), and not simply to the South African economy. The sector faces a range of challenges which include difficulties in competing against low-cost imports, low levels of investment in upgrading of skills and production processes to become competitive, as well as associated low levels of product design and innovation, and a marked decline in export activity.

A number of measures need to be taken to place the industry on a more competitive and sustainable footing, which requires movement up the value chain. Key measures undertaken during the 2007/8 financial year included a redesigned support scheme for the sector aimed at recapturing the domestic market share, a review of input costs into the clothing sector, full implementation of country of origin labelling, and support for productivity upgrading and skills development.

The 2010/11 – 2012/13 IPAP of 2010 is a document that explains the current industrial policy measures for the clothing and textile industry in some detail. Cluster 2 is aimed at scaling up and broadening interventions in existing IPAP sectors (IPAP – **the dti**, 2010, p. 54). Regarding the clothing and textile industry, key action programmes called the Clothing and Textiles Production Incentive (PI) and the Competitiveness Programme (CTCP) were introduced and implemented by the Industrial Development Corporation (IDC). There were other programmes accompanying the PI and CTCP, namely:

- to restrict illegal imports flooding the country;
- to provide skills development aimed at upgrading skills in the sector;
- to undertake an audit of textile capabilities to audit the capacity and the technology currently in the textile industry;

- to encourage innovation and technology so that identified distinct technologies and where potential commercialisation is possible would be undertaken with relevant partners; and
- to promote B-BBEE aimed at exploring and leveraging B-BBEE obligations at retail level to promote domestic manufacturing and sustainable black ownership.

It is important that interventions that could improve the competitiveness of industries are identified and fully leveraged. It is also important that the clothing and textile industry and other sectors of strategic importance are targeted for support. In South Africa, however, the economy cannot arguably be classified as industrialised; and to ensure that industrialisation will not lead to unequal distribution which is already a problem caused by previous apartheid government policies of exclusion, it is important that industrial policy measures are accompanied by policies such as B-BBEE to promote domestic manufacturing and sustainable black ownership.

According to the Competitiveness Improvement Programme (CIP), competitiveness improvement interventions would focus on People, Process, Product and Market Development. The first three interventions focus on the supply side while the fourth focuses on the demand side. The policy focuses on people (especially training new managers as there is a need to replace ageing managers in the industry; machine operators to prepare them to easily adapt to new technologies, multi-skilling, HIV/AIDS programmes, labour productivity; shop stewards to establish, nurture and maintain good relations between employers and employees, and shop floor workers and support personnel).

Other process activities include competitiveness improvement interventions, world-class manufacturing principles and interventions that increase the profitability of a company. Product-related supply chain integration interventions include quick and reliable delivery time; fashion design, pattern design and manufacturing integration process; process development focusing on bringing new processes into mainstream

production; and technology focus (automation). Market development interventions proposed in the CIP include market research activities related to determining the size and dynamics of the market both locally and internationally. This would be coupled with marketing activities linked to developing a marketing plan based on the results of the market research.

The CIP elaborates on other interventions that include product certification requirements, show room, brand development tradeshows, and technological innovation which could be easily integrated or explained within the context of the process interventions discussed above. A shortcoming explicit in the CIP document is the use of the phrase 'competitiveness improvement interventions'. All the measures explained above such as people, process, product, market development, product certification, showroom, brand development, trade shows and technological innovation activities are, in general, competitiveness improvement activities.

However, in the CIP documents, other activities are singled out as competitiveness improvement interventions, such as "economically viable and sustainable models for technical assistance through an approach to improve quality, efficiency and international competitiveness in individual companies" (CIP, March 2013, p. 15). This inconsistency in the use of the phrase may lead to confusion and unintended negative consequences.

It is worth noting that according to IPAP (**the dti**, 2010), Cabinet approved the first IPAP 2007/8 which reflected chiefly 'easy-to-do' actions and these have largely been implemented. The document further states that "there has been a growing recognition that industrial policy needs to be scaled up from 'easy-to-do' actions, to interventions that we 'need-to-do' to generate a structurally new path of industrialisation" (**the dti**, 2010, p. 3). According to the document, after intensive consultation and analysis, "it was recognised that a one-year IPAP is too short a period and that future IPAPs will be for a three-year rolling period, updated

annually and with a 10-year outlook on desired economic outcomes" (**the dti**, 2010, p. 4).

This creates the impression that there were no stakeholder consultations prior to the draft and release of earlier versions of industrial policy. If that is the case, this could be considered a serious omission because all those likely to be affected by the intended industrial policy were not informed of the measures that were being taken. In addition, this may suggest that the approach to industrial policy was that of trial-and-error in that there was awareness that the previous industrial policy outlined 'easy-to-do' actions and that there was a need for 'need-to-do'. However, besides the shortcomings in industrial policy approach mentioned above, South Africa's industrial policy approach should be commended on the seriousness with which it views the cluster system, measures to address competitiveness in the industry, and improvement in measurement tools to assess progress toward competitiveness.

The CIP is based on the belief that competitiveness improvement is best achieved through value chain networking and partnerships. Knowledge and information gained regarding the recapturing of the domestic market can be shared among firms through cluster activities. The CIP document outlines the requirements for cluster formation and makes a clear distinction between ordinary clusters and national clusters. The document requires the formation of clusters in the clothing and textile industry to be a model of best practice and illustrates the importance of the cluster concept being implemented.

The CIP is based on cluster formation of either similar manufacturing entities or a value chain cluster comprising manufacturers, suppliers and retailers in order to engage collectively with improvement activities which are more cost-effective and could include benchmarking, supply chain interventions and value chain integration where competitive advantages are identified (**the dti**, 2013/24). The importance of clusters is clearly illustrated by the following email enquiry from one textile Fabric Company directed at the researcher on 17th June 2015 after the researcher had been to the factory to collect data:

> Our company is involved with the finishing of textile fabrics. We believe that clusters are being formed to advance the status and employment of people. Could you please advise how one becomes involved in these clusters?

This suggests that clusters are important to the people who are directly affected and for whom the clusters were made available. However, there is some concern that not all stakeholders were properly informed about the formation of clusters. The response below illustrates how comprehensive the programme is:

> The Cluster Programme (Competitiveness Improvement Programme (CIP)) has been running since 2009. There are two provincial clusters that are funded by the provinces in KZN and Western Cape which anyone can become a member of. The CIP clusters which are 75% funded by **the dti** are typically formed by companies in a value chain (suppliers, manufacturers and retailers) who want to improve their competitiveness as a whole. We will be having workshops in September (we will confirm dates soon but the one in Gauteng is scheduled for 3 September 2015) where we will be explaining more about clusters and also industry development organisations.

Although the response above is encouraging, it may be an indication that policy makers in South Africa are reactionary, bearing in mind that the cluster programme was established in 2009 and applications were accepted from June 2012. The above enquiry was made in mid-2015, three years later. People who were supposed to be the recipients of incentives still had little knowledge of a policy programme that is intended to serve them. Another important aspect of the industrial policy approach in South Africa is the emergence of measurements of competitiveness improvement which is an important component of the CIP.

Competitiveness improvement is driven by efficiency advantages such as lowered costs including transaction costs, flexibility advantages (lower production run, higher variability of production, quicker turnaround of production) and innovation

advantages (product development, alternate product offerings, knowledge spillovers and co-operation) (**the dti**, 2013). Competitiveness improvements must be monitored by participants in order to demonstrate quantifiable improvement. The document requires that a cluster measurement exercise be done for each cluster member quarterly in order to determine the performance gaps and how these will be closed.

According to the CIP document, all interventions must be measurable and the impact of each must be monitored. It appears logical that for any competitiveness improvement to be attributed to the intervention, there should be baseline measurement prior to implementation and subsequent measurement at regular intervals to show improvement in relevant areas. As explained by **the dti** (2013, p. 10), "A well-structured benchmarking capability should form a principal part of the cluster implementation, and that stakeholders that include trade unions are involved in project formulation and implementation is preferred".

The CIP document explains the problems of clusters in the clothing and textile industry in South Africa as being that industrial structural deficiencies in South Africa are due to lack of coordination of firms in economic "clusters" because firms are focused on production for government rather than for consumers and competitors; exports are focused on commodities, rather than adding value; lack of skills integrated with technological capability; lack of competition in the local market; and lack of government bureaucratic capability.

2.7.3 Key issues on the current industrial policy document analysis

Document analysis is done to explore the measures outlined in the documents and whether these measures are translated correctly into action programmes in practice. These policies are then analysed to identify uniformity and possible inconsistencies. The following industrial policy documents were analysed:

- National Industrial Policy Framework (NIPF) – **the dti** – January 2007;
- Industrial Policy Action Plan (IPAP) – **the dti** – August 2007/8;

- Industrial Policy Action Plan (IPAP) – **the dti** – 2010/11 – 2012/13;
- Production Incentive Programme FY2013/2014 – Version 3 – April 2013; Competitiveness Improvement Programme for Clusters in the Clothing, Footwear, Leather and Leather Goods Industries for the 2013/14 financial year.

South Africa's economy is faced with a number of problems that include inequality, unemployment, low growth, poverty, and the exclusion of the majority of people from participating in the economy. South Africa is exporting commodities and other raw materials to its trading partners instead of processing these raw materials and commodities into value-added manufactures that increases both value and price. The clothing and textile industry in South Africa has experienced the challenge of a rapid and sustained surge in imports, particularly from China and India (Dunne & Edwards, 2006; Vlok, 2006). One of the reasons for the influx of imports of the clothing and textile into South Africa may be the lack of competitiveness of locally produced products in relation to foreign goods.

According to the NIPF vision, one of the goals of the Government for 2014 and beyond is the promotion of a more labour-absorbing industrialisation path with particular emphasis on tradeable labour-intensive goods, services and economic linkages that act as catalysts for employment creation. Three of the four manufacturing and tradeable services sectors which the Government has actively supported since 1994 have become leading sectors, namely the automotive sector, resource-processing industries and the tourism sector. The fourth sector is the clothing and textile sector which despite support through the Duty Credit Certificate Scheme (DCCS) has not become a leading sector and has instead been under severe strain from intense global competition (NIPF, **the dti**, 2007).

Cluster 2 is aimed at scaling up and broadening interventions in existing IPAP sectors (**the dti**, 2010). Regarding the clothing and textile industry, key action programmes known as the Clothing and Textiles Production Incentive (PI) and the Competitiveness Programme (CTCP) were introduced and rolled out by the

Industrial Development Corporation. According to the Competitiveness Improvement Programme (CIP), interventions would focus on People, Process, Product and Market Development. The CIP identifies other interventions that include product certification requirements, show room, brand development tradeshows, and technological innovation.

The primary objective of industrial policy measures in the clothing and textile industry is to recapture the lost domestic market which has been taken over by the surge in imports from China and India. In addition, there seems to be limited urgency to promote manufactured exports which is a requirement for global competitiveness and industrialisation. The CIP document outlines the problems of clusters in the clothing and textile industry as follows: Industrial structural deficiencies in South Africa are due to lack of coordination of firms in economic "clusters"; firms are focused on production for government rather than for consumers and competitors; exports are focused on commodities, rather than adding value; lack of skills integrated with technological capability; lack of competition in local markets; and lack of government bureaucratic capability.

This study explains that although the primary aim of the current industrial policy measure is to recapture the domestic market in the clothing and textile industry which has been taken by imports from China and India, this must be accompanied by measures that promote exports of manufactured goods because of the massive benefits associated with the measure. Training of government policy makers in cluster activities is also essential and more must be done in these areas.

2.8 SOUTHERN AFRICAN CUSTOMS UNION (SACU)

A Customs Union is a preferential trade arrangement in which two or more countries remove all tariffs against goods/services and/or investments originating from within those countries and where the countries within a Customs Union negotiate a common external tariff on goods/services and/or investments (Goode, 2005). According to the South African Trade Policy and Strategy Framework (TPSF, 2010), the new SACU Agreement which came into force in July 2004

comprises South Africa and four other countries in Southern Africa, namely Botswana, Lesotho, Namibia and Swaziland (BLNS).

The TPSF (2010) identifies several important departures from the old SACU Agreement, such as, amongst others:

- a democratic consensus around decision-making;
- new supra-national institutions including a Tribunal to settle disputes,
- a SACU Tariff Board to determine changes to the common external tariff and a Secretariat;
- envisioning deeper integration through development of common SACU policies in, among others, industry, agriculture, competition and unfair trade practices; and
- establishment of a Revenue Sharing Formula (RSF) that weights shares of customs revenue and excise taxes in favour of the BLNS, including through a development component.

South Africa values the new SACU Agreement for its ability to be transformed into:

- a vehicle for advancing and deepening developmental integration at the sub-regional level;
- an anchor in the Southern African Development Community (SADC) regional project; and
- a platform for harmonised engagement in wider global trade relations.

An important sector that is likely to benefit from common industrial policies in the sub-region is the clothing and textile industry. Sub-Saharan African clothing and textile exports are heavily concentrated in few economies and are of strategic significance in these economies with major implications for growth and poverty reduction (Kaplinsky, Raphael & Morris, 2009). An analysis of global trade indicates that the clothing and textile industry sector accounts for about 4% of total exports, and in 2012 this translated into about US$600 billion in value terms (Fundira, 2012).

The clothing and textile industry remains one of the most important sectors, especially for some developing and least developed countries where clothing accounts for a large proportion of total exports (Fundira, 2012). However, for Sub-Saharan Africa where the infrastructure is poor, resulting in logistical problems and limited capacity for large volume orders, the sector accounts for a mere 2% share of total clothing and textile exports (WTO, 2011). This suggests that there is still potential for Sub-Saharan Africa to increase its share of clothing and textile exports.

This potential can be realised if SACU Customs Union common industrial policy in the clothing and textile sector is aimed at increasing production capacity of clothing and textiles and thus enable the sector to meet large volume orders. This should be accompanied by measures aimed at introducing Member States to the global supply chain networks that often determine the countries from which large importers of the clothing and textile industry should be buying.

It is important that industrial policy measures should focus on segments where the SACU Member States have comparative advantage. The United States International Trade Commission (USITC) (2009) classifies the clothing and textile value chain into the following distinct sectors:

- production of raw materials (natural and man-made fibres);
- manufacture of yarn and fabric;
- making of clothing; and
- retailing of the finished items.

According to Fundira (2012), although the textiles industry which is capital-intensive is also important for developing countries, it is the labour-intensive garment manufacturing stage which is of particular importance when poverty alleviation concerns are raised. This implies that SACU industrial policy measures in the clothing and textile industry should place emphasis on the garment and clothing sector due to its labour-intensive nature and its concomitant ability to reduce poverty and unemployment.

2.9 AFRICAN GROWTH AND OPPORTUNITY ACT (AGOA)

According to Kaplinsky et al. (2009), the structure of the global clothing and textile sector reflects three major factors:

- Firstly, the concentration of global buying power in the industrialised countries, which disadvantages smaller-scale producing countries that cannot provide large volumes; and provides advantages to countries like China that have large volume producing plants.
- Secondly, larger volumes give rise to costs and efficiency advantages to these large-scale producing countries.
- Thirdly, the protective regimes determine the pool of countries that can reliably serve large-scale global buyers.

Although three protective regimes have been important in explaining Sub-Saharan Africa's (SSA) role in the global industry, the United States protective regime has been the most important to the SSA clothing and textile industry (Kaplinsky et al.,2009). The African Growth and Opportunity Act (AGOA) passed by the US in 2000 came about as a result of a research process that revealed the existence of social conditions that were conducive to American business in Africa (Gerstenfeld & Njoroge, 2005). According to the Act (2000), Sub-Saharan Africa represents a region of enormous economic potential and is of enduring political significance to the United States.

The aim of the AGOA is to expand the scope of preferential access of Africa's exports to the US in key areas that include clothing (Mattoo, Roy & Subramanian, 2002). AGOA is about more than trade and is a policy framework that covers trade, the development of trade capacity (for example, through the African Global Competitiveness Initiative), general development assistance, investment through bodies such as the Millennium Challenge Corporation (MCC), the Overseas Private Investment Corporation (OPIC), healthcare assistance, and security-related cooperation, amongst others (Naumann, 2010).

AGOA is aimed at broadly improving economic policymaking in Africa and encouraging countries on the continent to embrace globalisation and secure durable political and economic stability (Mattoo et al., 2002). Therefore, preferential access for African exports to the US is intended to serve as an incentive for African countries to adopt globalisation. In its original form, the Act forms part of US trade legislation and offers non-reciprocal trade preferences to qualifying countries from Sub-Saharan Africa and therefore provides these countries with duty-free access to one of the largest markets in the world (Naumann, 2010).

Since its signing in 2000, the Act, which was supposed to expire in September 2008, has undergone some amendments. Among the major amendments are the extension of the Act in 2004 by then President George Bush to run for an additional seven years to 2015, while also changing the expiry date of special provisions relating to garments from 2004 to 2007, and two years later changed to 2012. Additionally, during 2006 further changes to the key textile provisions were introduced with a view to oblige apparel manufacturers to utilise local denim fabric, although these provisions were again repealed in 2009 (Naumann, 2010).

According to ASNAPP Online (as cited in Gerstenfeld & Njoroge, 2005), AGOA holds potential benefits for qualifying African countries as well as for the US. For African countries, AGOA reinforces African reform efforts, provides improved access to US credit and technical expertise, and establishes a high-level dialogue on trade and investment in the form of a United States-Africa Trade and Economic Forum. For the US, AGOA benefits US firms through the provision of better market opportunities and better commercial partners in Africa, and new opportunities in the privatisation of African state-owned enterprises and in infrastructure projects (Gerstenfeld & Njoroge, 2005).

In a review of the first decade of AGOA and using the 2009 trade figures, Naumann (2010) observes that non-reciprocal imports account for $60 billion of the total, or 3.9%; and of this figure $28 billion, or 1.8% is attributed to AGOA, which is also the largest share of all non-reciprocal programmes. South Africa’s textiles and

apparel sector showed a dramatic decline in export earnings from 2003 to 2009 in which export earnings dropped by 49,7% from US$563 million to US$283 million over the period (Naumann, 2010). This decline in export earnings follows the liberalisation of the global and textiles sector in 2004.

The decline in export earnings coincides with the rapid increase in cheaper imports, particularly from China, as well as a decline in the share of South African exports to the United States. Among the sub-Saharan African (SSA) exporters to the US through AGOA, South Africa experienced a significant reduction of its exports to the US (Kaplinsky & Morris, 2009). South Africa's poor performance in the US clothing and textile market is often attributed to different stringent conditions that the country faces compared to other AGOA countries.

One of these conditions is the third-party country provisions that restrict South Africa to procuring fabric and raw materials only domestically or from other AGOA members. South Africa can become as competitive as any other country, including those in AGOA, if it was allowed to import yarn for knitwear and fabric for woven clothing from other more efficient producers outside Africa such as China, India and Taiwan, as is the case with other AGOA members (Morrison, Barnes & Esselaar, 2004). However, for a significant number of countries, the clothing sector has seen the most widespread uptake of preferences, and the benefits have in effect become a lifeline in ensuring the growth and preservation of significant employment opportunities and investment.

The clothing and textile sector is one of the sectors targeted by the South African government for promotion whose principal objective is to reduce unemployment levels. On the one side, there are tariff lines that are at Double-Stage Transformation which aim to increase value-addition in the sector. On the other side, there are few lines that are at Single-Stage Transformation. In the Single-Stage Transformation, value-addition is minimal.

2.10 THE CONCEPT OF 'COMPETITIVENESS'

Countries and governments pursue economic growth and economic development. Economic growth is a precondition for economic development and it is a sign that economic development can be achieved. An increase in the manufacturing of value-added products is a necessary path towards economic growth and leads to industrialisation. Industrialisation is achieved if factories in local industries are competitive. In the era of globalisation, industrialisation will be achieved if manufacturers in the local industries are globally competitive.

Concerns regarding 'competitiveness' have been growing (Kaplan, 2003b; Aiginger & Vogel, 2015; Olczyk, 2015). Governments introduce industrial policy with the aim of making their industries globally competitive. Although there is no generally accepted definition of the concept of "competitiveness", the concept has taken different meanings over time and "has assumed a broad number of definitions in both economic and business literatures" (Salinger et al., 1999, p. 4).

Competitiveness can have different meanings and academics, and economists in particular, are often wary of the concept of competitiveness, especially when it is applied to countries (Roberts, 2002). In economic literature, 'competitiveness' has often been associated with international trade. In this study, 'competitiveness' is used in an international trade context, namely international trade competitiveness, and with the aim of answering the question: 'Why do South Africans prefer to import clothing and textiles from other countries when these are produced and are available locally?'

In a case study on export competitiveness in Lithuanian industries, Travkina and Tvaronavičienė (2010) explore the genesis of competitiveness, the various theories and the key factors that determine competitiveness. These major schools of economic theory are the Mercantilists, Traditional Classical theories (Classical and Neo-classical theories); Modern theories based on classical principles (New trade theory, Development economics, New economic growth theory) and theories of

total spending in the economy (Keynesian theory). These theories are briefly discussed below.

2.10.1 Mercantilism

Salvatore (1995) observes that during the seventeenth and eighteenth centuries a group of men (merchants, bankers, government officials and philosophers) wrote essays and pamphlets on international trade that advocated for an economic philosophy known as 'mercantilism'. The main idea behind this economic philosophy was that the way for a nation to become rich and powerful was to export more than it imported and gain a balance of trade surplus (Salvatore, 1995). Mercantilism viewed trade as a zero-sum game in which a trade surplus of one country is compensated for by a trade deficit of another country (Travkina & Tvaronavičienė, 2010; Cho & Moon, 2013).

The Mercantilists are accepting of the concept of competitiveness (Krugman, 1996). Countries compete with each other the same way that firms and corporations do. For a mercantilist, the purpose of trade is to generate exports, which creates jobs (Krugman, 1996). The competitiveness of countries was determined by the wealth of a country measured by its holdings of precious metals such as gold and silver (Salvatore, 1995, Travkina & Tvaronavičienė, 2010; Cho & Moon, 2013). Therefore, a country was considered more competitive than others if its wealth of precious metals, such as gold and silver, was more than that of other countries.

2.10.2 Classical Theories

2.10.2.1 Adam Smith and the Absolute Advantage of Trade (1776)

The theory of absolute advantage in Adam Smith's publication, *The Wealth of Nations* (1776) postulates that when one nation is more efficient than (or has an absolute advantage over) another in the production of one commodity but is less efficient than (or has an absolute disadvantage with respect to) the other nation in producing a second commodity, then both nations can gain by each specialising in the production of the commodity of its absolute advantage and exchanging part of

its output with the other nation for the commodity of its absolute disadvantage (Salvatore, 1995, p. 28).

Therefore, countries could trade if they specialised in the production of different goods and exchanged these goods between themselves, provided that each was willing to accept what another was offering in exchange for what each was producing. In the absolute advantage trade, each country was supposed to have an absolute advantage in the production of a good.

2.10.2.2 David Ricardo and the Comparative Advantage of Trade (1817)

In his publication, *Principles of Political Economy and Taxation* (1817), David Ricardo presented the Law of Comparative Advantage. "According to the law of comparative advantage, even if one nation is less efficient than the other nation in the production of both commodities, there is still a basis for mutually beneficial trade" (Salvatore, 1995, pp. 30–31). The mutually beneficial trade can occur if the first nation specialises in the production of and exports the commodity in which its absolute disadvantage is smaller and imports the commodity in which its absolute disadvantage is greater (Sődersten, 1980; Salvatore, 1995; Travkina & Tvaronavičienė, 2010).

The absolute and comparative advantage of trade theories advocates for as little government interference in the economic system as possible, a policy of *laissez-faire*. These theories assume that the competitiveness of economies flows from the traditional factors of production, particularly capital and labour, and that capital investment, the division of labour (labour specialization) and free trade are the engines of growth (Sődersten, 1980; Salvatore, 1995; Travkina & Tvaronavičienė; 2010).

However, the problem with classical theories is that they address the same problem by providing models that clarify competitiveness of international trade based on differences in productivity levels between countries without explaining why these differences exist (Smit, 2010; Travkina & Tvaronavičienė; 2010; Cho & Moon, 2013).

2.10.3 Neo-Classical Theories

Some of the major Neo-Classical theories include the Stolper-Samuelson Theorem (1941); the Heckscher (1919)–Ohlin Theorem (1933); the Leontief Paradox Theory (1953); the Neary Factor-Intensity Reversals (1978); the Vernon's Product Life-Cycle Theory (1966); the Rybczynski Theorem (1968); the Samuelson–Jones Theorem (1968); and the Linder's Country Similarity Theory (1961). Some of these theories are discussed briefly below.

2.10.3.1 The Heckscher-Ohlin (H-O) Theorem

The H-O theory is a combination of the Heckscher (1919) and Ohlin (1933) theories and is normally represented by the following two forms of theorems: the H-O theorem (which deals with and predicts the pattern of trade), and the factor-price equalization theorem (which deals with the effect of international trade on factor prices (Salvatore, 1995). The H-O theory can be explained in terms of factor intensity and factor abundance (Sődersten, 1980; Salvatore, 1995).

The H-O theorem can be stated as follows: A nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor, i.e. the relatively labour-rich nation exports the relatively labour-intensive commodity and imports the relatively capital-intensive commodity (Salvatore, 1995, pp. 118-119).

Put simply, the country that is abundant in capital will export the capital-intensive good, and the country that is abundant in labour will export the labour-intensive good (Sődersten, 1980; Cho & Moon, 2013). The reverse of the theorem is also true, that if a country exports the capital-intensive goods, capital is its relatively cheap factor of production in that country, and if a country exports the labour-intensive goods, then labour is the relatively cheap factor of production in that country (Sődersten, 1980; Salvatore, 1995).

Table 1A: A Genesis of Competitiveness (Traditional Classical and Neo-classical)

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
1. Group: Traditional Classical Theories			
Classical Theory	Adam Smith (1776) – Absolute Advantage Theory; David Ricardo (1817) – Comparative Advantage Theory	• Investment in capital, improved machinery; • Labour specialization (division of labour); • Trade, based on absolute advantage and later comparative advantage.	• Improved machinery (latest technology); • Labour (division of labour to the extent that it increases productivity of labour).
Capital investment, the division of labour and free trade as engines of growth.			

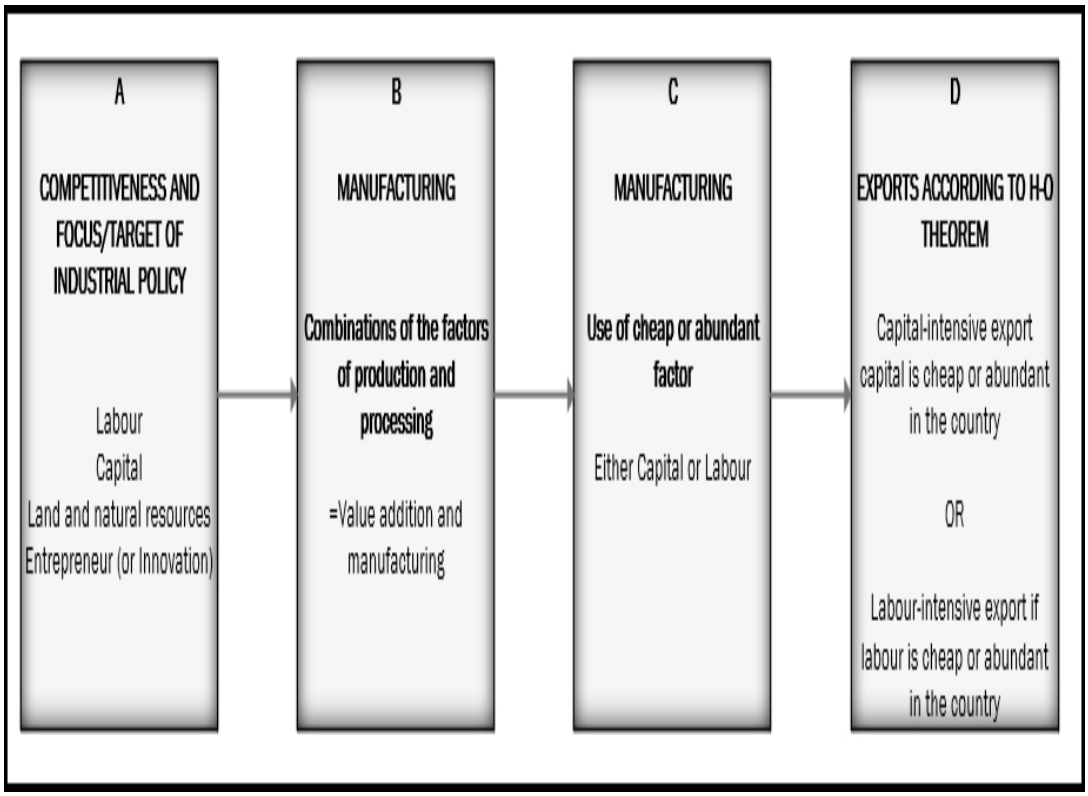
Source: Adapted from Travkina & Tvaronavičienė, 2010

Figure 3 below is used to illustrate the links between Competitiveness, Production (Manufacturing) and Exports. In Box A in Figure 3, competitiveness, which in this study has been defined as, *inter alia*, productive workers, productive machines with the latest technology and profit-making firms, is represented by the factors of production which are labour, capital, land and other natural resources, and entrepreneurship. Manufacturing in Box B is described as the combination of the factors of production, that is, processing which involves value addition or the conversion of factors together with material inputs into manufactured product.

Box C is still a manufacturing process but goes into detail in describing how the combination of factors occurs. According to Heckscher-Ohlin (H-O) theorem, if a country has an abundance of capital/capital is cheap in a country, the country will use more capital compared to other factors of production, making the product

capital-intensive. Similarly, if a country has an abundance of labour/labour is cheap in a country, the country will use more labour compared to other factors of production, making the product labour-intensive.

Figure 3: Links between Competitiveness, Production (Manufacturing) and Exports



Source: Own, 2018

A conclusion that is drawn from the H-O theorem is summarised in Box D in which a country that has an abundance of capital/capital is cheap, will use more capital in its production and produce a capital-intensive product which the country will also export while a country that has an abundance of labour/labour is cheap, will use more labour in its production and produce a labour-intensive product which the country will also export.

2.10.4 Porter's Diamond Framework of Competitiveness

Michael Porter's (1990) thesis, *The Competitive Advantage of Nations*, suggests that a country's prosperity is created and not inherited from factor endowments as the classical literature advocates. The country's environment that includes values, culture, economic structures, institutions and histories contributes towards the competitive success of a nation. Several authors (Krugman, 1994; Dickerson, 1995; Salinger et al., 1999; Porter, 2004) suggest that the best measure of competitiveness is 'productivity'.

They argue that productivity includes all other elements of competitiveness such as the growth rate of the living standards, the growth rate of domestic productivity, high wages, a strong currency, and attractive returns on capital. A country's standard of living depends on its companies' capacity to achieve high levels of productivity, and to increase that productivity over time (Porter, 1990). The productivity of human resources determines employee wages while the productivity with which capital is employed determines the return it earns for its holders. Figure 4 below illustrates Porter's Diamond Framework of Competitiveness.

Table 1B*:* A Genesis of Competitiveness (Traditional Classical and Neo-classical)

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitive Factors Relevant to this Research
1. Group: Traditional Neo-Classical Theories			
Neo-Classical Theory	• Vernon (1966) The product Life-Cycle Theory; • Rybczynski (1968) Rybczynski theorem; • Samuelson and Jones (1968) Samuelson-Jones Theorem; • Linder (1961) Country Similarity Theory.	Trade based on factor endowments (labour and capital); Factor-price equalisation (through capital-intensive and labour-intensive goods).	Factor endowments, labour and capital as the main factors. Price of factors and factor-price equalisation.

Source: Adapted from Travkina & Tvaronavičienė, 2010

Porter's (1990) Diamond Framework of Competitiveness comprises Factor Conditions, Demand Conditions, Related and Supporting Industries, Firm Strategy, Structure, and Rivalry. Factor Conditions refers to the nation's position in factors of production such as skilled labour, capital, land and entrepreneurship or infrastructure necessary to compete in a given industry. Demand Conditions refers to the nature of home market demand for the industry's product or service. Related and Supporting Industries refers to the presence or absence in the nation of suppliers' industries and other related industries that are internationally competitive.

Price Strategy, Structure and Rivalry refers to the conditions in the nation governing how companies are created, organised and managed, as well as the nature of

domestic rivalry (Porter, 1990). Porter's Diamond Framework of Competitiveness is not a new theory to explain the competitiveness of countries, but rather a framework that enhances the understanding of the international competitiveness of firms (Smit, 2010). This study argues that although comparative advantage is the first indicator of competitiveness, improvements in the factors of production influence competitive advantage.

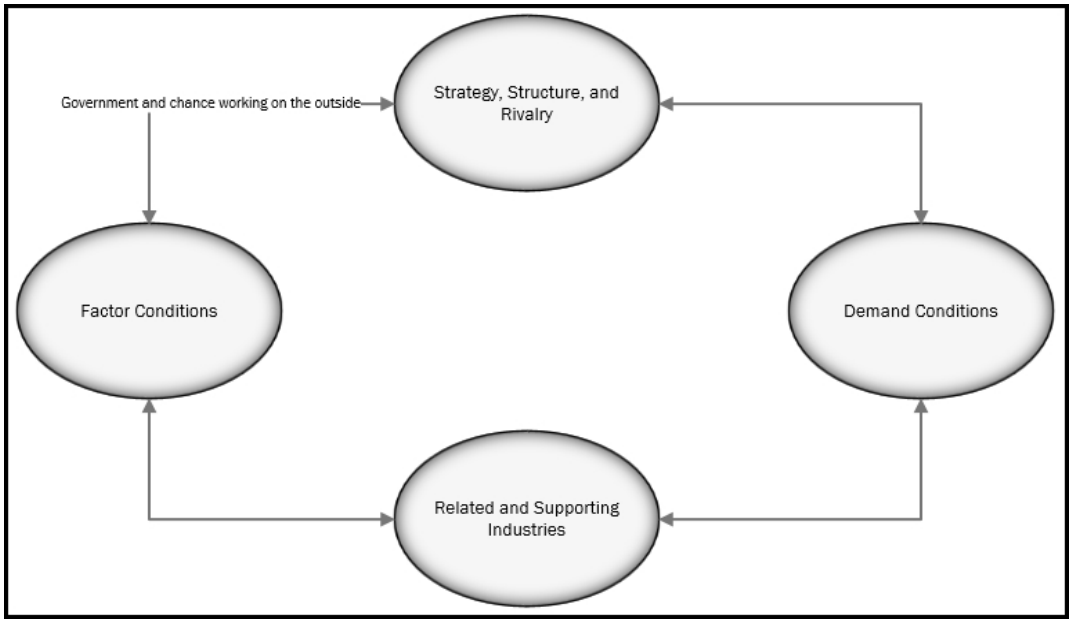
Smit (2010) provides an interesting distinction between firm competitiveness and country competitiveness that helps to understand Porter's contribution to the concept of competitiveness. If firms increase their productivity through these location advantages, it will be advantageous for that country because higher productivity always leads to higher levels of welfare (assuming fair redistribution), although this does not mean that the country has become internationally competitive, even if the firms located in the country have become internationally competitive (Smit, 2010).

Porter's framework provides a link between firms' and countries' sources of competitive advantage which has nothing to do with the international competitive advantage. Productivity is purely a domestic matter and is not related to the international competitiveness of a country (Krugman, 1998). However, Porter's approach to competitiveness contributed to the popularisation of the concept of regional economy, but the contribution was not perfect and was subject to criticism (Vuković, Jovanović & Đukić, 2012).

If a state creates an environment where the conditions are favourable for business and where the state provides maximum support for companies that perform operations in local and global markets, these conditions will give the nation competitive advantage and this can also be implemented at regional level (Porter, 1990). Krugman (as cited in Vuković et al., 2012) is of the view that the world's leading nations are not competing with one another and that there is no significant degree of competition among them. However, Krugman's argument that leading nations are not competing with one another seems to be outdated in modern times.

Very few people can argue against the observation that in modern times, the foundations of diplomatic and economic relations are premised on the desire to maximise the benefits for a country. A foreign economic representative of a country will always strive to maximise the benefits of his/her country even if it means taking advantage of another country's lack of or limited knowledge. Therefore, there is competition for resources between nations.

Figure 4: Porter's Diamond Framework of Competitiveness



Source: Stone & Ranchhod, 2006

2.10.4.1 Importance of the Clusters Approach in Industrial Policy and Competitiveness

Industrial policy is aimed at improving the competitiveness of selected sectors in the economy. Chlebiková and Mráziková (2009, p. 135) observe that "there are many definitions of clusters and most of them contain some resembling features". For instance, according to Piore and Sable (1984), a cluster is an aggregation of comparative companies performing in an industrial area in a scheme of competitive and cooperative correlation. For Schmitz and Nadvi (1994), a cluster is a group of producers that are founded close to each other and manufacture similar products.

Krugman (1991) defines a cluster as a regional concentration of related economic activities. Delgado, Porter and Stern (2014) define clusters as geographic concentrations of industries related by knowledge, skills, inputs, demand and/or other linkages. According to Leila, Zeibote and Stale (2010), the promotion and establishment of business clusters or other forms of, or network of, companies is an internationally recognised form of improving competitiveness and innovation of companies, especially for those searching for entry into international markets clusters.

Dayasindhu (2002) observes that knowledge management and industry cluster theory play an important role in attaining global competitiveness. While industrial policy and clusters both improve the competitiveness and innovation of companies, they are not the same. Porter (1998) argues that the cluster-based approach is often confused with industrial policy and yet the two differ fundamentally in both their intellectual foundations and their implications for government policy. For instance, industrial policy rests on a view of international competition in which some industries offer greater wealth-creating prospects than others.

Certain desirable high-technology industries that are growing are targeted for support, and industrial policy sees competitive advantage as being heavily determined by increasing returns to scale. This suggests that government policy through subsidies would advocate for nurturing priority to emerging ‘infant’ industries until they reach a critical mass, eliminate ‘destructive’ or ‘wasteful’ internal competition, apply selective protection from imports, and restrict foreign investment. The government employs these interventions with the aim of influencing competitive outcomes in a nation’s favour.

According to Porter (1998), the concept of a cluster rests on a broader, more dynamic view of competition among firms and locations based on the growth of productivity. Interconnections and spillovers within a cluster often influence productivity growth more than does the scale of individual firms. However, in cluster theory, instead of targeting particular industries, all existing and emerging

clusters desire attention, all offer the potential to contribute to prosperity and all clusters can improve their productivity. Porter (1998) defines a cluster as a group of interconnected companies and institutions in a specific (industrial) area and in a specific locality.

Within the scope of the Organisation for Economic Co-operation and Development (OECD), clusters are defined as close dependent companies in networks and institutions producing knowledge that unites institutions and customers which are linked into a production chain that forms an added value (Chlebiková & Mráziková, 2009).The European Union (as cited in Chlebiková & Mráziková, 2009) defines clusters as a group of independent companies and associated institutions that are locally concentrated in one or more regions, are specified in a particular area characterised by similar technologies and abilities, that cooperate and compete by innovation, and are knowledgeable or traditional.

There are many benefits that serve as incentives to clustering by firms and governments. Slaper and Ortuzar (2015) define industry clusters as regional concentrates of related industries and consist of companies, suppliers and service providers, as well as government agencies and other institutions that provide education, information, research and technical support. In other words, clusters are a network of economic relationships that create a competitive advantage for the related firms in a particular region. According to Kassalis (2011), one particular regional environment, to which a relatively prosperous economic development is often attributed, is a cluster.

Pisa, Rossouw and Viviers (2015, pp. 503-504) list the following benefits deriving from industrial clusters:

- firms in clusters display higher levels of knowledge integration, innovation, global competence, adaptability to change in the external environment, growth and sustainable development (Porter, 1998; Morosini, 2004);

- industrial clusters are repositories of specialised and flexible labour markets, capital, and research and development capabilities (Doeringer & Terkla, 1995; Lee, 2006);
- the geographic proximity of buyers, suppliers and firms in cluster creates short feedback loops for ideas and innovations, which leads to faster and more effective knowledge diffusion (Enright, 2003; Torre, 2008);
- geographic proximity also enables specialists to move easily between different firms and engage in personal communication with people undergoing training (Porter, 2002; Torre, 2008);
- industrial clustering gives rise to collective efficiency gains, an outcome that small firms would have been unlikely to realise when operating individually (Schmitz, 1995, 1997; Schmitz & Nadvi, 1999);
- industrial clustering increases the likelihood of firms, which might otherwise have been fierce local rivals in the absence of the cluster arrangement, embarking on consensual and reciprocal division of labour and specialisation (Schmitz, 1995), thereby enabling them to utilise specialised machinery more productively and achieve higher utilisation rates (Marshall, 1920);
- the division of labour also allows firms in the cluster to specialise in a limited range of production activities, save on both working and fixed capital costs, and procure materials and parts in a more flexible manner (Ruan & Zhang, 2009);
- the presence of commercial relationships, as well as concentrated demand, more accessible capital, and lower barriers to entry create opportunities for new companies to be formed and new lines of business to be initiated (Porter, 2002);
- industrial cluster formation enhances the economic performance of firms (Doeringer & Terkla, 1995; Schmitz, 1999; Lee, 2006; Sonobe & Otsuka, 2006);
- by being afforded access to better materials, capital machinery, skilled labour and networks, a firm is able to produce and market a better product and generate higher profits;

- being part of a cluster also entitles firms to various resources, i.e. infrastructure, collective bargaining and specialised services; and
- firms enjoy lower transport and transaction costs, thus reducing operational costs and enhancing profitability.

With these many benefits to be derived from establishing industrial clusters, it would be surprising if a country, industry or sector did not establish clusters. Morosini (2004), however, identifies disadvantages from geographic proximity as being:

- the poaching of specialised labour between firms;
- greater competition (which can also be an advantage);
- faster imitation of both technology and product innovations by competitors; and
- shared market intelligence among firms.

According to Delgado et al. (2014), using particular cluster definitions, studies have shown that the presence of related economic activity matters for regional and industry performance including job creation, patenting, and new business formation (Feldman & Audretsch, 1999; Porter, 2003; Feser, Renski & Goldstein, 2008; Glaeser & Kerr, 2009; Delgado, Porter & Stern, 2010, 2014; Neffke, Henning & Boschma, 2011).

Evidence from these studies has informed key questions of both research and policy interest such as the size of cluster effects, which mechanisms are most important in driving agglomeration, and how clusters diversify and grow in a region. Therefore, in order to compete more effectively, regions need to understand their cluster strengths as compared to those of others (Delgado et al., 2014). However, despite the advances in cluster research, this model, according to Viederyte and Didziokas (2014), remains a complex one and something that is hard to adapt to a real economic environment.

The importance of clusters for each company is well captured by Porter, Delgado, Ketels and Stern (2008) who explain that the New Global Competitiveness Index has three broad areas of microeconomic competitiveness which are Company Sophistication, Quality of the Business Environment, and Cluster Development as illustrated in Figure 5 below. According to Schmitz (1990, 1992), an enterprise cluster is a group of producers who are engaged in making the same or similar things in close proximity to one another – which signifies the types of concentration, namely a spatial or geographical cluster, and a sectoral cluster.

According to Porter et al. (2008, p. 48), cluster variables form part of the business environment, in that, "A higher-quality business environment including the presence of well-developed clusters significantly affect the capabilities that a company can access, the competitive choices it can make, and the productivity that it can generate using its internal assets". Humphrey and Schmitz (1996), in explaining the Triple-C approach, mention a number of policy measures to facilitate and solidify cluster development but say very little on what government should do about it.

Morosini (2004) posits a range of roles that public policy makers through government interventions can play in fostering the development of clusters and associated learning activities. These include a role for government in terms of facilitation and resource allocation, general promotion including accruing of benefits, coordinating certain cluster-related activities, and acting as the manager of the cluster process. The importance of clusters in economic development requires coordination and the fulfilment of a central role by the government.

2.10.4.2 Key issues on industrial clusters

There are many definitions of clusters and most of them share some similarities, as explained by Chlebiková and Mráziková (2009). Piore and Sable (1984) define a cluster as an aggregation of comparative companies performing in an industrial area in a scheme of competitive and cooperative correlation. Krugman (1991) defines a cluster as a regional concentration of related economic activities. According to Schmitz and Nadvi (1994), a cluster is a group of producers that has been

established in close proximity and which manufacture similar products. Delgado, Porter and Stern (2014) define clusters as geographic concentrations of industries related by knowledge, skills, inputs, demand, and/or other linkages.

The promotion and establishment of business clusters or other forms of, or networks of, companies is an internationally recognised form of improving the competitiveness and innovation of companies, especially for those searching for entry into international markets. Clusters consist of companies, suppliers and service providers, as well as government agencies and other institutions that provide education, information, research and technical support. In other words, clusters are a network of economic relationships that create a competitive advantage for the related firms in a particular region. A cluster can thus be defined as being a specific regional environment which experiences relatively prosperous economic development.

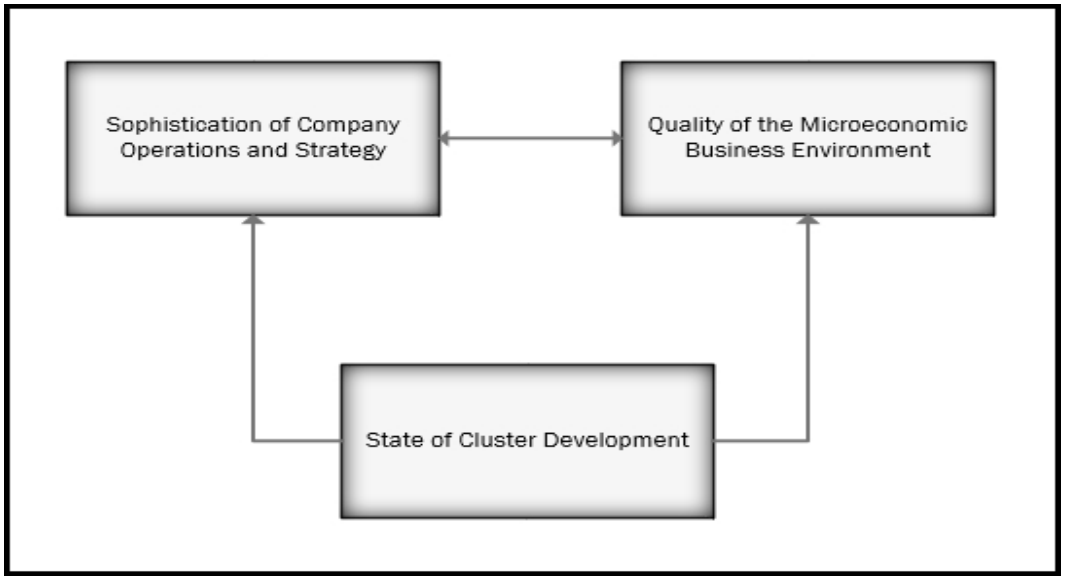
There is a range of roles that public policy makers through government interventions can play in promoting the development of clusters and associated learning activities. These include a role for government in terms of facilitation and resource allocation, general promotion including accruing of benefits, coordinating certain cluster-related activities, and acting as the manager of the cluster process. The success of clusters in economic development thus requires coordination and a central role to be played by government.

2.10.5 Competitiveness Measurement: Practical Aspects

According to Lall (2001), policy makers in many countries express serious concerns about national competitiveness. The concern for competitiveness is shared by developed countries intending to maintain their technological lead and entering new activities where high wages are not a competitive handicap, and the newly industrialised countries intending to raise their production and export shares in high-wage sectors (Lall, 2001; Vietor, 2007; Schneider, 2013; Mulati, 2015). Lall (2001, p. 1501) argues that while export-oriented new industrialised economies are concerned about staying ahead of lower wage entrants and challenging matured

industrialised countries in sophisticated activities, import-substituting economies opening themselves up to competition are concerned about restructuring their industries while developing new competencies.

Figure 5: Microeconomic Competitiveness



Source: Adapted from World Economic Forum in Porter, 2008

Competitiveness is used for analysing productivity, cost studies for specific activities, institutions, country strategy papers, and cluster studies (Lall, 2001). Although "many researchers have studied the subject of competitiveness and suggested relevant measures, most of the studies focus on the firm level and have not attempted a more comprehensive comparison of multi-country competitiveness" (Berikou, 2007, p. 2).While some authors such as Krugman (1994) deny the importance of competitiveness, others such as Reinert (1995, p. 24) believe that "although often misused and mostly ill-defined, the term competitiveness properly used does describe an important feature in the world economy. The concept scratches the surface of important issues which are central for understanding the distribution of wealth, both nationally and globally".

International institutions present annual competitive records of several countries. The two best-known indices are the World Competitiveness Yearbook (WCY) produced by the Institute for Management Development (IMD), and the Global

Competitiveness Report (GCR) of the World Economic Forum (Berikou, 2007). In addition to the WCY and the GCR, there are many unpublished reports prepared by governments, consultants and research institutions all contributing to the growing demand for benchmarking competitive performance and providing guidelines for strategy.

2.10.5.1 International Institute for Management Development (IMD) World Competitiveness Yearbook (WCY)

The World Competitiveness Yearbook of the International Institute for Management Development which was once regarded as the world's most thorough and comprehensive annual report on the competitiveness of nations has been published without interruption since 1989. Its competitiveness factors are summarised below:

- Economic Performance (78 criteria): Macro-economic evaluation of the domestic economy: Domestic Economy, International Trade, International Investment, Employment and Prices.
- Government Efficiency (71 criteria): Extent to which government policies are conducive to competitiveness: Public Finance, Fiscal Policy, Institutional Framework, Business Legislation and Societal Framework.
- Business Efficiency (68 criteria): Extent to which the national environment encourages enterprises to perform in an innovative, profitable and responsible manner: Productivity and Efficiency, Labour Market, Finance, Management Practices and Attitudes and Values.
- Infrastructure (114 criteria): Extent to which basic, technological, scientific and human resources meet the needs of business: Basic Infrastructure, Technological Infrastructure, Scientific Infrastructure, Health and Environment and Education.

2.10.5.2 The Global Competitiveness Report by the World Economic Forum

Since 2005, the World Economic Forum (WEF) has based its competitiveness analysis on the Global Competitiveness Index (GCI) – a highly comprehensive index for measuring national competitiveness – which captures the microeconomic and macroeconomic foundations of national competitiveness. It defines

competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country.

Table 2: A Genesis of Competitiveness - Porter and Extended Models

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
"National wealth is not set by factor endowments, but created by strategic choices" – Michael Porter (the pioneer of competitiveness theory)			
Porter and Extended Models	Porter's Diamond Model (Porter, 1990)	Factor Conditions (skilled labour, land, natural resources, capital or infrastructure) Local Demand Conditions (that are international competitive) Related and Supporting Industries (that are internationally competitive	Factor Conditions (skilled labour, land, natural resources, capital or infrastructure)
	Extended Models Double Diamond Model (Rugman, 1991); (D'Cruz, 1993); (Verbeke, 1995) Nine-factor Model (Cho, 2000)	• Firm Strategy, Structure, and Rivalry • Domestic and Foreign Diamonds to become globally competitive in terms of survival, profitability, and growth • Domestic and International Independent Variables of the Diamond Model • Politicians and Bureaucrats, Workers • Business Environment, Endowed • Resources, International Competitiveness, Domestic Demand, Related and Supporting Industries, Entrepreneurs • Professional Managers and Engineers.	Profitability Growth Workers Entrepreneurs

Source: Adapted from Travkina & Tvaronavičienė, 2010

Table 3: The 12 Pillars of Competitiveness

First Pillar: Institutions efficiency	Seventh Pillar: Labour market
Second Pillar: Infrastructure development	Eighth Pillar: Financial market
Third Pillar: Macroeconomic environment readiness	Ninth Pillar: Technological
Fourth Pillar: Health and Primary education	Tenth Pillar: Market size
Fifth Pillar: Higher education and training sophistication	Eleventh Pillar: Business
Sixth Pillar: Goods market efficiency	Twelfth Pillar: Innovation

Source: The Global Competitiveness Report: World Economic Forum

2.10.5.3 Shortcomings of the WCY and the GCR

Although the WCY is the study that rates and ranks the competitiveness of a certain group of nations and is a widely quoted report especially by government and public leaders, the details of its methodology are in large part unknown to the public because, according to Berikou (2007, p. 6), "The underlying analytical framework used in producing country rankings remains weal and suspect". Furthermore, "… the connections between the variables in terms of producing growth or structural competitiveness are unclear, often not impartial or are biased" (Berikou, 2007, p. 6).

A study by Oral and Chabchoub (1996) was done in an attempt to uncover it and after detailed mathematical programming, it was found that the undisclosed methodology of the World Competitiveness Report is hard to 'guess'. It was also shown that one does not need to use all of the indicators in order to replicate the WCR ranking and that 27 of them were unnecessary. The findings of Oral and Chabchoub (1996) are used in Zanakis and Becerra-Fernandez (2005), whose study uses data mining and multivariate statistical techniques to identify important factors associated with determining a country's competitiveness.

According to Lall (2001, p. 1519), the "examination of the WEF index shows that it suffers from several analytical, methodological and quantitative weaknesses. Moreover, its presentation conceals these weaknesses, giving a misleading impression of precision, robustness and sophistication". Lall (2001) observes that while the Global Competitiveness Report is well written and contains useful material, its competitiveness indices do not merit the attention they attract and the policy concern and debate they generate.

Ulengin, Ulengin and Onsel (2002) suggest some important guidelines for policy formulation that can be used for evaluating changes in a given country's competitive status between re-evaluations of the WCI. After validation of results based on the hypothesis that the long-term competitiveness of a country can be estimated using objective attributes versus those of the WCI, the paper explains the relative competitive level of the countries analysed by using explanatory variables (Ulengin et al., 2002).

Despite the criticism levelled against the WCY and the GCR indices, they remain useful as a foundation for many studies. In many other studies that follow the indices of the WCY and the GCR, these indices have served as a foundation and in most cases, been improved so as to continue to serve a useful purpose. For instance, in the Oral and Chabchoub (1996) study, the indices served as foundations to the study while the outcome of the study was used as a foundation to another study by Zanakis and Becerra-Fernandez (2005). The indices remain useful as a foundation in many studies.

2.10.5.4 Other Competitive Priorities

Ramdass and Pretorius (2008) argue that the multitude of competitive priorities has been the subject of considerable argument by manufacturers around the world and that a universal set of priorities does not exist for all the firms in the global market-place. However, there are priorities that feature in many of the lists provided and therefore deserve attention from many of the firms. These priorities include price, quality and dependability.

Porter (as cited in Ramdass & Pretorius, 2008) formalised the concept of competitiveness priorities into four different types, namely price (derived from cost of labour, capital, entrepreneur, natural resources, electricity and water), flexibility, quality and dependability. In the case of Ward and Durray (2000), competitiveness in firms should include price, quality, dependability, product flexibility and volume flexibility. Chan and Burns (2002) proposed that a combined list of priorities should include plant and equipment (physical capital), production planning and control, labour and staffing, product design and engineering, and organisation and management.

Hill (2000) argues that a firm should identify those criteria or priorities that win orders against the competition in the market-place and these are price, delivery, quality, product design and variety. Krajewski and Ritzman (1996) put forth a more detailed list by differentiating four different aspects, namely cost, quality, time and flexibility. From these explanations, it is possible to arrive at a conclusion that although different concepts are used, competitive priorities revolve around the four factors of production which are the subject of this study: labour, land and natural resources, capital, and entrepreneurship.

For instance, concepts such as product design, variety, time, delivery, flexibility, production planning and control could be achieved if an entrepreneur/owner of the business has the necessary business management competencies to run the business efficiently. Training and skills development of entrepreneurs is likely to ensure that these competitive priorities are realised. The price of a product is arrived at after taking production and overhead costs of production into consideration.

Wages and salaries, interest on borrowed capital, rent for land and buildings, profit for the entrepreneur, water and electricity cost are common costs in most firms. If appropriate measures that reduce the cost of these production factors are correctly implemented, these competitiveness priorities for competitive/lower prices are likely to be achieved. It is worth noting that price appears in almost all

competitiveness priority lists and this highlights its importance as a competitiveness factor.

This study is premised on the view that competitiveness is defined as the sum of competitive pricing, use of existing technology, productive workers, diversified production, profitability of firms, and reinvestment of some of the profits into the firms. This indicates that industrial policy measures should be aimed at reducing the cost of production through means that would achieve the overall objectives of the firm (including research and development, attracting foreign direct investment, incentives, increasing exports and promoting education), in order to make domestic industries compete on price and/or on quality.

Ramdass and Pretorius (2008, p. 166) argue that in the South African clothing industry context, competitive strategies that require implementation as a matter of urgency are leadership that is people-oriented with an insight into cultural diversity, financial management by understanding organisational costs, service delivery with quality management imperatives, and performance management initiatives. These proposals are based on their observations of the adverse conditions in the industry, some of which are listed below:

- the value chain within the industry is characterised by working within "silos";
- the limited communication and independence of organisations stifled information sharing in the clothing and textile industry;
- many organisations are not enlightened about the incentives available and the process is cumbersome;
- organisations experimented with different ways of improving productivity but failed to implement fundamental methodology of performance measurement;
- both the management and the workforce require critical skills thinking that would empower the workforce in totality to make decisions for the benefit of the organisation;

- niche opportunities are being missed by the clothing and textile industry as clothing exporters focused their attention on product development to maintain customer allegiance; and
- that 75% of the Cut-Make-Trim (CMT) organisations were not applying the fundamentals of operations management such as, *inter alia*, performance management, garment costing, productivity calculations, and work study principles.

These adverse conditions are further exacerbated by other problems in South Africa's labour regulations that include labour policy, minimum wage legislation, statutory labour regulations, business procedures, declining value in the sector, employment trends, closure of organisations, and overall performance of the industry. This study argues for a more aggressive reaction to arrest the problems in the industry. The need to address incompetence in management, although requiring immediate attention, does not justify the delay in implementing measures that would help the industry reduce its cost of production as outlined above, but rather makes the implementation of these measures more urgent.

2.10.7 Key issues on competitiveness

An increase in the manufacturing of value-added products is a necessary path towards economic growth and leads to industrialisation. In the era of globalisation, industrialisation will be achieved if manufacturers in the local industries are globally competitive. Nations are said to have achieved competitiveness if they increase their overall productivity.

The concept of competitiveness has both an output component, i.e. the level of productivity and ultimately prosperity reached, and an input component, i.e. which is the set of factors (of production) that drive these outcomes. For this study, it is the latter that is relevant because it is important for policy to define where changes have to be made in order to achieve sustainable improvements in prosperity outcomes. The input component is in line with competitiveness theories that outline

factors that drive productivity outcomes and include absolute and comparative advantage theories, as well as the Heckscher-Ohlin (H-O) theory.

There are similarities between these theories in that they all identify factors of production as the determinants of what countries will export and what they will import. The H-O theorem is an improvement on absolute and comparative advantage theories and can be stated as follows: A nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor, i.e. the relatively labour-rich nation exports the relatively labour-intensive commodity and imports the relatively capital-intensive commodity.

The Competitive Advantage of Nations suggests that a country's prosperity is created and not inherited from factor endowments as the classical literature advocates. However, in the Competitive Advantage of Nations, Diamond Framework of Competitiveness comprises Factor Conditions; Demand Conditions; Related and Supporting Industries; and Firm Strategy, Structure and Rivalry. Factor Conditions refer to the nation's position in factors of production such as skilled labour, capital, land and entrepreneurship or infrastructure necessary to compete in a given industry. Therefore, nations are not confined to the advantages that are inherited but are able to improve on the inherited factors and also create their own competitiveness.

For this study, competitiveness in the clothing and textile industry is defined as the sum of competitive pricing; use of existing technology; productive workers; diversified production; profitability of firms; and reinvestment of some of the profits into the firms. The theories of competitiveness also advocate for improvement in the traditional factors of production (labour, capital, land and natural resources, and entrepreneurship) for competitiveness to be achieved.

2.10.8 Theoretical Framework

Table 1A above of the Genesis of Competitiveness suggests that the factors of production, especially labour and capital, have stood the test of time since Adam Smith's Absolute Advantage and David Ricardo's Comparative Advantage. Subsequent theories after the Classical theories have focused on the different dimensions of the factors of production, especially labour and capital. Firstly, the Classical Theories were the first to identify labour and capital as the factors behind the competitiveness of countries.

Secondly, the Neo-Classical Theories modified the factors of production by introducing other dimensions to the factors such as the quantity (abundance of capital and labour), whether the commodity will be labour-intensive or capital-intensive, depending which factor is in abundance in a country. The Neo-Classical Theories also introduced the dimension of pricing the factors of labour and capital, such as wages and interest rates, through the Factor-Price Equalisation Theorem.

Thirdly, New Trade Theories introduced the quality of the factor of labour dimension such as skilled labour, and the importance of the location of technology (localised technology). New Trade Theories also introduced other competitiveness factors in countries such as specialised infrastructure and network of suppliers. Network of suppliers could be classified along with other competitiveness factors in firms such as labour and capital, in the sense that networks have direct influence on the cost of production, especially as networks of suppliers are normally cheaper compared to existing individual suppliers, and those outside networks. More often, a network of suppliers has a monopoly over the supply of important material inputs to the production process.

Fourthly, Development Theories used investments, both local and foreign, which provide capital to the firms and facilitate industrialisation – the movement of countries from the agricultural mode of production to the value-added process of production. Industrialisation is the aim of government's industrial policy and, if achieved, industrialisation represents developed, matured industries which are able

to withstand foreign competition mainly as a result of skilled labour and improved capital.

Fifth, New Economic Growth Theories focus on the improvement of labour and capital and also use concepts such as R&D expenditure (knowledge and productivity of labour), innovativeness (patents), spending on investment in human capital (technology and knowledge, knowledge and improvement in productivity); and education level (knowledge and improvement in productivity).

Sixth, the Keynesian Economic Theory focuses on capital intensity and investment (capital improvements in machines, access, availability and price of capital). Other factors that have come to play a prominent role in competitiveness and were not accounted for in the theories under review include infrastructure, water and electricity which were previously regarded as public goods that should be provided for by governments.

This leads into the seventh, Competitiveness Measurement: Practical Aspects, which makes a contribution to competitiveness by acknowledging the importance of other competitiveness factors that are provided for by states and their institutions.

The World Competitiveness Yearbook focuses on pricing which incorporates all competitiveness factors including the costs of capital (interest) and labour (wages) which had been the focus of earlier theories. It also focuses on productivity, labour, finance (capital), technology, and education (training of labour), as well as on competitiveness factors such as Business Efficiency (Productivity and Efficiency, Labour Market, Finance, Management Practices, and Attitudes and Values).

Table 4: A Genesis of Competitiveness - New Trade Theories

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
Factor price equalization implies convergence of returns to capital and labour, free trade is the engine for growth			
II Group: Modern Theories based on classical principles			
New Trade Theory	Krugman (1979), Lancaster (1979) – Economies of Scale; Krugman (1980) – Monopolistic competitiveness model	• Skilled labour; • Specialised Infrastructure; • Networks of suppliers; • Localised technologies	• Skilled labour and • Localised technologies
Investing in skilled labour, specialised infrastructure, networks of suppliers and localised technologies, is the engine of growth			

Source: Adapted from Travkina & Tvaronavičienė, 2010

The World Competitiveness Yearbook focuses on other competitiveness factors outside the firm such as Economic Performance, Government Efficiency and Infrastructure and these could be classified under government intervention which is important to assist the competitiveness of local firms.

Table 5: A Genesis of Competitiveness - Development Economics

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
Development Economics	Rostow (1960) – the stage theory of development by Rostow; Myrdal (1957) - Myrdal's Hypothesis of circular and cumulative causation	• Move from agriculture to higher value-added sector; • Openness to trade; • Foreign direct investment (FDI)	• Industrialisation and • Price of capital and access to capital

Source: Adapted from Travkina & Tvaronavičienė, 2010

Table 6: A Genesis of Competitiveness - New Economic Growth Theory

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
Economic policy plays an important role and is needed to promote 'spread effects' through key factors			
New Economic growth theory	Solow (1956) – the Solow model; Martin and Sunley (1998) – New growth models	• R & D expenditure; • Innovativeness (patents); • Spending on investment in human capital; • Education level.	• knowledge and productivity of labour • technology, knowledge • knowledge and improvement in productivity

Source: Adapted from Travkina & Tvaronavičienė, 2010

The Global Competitiveness Report also acknowledges the importance of competitiveness factors already identified in the earlier theories illustrated above such as labour and its improvements through education and training, capital, and the role played by financial markets in providing capital in all its forms, technology and innovation, and business sophistication.

The Global Competitiveness Report also acknowledges the role played by government by focusing on competitiveness factors that fall outside the firm such as institutions, infrastructure, macroeconomic environment, health and education, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, and innovation.

Table: 7: A Genesis of Competitiveness - Keynesian Economic Theory

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
Improvements in technology and human capital, open trade, investments in research and development are engines for growth.			
III Group: Theories of total spending in the economy			
Keynesian economic theory	Keynes (1936) – Keynesian theory	• Capital intensity; • Investment; • Government spending	• Capital (improvement in machines) • Access, availability and price of capital

Source: Adapted from Travkina & Tvaronavičienė, 2010

The theories of competitiveness explained above lead to the conclusion that the competitiveness of firms depends on competitiveness factors within firms such as skilled labour, wages, education and training, capital, interest, improved machinery, technology, business efficiency, knowledge of productivity methods, business sophistication, and prices of goods/services, amongst others, as well as competitiveness factors that are found outside the firms, such as localised technology, infrastructure, market size, goods market efficiency, health and education, financial market development, technological readiness, innovation, institutions, macroeconomic environment, economic performance, and government efficiency. This indicates that firms can achieve competitiveness by improving competitiveness factors within the firm and using competitiveness factors provided by governments outside the firm.

2.10.9 Contribution to Knowledge

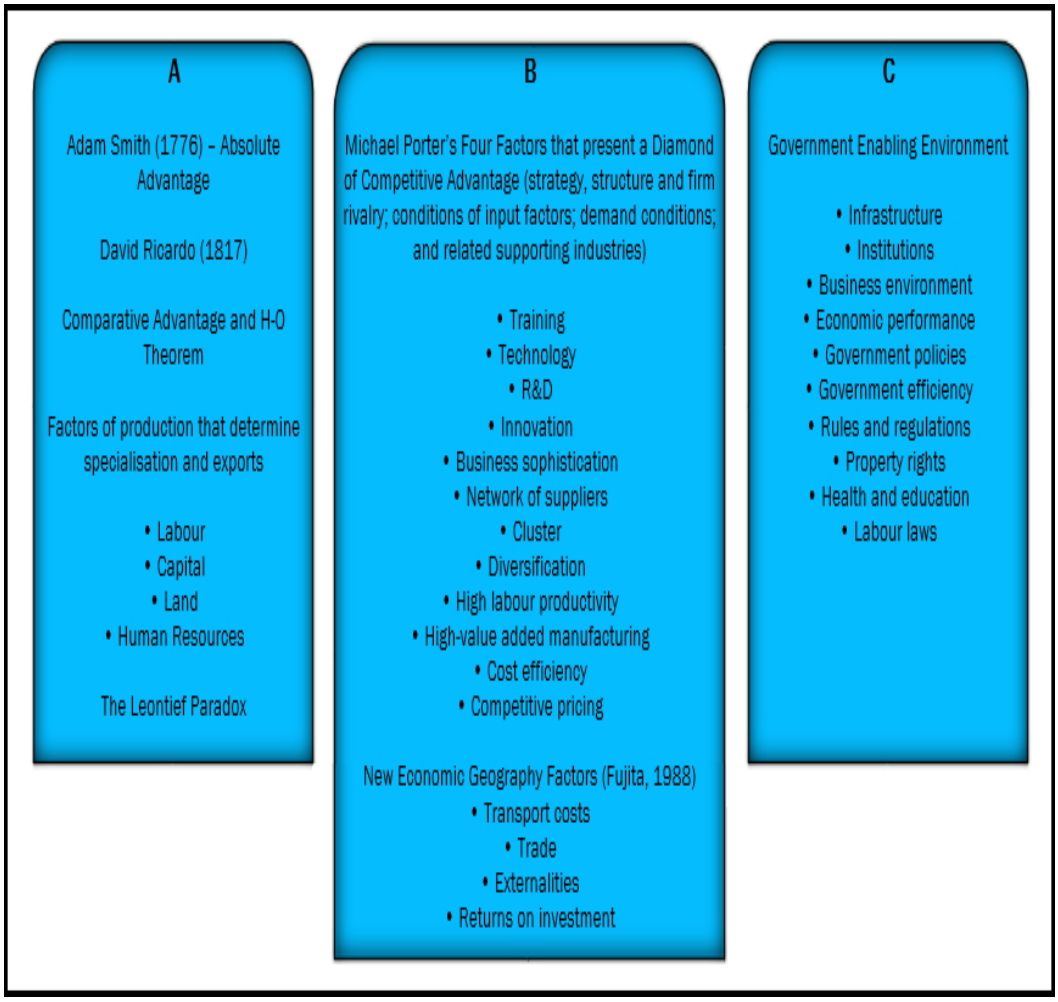
2.10.9.1 Factors of specialisation and exports

Figure 6 below illustrates that although Krugman (1994) believes that the world's most advanced nations are not competing with one another and that there is no significant competition among them, Porter (1990) believes that favourable conditions in nations present these nations with competitive advantage. Column A in Figure 6 below represents comparative advantage.

According to Vuković et al. (2012, p. 58), comparative advantage illustrates activities of competitiveness growth in which a country can successfully engage what it already has, depending on the model, inherited factors of production, technology, economic growth level, and the local structure of request. However, over the years the concept of comparative advantage has proven to have its own limitations – being static and based on inherited factors characterised by diminishing returns. It has also become apparent that comparative advantage cannot sufficiently explain trade patterns between nations. It is for this reason that governments believe that they can change the priority factor in various forms of activities, especially changes in the cost factors.

Column B in Figure 6 below explains the new phenomenon of competitive advantage pioneered by Michael Porter and also discovered through analysis of the Leontief Paradox. Nations are not confined to the advantages that are inherited but are able to improve on the inherited factors and also create their own competitiveness. Chang (Lin & Chang, 2009) suggest that even if a country has all the right machines, engineers and workers, they still cannot be combined into internationally competitive firms because they still need to be put through a learning process before they can acquire all the necessary technological capabilities. However, Lin (Lin & Chang, 2009) warns against deviating too much from one's comparative advantage. This underlines the importance of comparative advantage even with its limitations.

Figure 6: Factors of Specialisation and Exports



Source: Own, 2017

The superiority of competitive advantage over comparative advantage is that, although they complement each other, competitive advantage focuses on those characteristics of a nation that enable companies to create and sustain competitive advantage in certain areas. This is where Column C plays a role because it focuses on the areas that seem to be external to the business or firm and can be adequately provided by the government, or those the government could assist in providing. The roles played by electricity, water and transport are so important that their provision or non-provision may determine the success or otherwise of most businesses. The provision of these utilities enhances the competitiveness of businesses operating in a particular country compared to the same businesses in other countries.

2.10.9.2 Genesis of Competitiveness, Factor Specialisation and Exports

In Figure 7 below, Columns A and B are used to illustrate that Adam Smith's (1776) 'absolute advantage' and David Ricardo's (1817) 'comparative advantage' postulate that factors of production (such as labour, capital, land and natural resources, and entrepreneurship) determine specialisation. According to the two theories, the competitiveness of economies flows from the traditional factors of production, particularly labour and capital. Therefore, capital investment, the division of labour (labour specialisation) and free trade are engines of growth (Sődersten, 1980; Salvatore, 1995; Travkina & Tvaronavičienė, 2010).

Column C represents the Heckscher-Ohlin Theorem (1933) which takes the process further and advocates that a country exports those commodities produced with relatively large amounts of the country's relatively abundant factor (Minabe, 1966). This means that a capital rich country will export capital intensive products while a labour rich country will export labour intensive products.

Column D, the Leontief Paradox Theory (1953) is the outcome of a study by Wassily Leontief aimed at testing the outcome of the Heckscher-Ohlin Theory (in Column C) which postulates that 'the country that is abundant in capital will export the capital-intensive good and the country that is abundant in labour will export the labour-intensive good (Sődersten, 1980). It was expected that the United States, which was considered the capital-abundant nation, will export the capital intensive good and import the labour intensive good.

Table 8A: A Genesis of Competitiveness – Competitiveness Measurement: Practical Aspects

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
IV STAGE. COMPETITIVENESS MEASUREMENT: PRACTICAL ASPECTS			
Sets of implements for competitiveness measures	Publications		
International Economic Competitiveness indicators	-World Competitiveness Yearbook (developed in 19996 by the World Economic Forum)	Economic Performance (Domestic Economy, International Trade, International Investment, Employment and Prices)	Prices
	Global Competitiveness Report (developed in 1996 by the World Bank)	Government Efficiency (Public Finance, Fiscal Policy, Institutional Framework, Business Legislation and Societal Framework -Business Efficiency (Productivity and Efficiency, Labour Market, Finance, Management Practices and Attitudes and Values -Infrastructure (Basic Technological, Scientific, Health and Environment and Education Infrastructures)-	Productivity, Labour, Finance (Capital) Technology, Education (training of labour)

***Source*: Adapted from Travkina and Tvaronavičienė, 2010.**

Table 8B: A Genesis of Competitiveness – Competitiveness Measurement: Practical Aspects

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Research
		Since 2005, the WEF has based its competitiveness analysis on the Global Competitiveness Index and based on the following 12 Pillars of Competitiveness: Institutions; Infrastructure; Macroeconomic environment; Health and Primary education and training; Goods market efficiency; financial market development; Technological readiness; Market size; Business Sophistication; Innovation	
	World Knowledge Competitiveness Index (developed since 2007 by the Centre for International Competitiveness in UK	developed since 2007 by the Centre for International Competitiveness in the UK	
Comparative competitiveness indicators of countries	-UK, European Competitiveness Index (UKCI) -Index of the Massachusetts	-developed since 2007 by the Centre for International Competitiveness in UK -developed by The Massachusetts Technology Collaborative	
Regional competitiveness models, indexes	-Diamond Model - Capital Access Index -Double Diamond Model -Generalized double diamond model -Nine-factor model	developed by Porter M. E in 1990 -developed by Milken Institute -developed by Rugman and D'Cruz in 1993 -developed by Rugman, Moon and Verbeke in 1995 -developed by Cho in 2000	

***Source*: Adapted from Travkina and Tvaronavičienė, 2010.**

Table 8C: A Genesis of Competitiveness – Competitiveness Measurement: Practical Aspects

Major School of Economic Theory	Relevant Theories	Key Factors Determining Competitiveness	Competitiveness Factors Relevant to this Theory
International economic policy indexes	Economic Freedom of the World -Index of Economic Freedom -Freedom in the World	developed since 1970s by the Freedom House	

***Source*: Adapted from Travkina and Tvaronavičienė, 2010.**

However, the findings revealed the opposite of what was expected, that the United States was exporting labour-intensive goods to the rest of the world in exchange for capital-intensive imports (Smit, 2010; Cho & Moon, 2013). Information in both Column E – Vanek's (1959) Natural Resources (NR) Approach, and Column F – Factor Content Approach (FCA) which is explained well by Webster (1984), are attempts to clarify the causes of the Leontief Paradox which was explained under Column D.

According to the Natural Resources (NR) Approach (Column E), the US had become increasingly reliant upon the imports of NR intensive products from less developed countries as well as from Canada in particular. Vanek (1959) argues that physical capital and natural resources are complementary inputs in production and that the extraction and transportation of NR products, such as coal and petroleum require large capital investment and the use of highly capital-intensive techniques. As a result, the US was indirectly importing capital-intensive products because of its reliance on NR products (Smyth, 1992). According to Factor-Content Approach (FCA) (Column F), the Leontief Paradox points to a range of factors, some of which are more competitive than comparative in nature (such as skills, technology, research and development, infrastructure such as roads, water and electricity, and institutions) that were not taken into account when the H-O theorem was conceived.

For instance, the FCA goes further in postulating that specialisation of countries according to specific types of skill may also be a cause of international specialisation. Therefore, if US human capital was to be added to physical capital, the paradox would be reversed and the US would be found to be abundant in skilled labour and consequently export skilled labour-intensive products as the H-O theorem predicted (Kenen, 1965). This explains Column G, i.e. the Heckscher-Ohlin-Vanek (1959) theory.

A comprehensive list of competitiveness factors is provided by Porter's (1990) Diamond Framework of Competitiveness which comprises Factor Conditions; Demand Conditions; Related and Supportive Industries; and Firm Strategy, Structure and Rivalry as represented under Column H. Factor Conditions refer to the nation's position in factors of production, such as skilled labour, capital, land, and entrepreneurship or infrastructure necessary to compete in a given industry. Demand Conditions refer to the nature of home market demand for the industry's product or service. Related and Supporting Industries refer to the presence or absence in the nation of suppliers' industries and other related industries that are internationally competitive.

Price Strategy, Structure and Rivalry refers to the conditions in the nation that govern how companies are created, organised and managed, as well as the nature of domestic rivalry (Porter, 1990). What is lacking in Porter's Diamond Framework of Competitiveness are factors that are outside the firms' control such as transport costs, trade rules, roads, water and other externalities (i.e. factors that are important to firms and which even if a firm does not pay for, it cannot be excluded from using such factors) most of which are listed under the FCA above as well as under New Economic Geography, which is represented under Column I.

A developmental state, as represented under Column J, is supposed to provide a vision for the industrialisation path of a country. Although absolute and comparative advantages provide an indication as to the abundant factor within a country, a developmental state should also undertake research and development to

ensure appropriate use of the abundant factor and provide direction. Given the nature of the process of factor accumulation and technological capability-building, it is not possible for a developing economy to accumulate capabilities in new industries without defying comparative advantage and actually entering into new industries before it has the 'right' factor endowment (Lin & Chang, 2009).

The Leontief Paradox indicates that the developmental state should give guidance on what the abundant/cheap factors for a country might be, as Vanek (1959) explains the complications brought about by natural resources to the absolute and comparative advantages. More research on the abundant factors a country possesses needs to be done before a conclusion is reached as illustrated with the US. The developmental state should provide the capital required to ensure the contents of abundant factors are clearly understood.

Although comparative advantage identifies an abundant factor, a country may need to define this advantage in order to succeed and such vision should be provided by a developmental state. The Factor-Content Approach advocates that particular types of skills that a country possess may determine what is produced, specialised in and exported. Countries may rely on a developmental state to dictate the type of training and development necessary in using the abundant factor.

Improvement on the inherited factors may be necessary before specialisation and exports can take place. Industrial policies are often used to assist identified strategic industries in order to achieve industrialisation. Porter (1990) surmises that the success of a firm depends on related and supportive industries in a value chain coordinated through clusters in order to share a common strategy and use of common resources. A developmental state is supposed to encourage such clustering and use of joint resources to achieve competitiveness for firms within clusters.

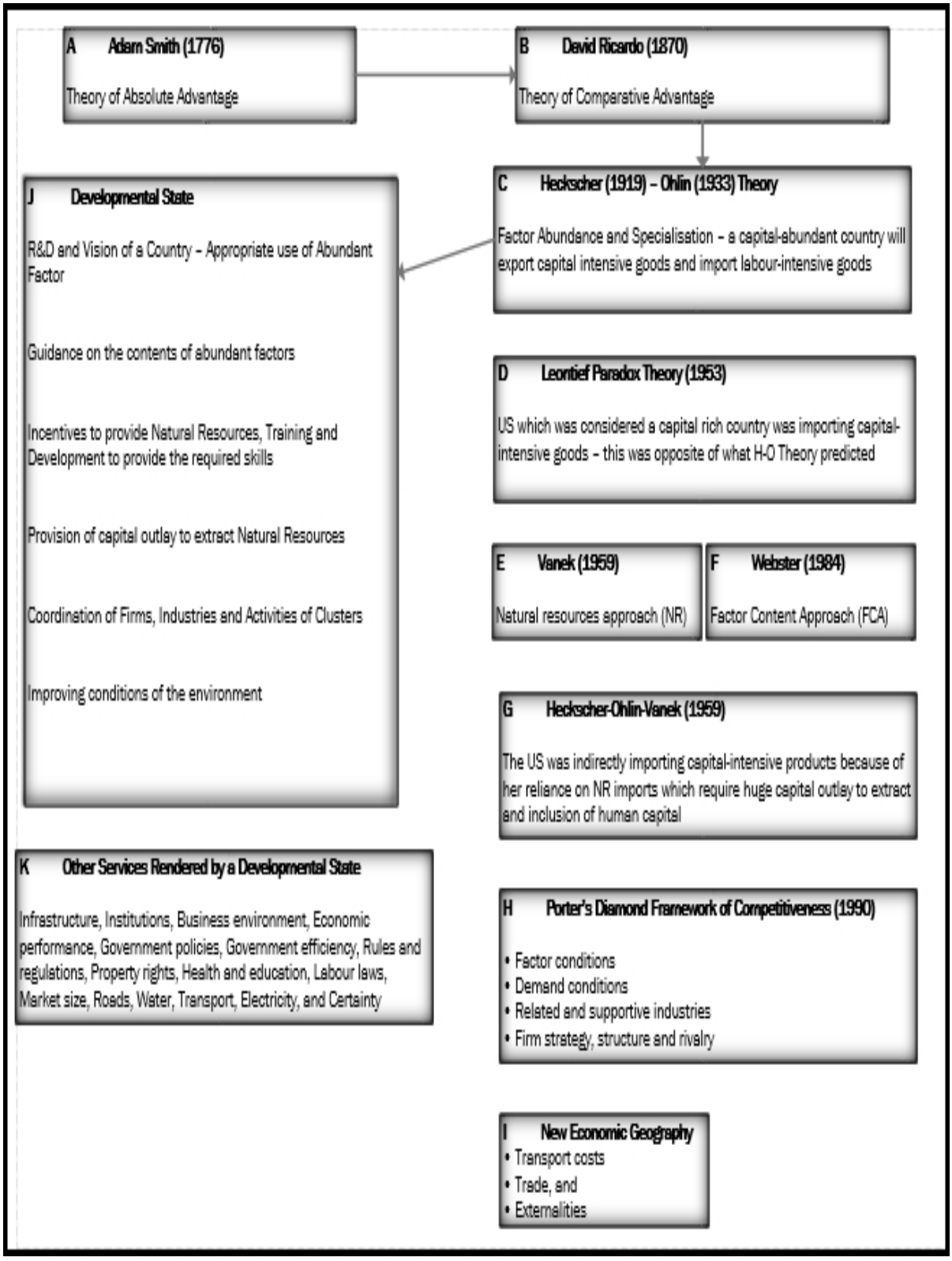
Porter (1990) does not pay attention to factors outside the firm which may have a direct impact on the competitiveness of firms. The New Economic Geography identifies factors that are outside the firms and have a direct impact on the

competitiveness and therefore the performance of firms, such as externalities in the form of roads and infrastructure, which even if a firm does not pay for, it cannot be excluded from using. Other similar factors include transport and transport costs, infrastructure and other factors that are external to the firm.

Besides these services, a developmental state is expected to play a significant role in the industrialisation of a country by providing a range of other important services that include Infrastructure, Institutions, Business Environment, Economic Performance, Government Policies, Government Efficiency, Rules and Regulations, Property Rights, Health and Education, Labour Laws, Market Size, Roads, Water, Transport, Electricity, and Certainty.

Figure 7 below shows hypothetical situations that illustrate how a developmental state would have ‘acted’ and not ‘reacted’ in the above situational stages towards competitiveness. The message is that policy makers in governments should be proactive and not reactive. Firms should not be experiencing unusual drops in profits, closure and unemployment before the government starts to act. Industrial policy activities are supposed to be proactive. Interventions that are delayed can be expensive and prove difficult to reverse if the damage is already done.

Figure 7: Genesis of Competitiveness, Factor Specialisation and Exports



Source: Own, 2017

In a developmental state, top government develops a long term vision and designs or creates lower government organisations which use the vision to construct and execute feasible strategies and action plans. These strategies and action plans could be adjusted to suit the changing circumstances while the long term vision remains intact to guide adjustments to changes in circumstances and learning (Ohno & Ohno, 2009).

A Dynamic Capacity Development Methodology of Policy Formulation prescribes a coherent package of targeted industrial upgrading wherein governments establish priorities, encourage accumulation of technical capacity in targeted sectors, push resources into private firms operating in those sectors, and encourage the accumulation of additional rents by local incumbents to provide them with a financial cushion that will support upcoming new products and geographical markets (Ohno & Ohno, 2009).

2.11 METHODOLOGY AND TOOLS IN IDENTIFYING COMPETITIVE ADVANTAGE

According to Altenburg, Kleinz and Lütkenhorst (2016), a recent contribution to methodology and tools to identify competitive advantages comes from Lin and Monga (2010, 2012). This contribution is built on Ricardo's 1817 concept of comparative advantage, which they propagate by introducing the notion of 'latent' comparative advantage.

Developing countries became more successful when their governments targeted mature industries in countries with similar endowment structures and only slightly higher levels of development (Lin & Monga, 2010; 2012). This comparative historical perspective assisted governments in their identification of latent comparative advantage inherent in their own industries so that only limited support through industrial policy was enough for these industries to quickly gain competitiveness (Altenburg et al., 2016). According to the 'latent' advantage theory, governments should promote those industries in which a country is likely to develop a comparative advantage in the future (Lin &and Monga, 2010; 2012).

In line with the view expressed in this study, Lin and Monga (2010; 2012) argue strongly in favour of placing factor endowments at the centre, while also recognising the need to sharpen and promote existing endowments with light-handed government interventions. Therefore, profit-maximizing firms will only choose their industry and technology in accordance with comparative advantages, if the relative abundance of factors is reflected in their relative prices, hence an efficient market mechanism is critically important. In practical implementation Lin and Monga (2010; 2012) propose six concrete steps to be taken by policy makers in developing countries: choosing the right target, removing binding constraints, attracting global investors, scaling-up self-discoveries, creating dedicated support infrastructure, and providing limited incentives.

A different approach to identifying competitive advantage was advanced by Hausmann, Hwan and Rodrik (2005), Hausmann and Klinger (2006) and Hidalgo, Klinger, Barabási and Hausmann (2007). Their approach, the 'product space analysis', is built on the evolutionary economic theory and highlights how new technological capabilities evolve based on spillovers from previously existing capabilities. According to the product space analysis, a country's current export structure would thus reveal potential candidates for future competitive advantages that build on technologically related assets (Altenburg et al., 2016).

The product space analysis especially that of Hausmann and Klinger (2006), is based on the hypothesis that 'if a pair of products requires similar infrastructure, technology, capital, institutions, or skills, they are likely to be co-produced'. As explained by Altenburg et al. (2016, p. 6), "Diversifying the industrial structure of a country is seen as easier the more already existing assets and capabilities from "nearby" products can be capitalised on". Therefore, it may be assumed that it becomes more difficult for poorer countries to diversify their exports and enhance their level of product sophistication than for developed countries already exporting a greater variety of products.

In applying the product space methodology and measuring 'proximity' as the conditional probability of successfully exporting any pair of goods, they develop a measure that is independent of any *a priori* belief about what specific factor makes the two goods similar, as it is based on observed export outcomes alone (Hausmann & Klinger, 2006). In addition, mapping the calculated proximities in a "tree network" gives a visual impression of the heterogeneous core-periphery structure of the product space (Hidalgo, Klinger, Barabási & Hausmann, 2007).

Lee's (2013) technological life-cycle dynamic approach to identifying potential competitive advantages is based on empirical evidence largely drawn from Asia and suggests specialising in technologies whose life-cycles are short. He argues that by strategically taking up such technologies, exposure to competition from more advanced incumbents can be reduced. In applying his approach, Lee (2013, p. 36) relies on patent data and applies four innovation system variables that are intended to reflect the key dimensions of the relevant literature: "short- versus long-cycle specialisation; the localisation of knowledge creation (versus foreign reliance); high- versus low-originality technologies; and balanced or unbalanced growth strategies (concentration over actors or sectors)".

While the approaches mentioned above assumed units of specialisation to be products, the value-chain approach differs. In the value-chain approach, the units of specialisation are business functions and tasks (Grossman & Rossi-Hansberg, 2006) rather than products. Therefore, "if a country is good at assembling garments, it may also have advantages in assembling other products (a similar task), but it may have no competencies related to other aspects of garment production, such as spinning, weaving and designing" (Altenburg et al., 2016, p. 9). Therefore, to diversify and upgrade exports, countries need to make use of global value-chains such that they maximise the benefits in terms of access to markets and technologies while avoiding constellations that are exploitative or very risky (Altenburg et al., 2016).

The technology foresight approach provides a set of tools "for collectively exploring, anticipating and shaping the future" (Cassingena Harper, 2013, p. 6) within an overall scenario of high uncertainty and limited predictability of future economic and technological trends. Different foresight methodologies, instruments and implementation practices have been developed in various configurations that combine data analysis and expert knowledge (Altenburg et al., 2016). At the practical level, technological foresight exercises bring together stakeholders from various disciplines and backgrounds, and interdisciplinary exercises are organised to address the long-term challenges of anticipating possible and likely "futures" (Altenburg et al., 2016).

In combining these approaches, the following outcomes emerge. The growth identification and facilitation framework made a pivotal contribution in establishing and promoting future growth opportunities in the context of developing countries. The approach proposes a gradual evolution rather than disruptive shifts in production patterns (Altenburg et al., 2016). The product space approach highlights how new technological capabilities can be gradually derived as a result of spillovers from already existing ones.

This commences with a stocktaking exercise during which countries first examine their current position in the product space and then identify specific opportunities of "jumping" to "proximate" goods. Therefore, the approach emphasises earlier skills and capability investments in related industries rather than on endowment-based factor cost constellation (Altenburg et al., 2016). The technology life-cycle suggests a growth trajectory that explores "new opportunities in emerging technologies that rely less on existing technologies that are most likely already dominated by incumbent advanced countries" (Lee, 2013, p. 30).

According to Altenburg et al. (2016, p. 15), all three approaches are 'mechanistic' in the sense that they advocate for the reliance on formalised analytical tools (latent comparative advantage, product space, technological life-cycles) regardless of the specific country context. Accordingly, they do not adequately capture institutional

and policy capabilities as well as specificities such as being land-locked or an island state. More specifically, there is a general disregard of the important role being played by neighbouring countries. In applying competitiveness analysis across countries, mostly by looking at factor endowments, there is a danger of arriving at similar conclusions on key sectors to be prioritised (Altenburg et al., 2016).

The value-chain analysis calls for a more granular approach than looking at entire industries. The emphasis is more on specific processing stages together with business functions (such as R&D, design, assembly, packaging, marketing) within a globally dispersed production system. However, the approach also remains subject to an important "single loop" caveat as it is essentially based on an analysis of prevailing constellations, thus limiting the relevance of its conclusions for future scenarios (Altenburg et al., 2016). The technology foresight adopts a "double-loop" approach which is not confined to a given context but can fundamentally question whether currently prevailing conditions will remain as they are.

There are good reasons for linking different approaches to different levels of economic development. For instance, in early stages of economic development, when the relative weight of factor endowments is relatively high, trade-based specialisation should be the focus, whereas the risks taken in "jumping ahead" are lower at later stages when significant technological, institutional and policy capabilities have already been acquired and mastered (Lin & Monga, 2010; Lee, 2013; Altenburg et al., 2016).

According to Altenburg et al. (2016, p. 18), "It would seem that methodologies placing less emphasis on technological continuity and past experience are a logical response to disruptive structural change". According to Lee (2013, p. 18), "the strategy of leapfrogging makes more sense during a paradigm shift when every country or firm finds itself faced with the challenge of dealing with a newly emerging techno-economic paradigm".

The defining character of transformation towards sustainable production and consumption patterns are the high uncertainty and long-term horizons involved, together with the need to create new, and to disrupt old, pathways (Lütkenhorst, Altenburg, Pegels & Vidican, 2014). These characters cannot be adequately captured by methodologies based on the historic development experience of comparator countries (Lin & Monga, 2010) or the infrastructure, technology, capital, institutions, or skills created in existing sectors (Hidalgo, Klinger, Barabási & Hausmann, 2007).

2.12 COMPETITIVENESS IN THE NEWLY INDUSTRIALISED ECONOMIES OF EAST ASIA

South Africa and many other developing countries can improve their competitiveness by learning from the Newly Industrialised Economies of East Asia. According to Stiglitz (1996), industrial policy measures that were common in most of the East Asian economies include support for education, decisions on the allocation of capital, encouraging exports, and promotion of technology programmes and subsidies. These industrial policy measures are discussed below.

2.12.1 Support for education

The support for education, particularly in engineering and science education, provided an intellectual infrastructure that facilitated technological transfer (Stiglitz, 1996). Weiss (2005) argues that having a relatively well trained and educated labour force was a critical element in the rapid export growth of the East Asian economies and that in general, education plays a critical role in growth. “One of the major initial advantages of the Newly Industrialised Economies (NIEs) was their comparatively high education standards” (Weiss, 2005, p. 11).

Rodrik (1994) provides convincing evidence that relative to their income levels, both the first and second tier NIEs had high educational attainments in 1960. In all but the case of Hong Kong, China, primary enrolment was well above that predicted for the countries’ income levels and Hong Kong, China enrolment was already high

(Rodrik, 1994). A similar pattern applied for secondary enrolment, with the exception that it was slightly below the predicted level for Indonesia, but well above the Republic of Korea and Singapore (Weiss, 2005).

A high level of education on its own does not guarantee strong export growth. The Philippines, whose achievements in the education sphere are widely recognised, has had the most disappointing growth performance of the region and has only experienced rapid export growth relatively recently, and a similar situation applies to Sri Lanka in South Asia (Weiss, 2005).

One lesson to be drawn from East Asian countries is that support for education is important for economic growth and industrialisation, but education attainment should be seen as a critical facilitating mechanism where other appropriate stimuli are in operation. According to Hernandez (2004, p. 9), "investment in skills and infrastructure explain a great deal of how Japan, Korea, Taiwan, China and Singapore moved up the technology ladder".

2.12.2 Decisions on the allocation of capital

Stiglitz (1996, p. 157), explains that, "The decision to discourage, through financial market regulations the allocation of capital to areas such as real estate meant that more capital was available for areas with higher technological benefits such as plant and equipment". Increasing returns combined with a shortage of capital may stunt small firms, since they cannot expand to take advantage of increasing returns either because they cannot get access to capital or because the only form of capital to which they have access is credit, which imposes too high a risk (Stiglitz, 1996).

Government intervention to lower the cost of capital and increase economic efficiency provides other multiplier effects/benefits. Firstly, lowering the cost of capital interest means that the final price of the manufactured product is also lowered and this can improve the competitiveness of a firm. Secondly, a firm that expands production lowers its future production costs and undercuts its rivals (Stiglitz, 1996). Chang (1999, p. 29) argues that "any financial support to

manufacture should be geared towards creating competitiveness and diversifying the production".

2.12.3 Encouraging exports of manufactures

Export-Oriented Industrialisation (EOI) consists of those strategies that are outward-looking and aimed at increasing exports (Lindert & Kindleberger, 1982). Export promotion instruments are thought to have worked in East Asia (Stiglitz, 1996; Mody, 1999). The East Asian model of growth became popular for being "export-oriented" in contrast with import-substitution strategies in other countries that were "inward looking" with high tariff and quantitative barriers to trade, and barriers to foreign investment (Hernandez, 2004).

The East Asian economies experienced extremely rapid manufactured export growth, which can be seen as a critical variable in 'economic take-off' commencing approximately in 1960 for the initial 'Gang of Four' NIEs (South Korea, Taiwan, Singapore and Hong Kong) (Weiss, 2005). This was followed by second tier NIEs (Malaysia, Thailand and Indonesia) which experienced rapid growth in the 1980s (Weiss, 2005). The share of the Gang of Four in world exports of manufactures rose from 1.5% in 1965 to 5.3% in 1980 and to 7.9% in 1990 (World Bank, 1993). Weiss (2005, pp. 9-10) identified several possible mechanisms to benefit from 'openness' to trade and rising exports:

- If economies can break into export markets, they will be able to overcome the constraints on sales imposed by the absolute size and dynamism of the domestic market;
- Exporting by exposing firms to foreign competition, technology and marketing can lead to productivity gains that would not be obtainable from sales in the domestic market, such as foreign designs, lower cost sources, and international standards;
- Exports allow access to imports that can be purchased with the foreign exchange they generate; and

- If an export-oriented strategy attracted FDI that would not have come to the economy under an import substitution regime, and insofar as this FDI generated positive externalities for the domestic economy, there will be further benefits that go beyond the monetary value of increases in exports.

Roberts and Tybout (1992) explain that because exporting has high sunk costs, producers do not move freely in and out of exporting activity; they persist in doing so until conditions change to such an extent that the option value of staying exporters falls significantly, thereby inducing a shift away from exports. According to Egan and Mody (1992) and Mody and Yilmaz (1997), persistence is seen to emanate from long-term relationships with international buyers who have invested in developing country exporters by providing continuing technical and marketing information leading to growing exports, superior "reputation", and increased competencies.

The policy lesson is that some of the measures of industrial policy used successfully in the NIEs, like export subsidies and measures to support new producers, still have a role to play at a relatively early stage of industrialisation and can be used effectively to encourage a diversification of exports and the expansion of new manufactures, and these do not contravene WTO regulations (Weiss, 2005).

2.12.4 Promotion of technology programmes

Stiglitz (1996, p. 157) explains that, "In some industries, particularly those with many firms, government promoted technology programmes included science centres that offered services ranging from identifying new products to providing research and development for firms that had no facilities of their own". Diffusion of technology has been found to be the most sustainable strategy in keeping up with the best competitors in the market. "In Taiwan, China, public research institutions played a greater role in promoting the diffusion of new technologies and coordinating industry-specific R & D", explains Hernandez (2005, 10).

Singapore relied heavily on FDI to attract foreign technology and invested heavily in increasing the ability of local firms to absorb foreign technology through linkage and training programmes, while Thailand, Malaysia and Indonesia have also relied on foreign investors to bring new technology to their countries albeit in a less selective way than Singapore (Hernandez, 2004). During the late 1980s, some declining industries in North Korea received temporary support and subsidies for equipment upgrading on condition that they achieve certain targets in relation to the technology upgrading (Chang, 1993, 1999).

Stiglitz (1996, p. 151) argues that East Asian's success was based on a combination of factors, particularly the high savings rate interacting with high levels of human capital accumulation in a stable market-oriented environment, but one with active government intervention that was conducive to the transfer of technology.

2.13 COMPETITIVENESS AND ECONOMIC DEVELOPMENT

Porter, Ketels and Delgado-Garcia (2006, p. 56) argue that according to the competitiveness literature, economic development is characterised as "a process of successive upgrading in which a nation's business environment evolves to support and encourage increasingly sophisticated and productive ways of competing. Porter (1990) describes this process as having three characteristic stages called factor-driven, investment-driven, and innovative-driven (Porter, 1990).

The factor-driven stage is a stage during which economies compete on the basis of low cost through providing access to cheap factors of production, particularly labour. The investment-driven stage is when an economy's advantage shifts to high productivity driven by access to human and physical capital and other conditions that drive efficiency. At the innovation-driven stage, the unique value from the new products, services, and business models dominates, driven by further enhancement in competitiveness factors that encourage innovation and entrepreneurship. As economies move through these stages, the relative importance of different aspects of competitiveness, and by extension the policies that affect them, changes (Ketels, 2017).

During different stages, economies require systemic and coordinated changes across a broad range of policies, in some cases including steps that undermine previously important strengths. The failure of proper coordination of policies implies that the country's economy will not achieve the required development. It is during the different stages that proper coordination by firms, the government and markets is required, wherein each important stakeholder must correctly play their part.

2.14 CONCEPTUAL FRAMEWORK: A "COORDINATED SYSTEM"

The conceptual framework is aimed at identifying key concepts of research and outlining the relationships between them. The conceptual framework runs through the whole research project and provides a conceptual map through which a broad idea about the research is captured. According to Badenhorst (2007), a conceptual framework connects to all aspects of the research such as the problem statement, purpose statement, literature review, research method, data collection and analysis, and findings and conclusions. Badenhorst (2007) argues that any academic writing is about argument and needs to illustrate which interpretations of concepts and theories are the most valid for the specific research.

Figure 8 below illustrates how South Africa could learn from the NICs to make the clothing and textile industry globally competitive. Many of the industrialised countries used industrial policy in order to industrialise their economies. Chang (2002) argues that there are few successful economies whose industrialisation did not come about as a result of government intervention. The success of Japan's industrialisation was no accident but was as a result of the efforts of a 'plan rational' state or developmental state (Johnson, 1992).

Edigheji (2010) argues that South Africa is in a better position to construct a democratic developmental state. Developmentalism is one of the important variables in defining a developmental state and it implies that a developmental state aims to achieve industrialisation through active industrial policy, while at the same time implementing other policies aimed at redistributing income (Edigheji, 2010).

Point A in Figure 8 below illustrates that the clothing and textile industry in South Africa is in a crisis because some firms are closing down while others continue to perform poorly in terms of both productivity and employment. A country that wishes to industrialise and make its industry globally competitive needs the participation of government to intervene in the economy. The clothing and textile firms in South Africa need to be assisted by the State's Active Intervention as indicated in Point B of Figure 8. The bureaucracy of a developmental state should actively intervene in the economy if there are market failures, in order to correct the failures in the market (Edigheji, 2010).

Leftwich (1995) identifies the elements that made a developmental state model of East Asian countries successful as the following: determined developmental elite; relative autonomy from major capitalist interests; a powerful, competent and insulated economic bureaucracy; weak and subordinated civil society; effective management of non-state economic interests; and accessible and usable institutions. Although the private sector remains an important partner for collaboration with the bureaucrats, it is crucial for the bureaucrats to remain independent from capitalists' interest. Evans (2010) argues that the successes of the 'East Asian Tigers' were achieved through bureaucratic capacity and 'embeddedness'. The East Asian bureaucrats had 'embedded autonomy' where they maintained independence even where they interacted with business.

Their intervention in the economy was through industrial policy that was based on the interest of their nations. In this regard, South Africa should learn from the East Asian economies' 'Dynamic Capacity Development Methodology of Policy Formulation' which the East Asian economies used and that countries in Africa can learn from (Ohno & Ohno, 2009). The methodology consists of real-sector pragmatism, goal orientation and enhancing unique strengths rather than removing general negatives (Ohno & Ohno, 2009). This methodology of policy formulation is explained in point C below.

Real-sector pragmatism recognises that successful industrialisation requires both the ‘framework approach’ which is practised by Western aid donors, and the ‘ingredient approach’ which was adopted by the Japanese government in the development aid strategy (Ohno & Ohno, 2009). The framework approach focuses on the ‘rules of the game’ such as the functioning of the markets, the principle of official intervention, empowering and participation, and monitoring mechanisms; while the ‘ingredient approach’ focuses on how individual players are doing in the field of play and the ‘outcome’ of each game (Yanagihara, 1992).

The ingredient approach also examines the state of technology, factors of production, demand trends, product mixes and industrial structure, amongst others (Ohno & Ohno, 2009). A combination of the framework and ingredient approaches is likely to assist industrialisation better than when each approach is used individually without another. Goal orientation means that the top echelons of government develop a long-term vision and design and create lower level government organisations which use the vision to construct and execute feasible strategies and action plans (Ohno & Ohno, 2009). The strategies and action plans could be adapted to changing circumstances while the long term vision remains intact.

The East Asian Miracle study identifies eight high performing Asian economies as Japan, South Korea, Taiwan, Hong Kong, Singapore, Malaysia, Thailand and Indonesia (World Bank, 1992). These economies have assumed a goal-targeting form (Ohno & Ohno, 2009). Enhancing unique strengths rather than removing general negatives means that policy formulation should identify and focus on the future potential (dynamic comparative advantage) rather than identifying challenges in individual countries (Ohno & Ohno, 2009). The future potential of industries has been identified in this study and are represented by competitive factors inside the firm, namely advanced technologies, labour skills and high labour productivity, direct investment (both foreign and local) and competitive prices and exports. These are also the target which industrial policy must achieve as outlined in Point C below.

Once the future potential of industries or the objectives of industrial policy have been identified, industrial policy measures can be identified as in Point D. These industrial policy measures, some of which emerge from the East Asian economies, include encouraging exports of manufactures; allocation of capital to supported industries; encouraging high savings and investments; support for education and skills development; and support for entrepreneurial initiatives and technologies (Stiglitz, 1996; Hernandez, 2005; Weiss, 2005).

Noland and Pack (2005) argue that the common methodology of industrial policy-making in East Asian countries comprise coherent packages of targeted industrial upgrading and committed resources to those targeted sectors. Entry points for African industrialisation are aligning assistance to existing policy vision and strategies; policy dialogue with a view for future actions; regional development around a core infrastructure; and providing enabling conditions for concrete foreign investment (Ohno & Ohno, 2009).

Butler (2010) argues that the NICs of East Asia relied upon an elite bureaucracy controlling industrial and trade policies through powerful state institutions. Although state intervention through proactive strategic industrial and trade policies was key to rapid growth, mechanisms to discipline the firms receiving support helped achieve the goal of competitiveness. Roberts (2010) argues that competitive discipline/rivalry with clear terms of contest such as export performance and competition in the domestic market could improve the performance of supported firms.

The East Asian government policies were not directed at ‘picking winners’ in the narrow sense of the term, although several governments decided to support export-oriented industries (Stiglitz, 1996). These governments decided to perform entrepreneurial roles and focused on identifying market failures, particularly in training and technology. For instance, while firms would benefit from a trained labour force, workers may leave for better jobs once they are trained and therefore firms have inadequate incentives to proceed with training. In addition,

entrepreneurship requires combining technological and marketing knowledge, a vision for the future, a willingness to take risks, and the ability to raise capital.

These ingredients are typically in short supply in the early stages of development. It is for this reason that the governments in East Asia stepped in to fill the gap, but in a way that promoted rather than thwarted the development of private entrepreneurship (Stiglitz, 1996). In addition to identifying and implementing industrial policy, governments should also ensure the availability of some of the supporting environment factors of competitiveness that are outside the firm, as identified by Porter (1990), Rugman (1991), Rugman and D'Cruz (1993), Moon, Rugman and Verbeke (1995) and the World Economic Forum, amongst others.

These factors are listed in Point E of Figure 8 as Economic Performance, Government Efficiency, Financial Market Development, Macroeconomic Environment, Health and Education, Labour Market Efficiency, Innovation, Infrastructure, Institutions, Market Size, Technological Readiness, and Goods Market Efficiency. Point F indicates that if both private (provided by the firm in Point D) and the public (provided by government in Point E) competitiveness factors are applied to the clothing and textile firms which are in crisis and closing down (in Point F), the clothing and textile firms will become globally competitive and graduate to Point G.

The clothing and textile firms will be price-competitive and be able to export manufactures, use the most advanced and latest technologies available in the market, employ a highly skilled and productive labour force, make profits and reinvest some of the profits into expanding the firms, be cost efficient, and diversify the process of production. Industrialisation is viewed as a process where the industry has become globally competitive in the production of manufactured goods (Amsden, 1991).

One sound analytical reason why industrialisation should be favoured as a strategic development objective is that the industry is characterised by rapid technological

change (technology) and productivity growth (high labour productivity) (Power, 2008). Industries that were successful in diversifying exports (diversification) performed better than those that did not (Imbs & Wacziarg, 2003). This supports the view that cost efficiency, competitive pricing, technology, high labour productivity and diversification are critical elements to achieve global competitiveness as illustrated in point G.

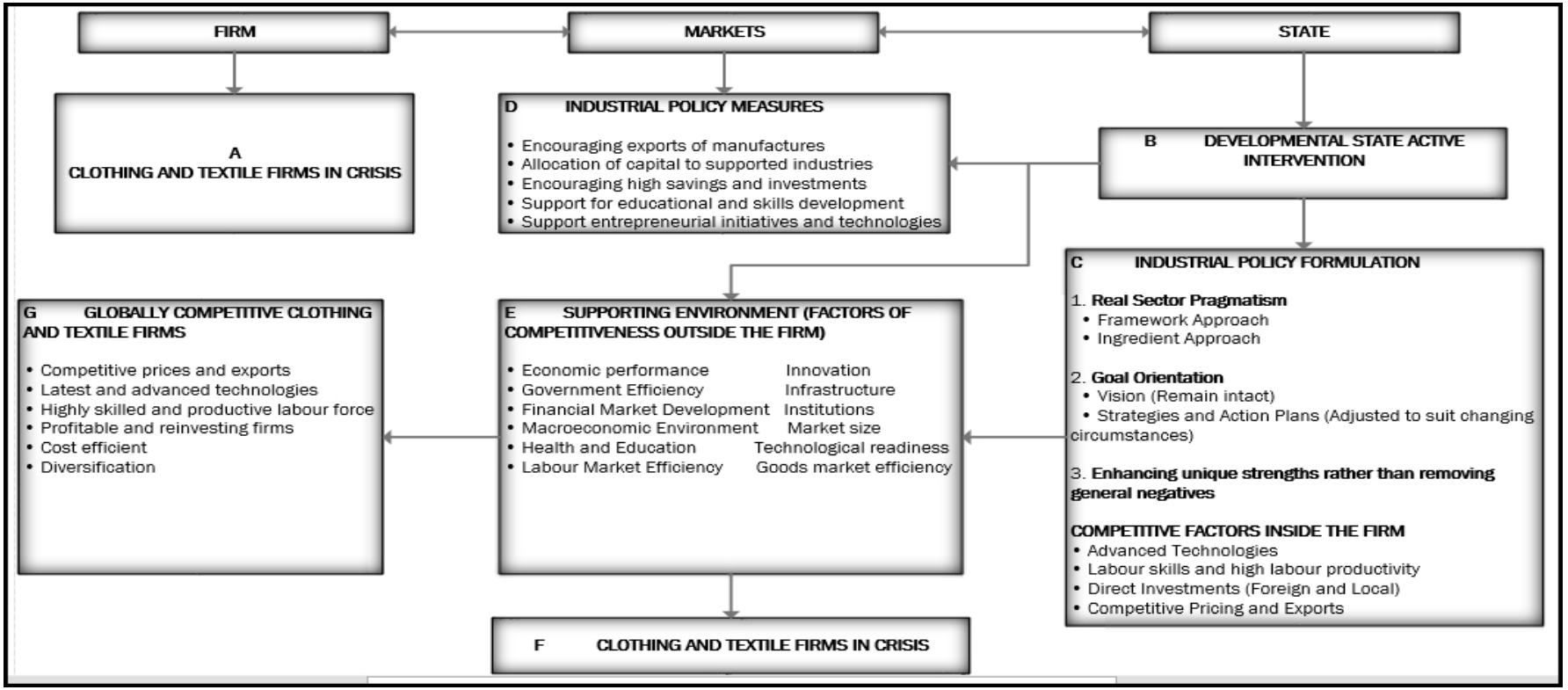
2.15 SUMMARY

Many developed countries, including the early industrialisers Great Britain and the Netherlands, used industrial policy to promote industrialisation. However, these developed countries differ as to the extent to which they intervened in the economy, the strategies they adopted, as well as on the instruments of industrial policy they used. The capacity of industrial policy to achieve industrialisation has mainly come to be associated with the NICs of East Asia.

South Africa could learn from these countries, generally from the developmental state approach of the NICs, and specifically their methodology of policy formulation. South Africa should intervene actively in the economy and focus on market failures. Market failures occur in the areas of technology, skills development and entrepreneurship development, areas which are in scarce supply in developing economies. These are the areas in which government intervention is justified.

Economic development depends on the speed at which a country is able to industrialise. This study aims to establish the current status and context of the clothing and textiles industry in South Africa. Industrial policy measures must be implemented to make the clothing and textile industry globally competitive and should be complemented by supporting environment measures with the assistance of government intervention. The methodology through which this is done is the subject of the next chapter which discusses the research methodology.

Figure 8: Graphic Presentation of the Conceptual Framework: A 'Co-ordinated' System



Source: Own, 2015

Table 9A: Researches related to this study

RESEARCH TITLE	OBJECTIVES	RESEARCH METHODOLOGY	COMMENTS
1. Masters (Wits) Development Theory and Policy: How is the South African State Promoting Investment that increase local content in the production of Automobiles: A Critical Evaluation of Investment Promotion and Industrial Policy (1994 – 2014)	Critically analyse the role of the state in the development of Automobiles industry from 1994 - 2014	Critical Approach and Qualitative Methodology with structured and unstructured interviews as instrument of data collection	
2.PhD (Wits) Informing Industrial Policy in Uganda: Interaction Between Institutions, Technology and Market Reforms	2.1 To explain the nature of Uganda's industrial policy practices, historically with the view to deepening our understanding its impact on the industrialisation process 2.2 To understand the failure to institute coherent industrial policies as the major explanation for Uganda's stunted industrialisation	Broad qualitative review of industrial policy practices and what informs their past and the motive forces behind these policies. Case Studies and relatively structure supplemented with quantitative use of statistical tables.	An objective with so many sub-objectives/multi-focused confuses and in the end the reader is not sure whether all the objectives have been achieved.

Table 9B: Researches related to this study

RESEARCH TITLE	OBJECTIVES	RESEARCH METHODOLOGY	COMMENTS
	2.3 To undertake a systematic investigation into what informs the nature of industrial policy and the industrialisation process in Uganda focusing on the interactions between institutions, technology and market reforms 2.4 To investigate why and how the failure to formulate a coherent industrial policy may explain the failed industrialisation process in Uganda.		
3.PhD – Wits Market Share, Profitability and Implications for Strategy Formulation	The aim of the research is to explore the underlying cause behind the market share/profit relationship	"fine-grained methodologies (case studies and industry studies; Hybrid methodologies for strategy research and coarse grained	Competitiveness of the business is restricted to only two areas within the business which are corporate structure and strategy. Is the environment outside the business an enabling environment and is infrastructure available?

Table 9C: Researches related to this study

RESEARCH TITLE	OBJECTIVES	RESEARCH METHODOLOGY	COMMENTS
4. PhD – Wits Effects of Capital Market Development and Inflow of Foreign Direct Investment in African Countries	To establish the relationship between Africa's capital market development and the attractiveness of the continent to inflow of FDI	Selection of different hypothesis and testing of the hypothesis	The assumption is that the environment outside the business is enabling and infrastructure is available.
4. PhD – Wits Effects of Capital Market Development and Inflow of Foreign Direct Investment in African Countries	To establish the relationship between Africa's capital market development and the attractiveness of the continent to inflow of FDI	Selection of different hypothesis and testing of the hypothesis	The assumption is that the environment outside the business is enabling and infrastructure is available.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research methodology employed for this study. Neuman (2006, p. 2) defines research as being a "way of going about finding answers to questions". There are various ways and methods of finding answers to questions and acquiring knowledge (Du Plooy, 2009), one of which is the scientific method. The basic characteristics of the scientific method distinguish it from other ways and methods of acquiring knowledge because it is empirical, cumulative and systemic, objective, predictive and public (Du Plooy, 2009). These basic characteristics of the scientific method make it a fundamental approach to generating knowledge through research (Iqbal, 2007). Methodology is defined as a "system of actions that are taken to implement and test ideas about the real world" (De Munck, 2009, p. 31). This system of actions aims at stimulating real world processes and phenomena (De Munck, 2009).

Methodology is a way of thinking about and studying social reality while method is defined as a set of procedures and techniques for gathering and analysing data (Strauss & Corbin, 1998). While methodology refers to a holistic approach that is followed in a specific research process, method refers to the tools and techniques that will be used in that research process. Methodology is broader than method and includes methods, social organisational context, philosophical assumptions, ethical principles and political issues among others, while method is a set of specific techniques for selecting cases, measuring and observing aspects of social reality, gathering and refining data, analysing the data and reporting results (Neuman, 2006).

3.2 RESEARCH APPROACH

3.2.1 Research Assumptions

The choice and adequacy of a research method is dependent on the assumptions a researcher holds about the underlying nature of the objects of the research (Long, White, Friedman & Brazeal, 2000). These assumptions relate to the ontological, epistemological and methodological nature of society and social science (Long et al., 2000). Social ontology is defined as "assumptions held about the nature of social reality" (Long et al., 2000, p. 190). These assumptions are that reality can either be objective and external to the individual, or that reality can be subjective and cognitively constructed on an individual basis. The social ontology assumption dictates the epistemological assumption, which is the manner in which knowledge can be transmitted to others.

If the researcher assumes that social reality is objective, for instance, this means that knowledge should be theoretically accessible to all. Conversely, if social reality is assumed to be subjective, knowledge should be dependent on individual experiences. Ontological and epistemological assumptions about social reality and knowledge dictate the methodology that the research will adopt. "Theory can be used as an initial guide to design and data collection, as part of an iterative process of data collection and analysis, or as a final product of the research" explains Walsham (2006, p. 324). Existing theory about the social reality will guide the scientific approach or paradigm that the research process or design will follow.

3.2.2 Research Paradigms/Philosophies

A paradigm may be defined as "a general organizing framework for theory and research that includes basic assumptions, key issues, models of quality research, and methods of seeking answers" Neuman (2006, p. 81). Neuman (2006) identifies three scientific approaches to the research process and likens these to research programmes, research traditions and scientific paradigms. These scientific approaches are the positivist, the interpretive and the critical approaches (Neuman,

2006). Interpretivism is rooted in 'hermeneutics' which is the study of the theory and practice of interpretation (Nieuwenhuis, 2007). Interpretive methods of research start from the position that our knowledge of reality, including the domain of human action, is subjective and therefore a social construction by human actors (Walsham, 1993; 2006).

"Interpretive researchers strive and attempt to understand the way others construe, conceptualise and understand events, concepts and categories, in part because these are assumed to influence individuals' behaviour", as explained by Kaplan and Duchon (1988, p. 572). Nieuwenhuis (2007) argues that although interpretivism gave rise to a number of different interpretive approaches that include phenomenology, critical theory and constructivism, the common trend in these approaches is that the research is premised on the assumption that access to reality is possible only through social construction such as language, consciousness and shared meanings. It is often difficult to make clear distinctions between different approaches as these approaches overlap in practice. For instance, the difference between the positivist and interpretive approaches is often overemphasised (Weber, 2004).

There are no fundamental differences between the positivist and interpretive paradigms except in the research methods they use and the genres to report their research (Weber, 2004). Although the positivists (objective) and interpretivists (subjective) assume objective and subjective realities respectively as their points of departure, whether researchers believe in an objective reality that exists beyond the human mind or believe in a socially constructed reality, all accept that the artefacts they build to understand the world (theories, frameworks, constructs) are socially constructed (Weber, 2004).

While 'positivist' and 'interpretivist' approaches try to enhance their understanding of the world, both bring biases and prejudices to the research they undertake and both use research methods that have strengths and weaknesses (Weber, 2004). The interpretive approach is also called the phenomenological approach (De Vos,

Strydom, Schulze & Patel, 2011). The phenomenological approach insists that all human beings are engaged in the process of making sense of their worlds and continuously interpret, create, give meaning, define, justify and rationalize daily actions (Babbie & Mouton, 2001).

Phenomenology as a method of research is concerned with understanding social and psychological phenomena from the perspectives of the people involved (Welman & Kruger, 1999). This suggests that researchers who need a suitable exploratory research design that would prevent, minimise or restrict their own biases should choose phenomenology.

The critical approach appears to be both an extension of, and an improvement of, the interpretive analysis. The critical approach "goes beyond surface illusions to uncover the real structures in the material world in order to help people change conditions and build a better world for themselves" (Neuman, 2006, p. 95). The purpose of the critical approach is not simply to study the world as would the interpretive analysis, but also to change it (Neuman, 2006).

The critical approach seeks not only to study and understand society but rather to critique and change society (De Vos et al., 2011). The critical approach prescribes that the researcher must be embedded in the everyday life worlds of the people to be studied, with the aim of becoming educative and ultimately transformative (Babbie & Mouton, 2001). The distinctions between Positivism and Interpretivism are outlined in Table 10 below.

The purpose of this study is not only to investigate the current industrial policy measures in the clothing and textile industry in order to understand them and the context within which they are implemented, it is also aimed at recommending alternative industrial policy measures that could make the clothing and textile industry in South Africa globally competitive.

Table 10: Distinctions between Positivism and Interpretivism

Metatheoretical Assumptions About	**Positivism**	**Interpretivism**
Ontology	Person (researcher) and reality are separate	Person (researcher) and reality are inseparable (life world)
Epistemology	Objective reality exists beyond the human mind	Knowledge of the world is intentionally constituted through person's lived experience
Research Objects	Research object has inherent qualities that exist independently of the research	Research object is interpreted in light of meaning structure of person's (researcher's) lived experience
Method	Statistics, content analysis	Hermeneutics, phenomenology, etc.
Theory of Truth	Correspondence theory of truth: one-to-one mapping between research statements and reality	Truth as intentional fulfillment: interpretations of research object match live experience of objects
Validity	Certainty: data truly measures reality	Defensible knowledge claims
Reliability	Replicability: research results can be reproduced	Interpretive awareness: researchers recognise and address implications of their subjectivity

Source: Class notes by Jorgen Sandberg (In Weber, R., 2004)

Policy makers decide on industrial policy measures that they assume would be suitable for the economic context within which they live. This implies that since there are no blueprint industrial policy measures for different contexts, industrial policy measures are premised on the subjective economic realities, knowledge and learning (ontological and epistemological assumptions) of policy makers which originate from individual experiences and are therefore subjective in nature (Long et al., 2000).

However, the success and failure of industrial policy measures may be dependent on other factors, such as the type of support/incentives provided to targeted firms, complementary firms in the supply value-chains and networks, the structure of the country's economy, the country's stage of economic development, politics and the interests of policy makers and other bureaucrats in the chains of command and implementation. In other words, context plays a role in the success or failure of industrial policy measures.

The critical approach is the most appropriate research paradigm for this study because the critical approach not only facilitates an understanding of the world, but also how to change it (Neuman, 2006). For this study, the critical approach helps not only to understand the current industrial policy measures but also to recommend alternative measures that would help firms grow and where the country achieves both economic development and industrialisation.

The hypothesis of the research is that the clothing and textile industry in South Africa is not globally competitive because the cost of production factors (wages and salaries, interest, profit, rent, water and electricity) and final prices of product are high compared to competing nations. In this study, themes were developed and questions for interviews were formulated from the themes.

The themes are Current Prices of Products, Cost and Availability of Labour, Productivity of Employees, Models of Machines, Profitability of Firms, and Reducing Electricity Consumption. These themes were developed in order to understand the actual reality of cost and profit items in the industry. Information collected during the interviews was recorded under the themes used to formulate interview questions. The researcher made calculations to quantify the extent of profits made in the firms. This and other information collected informed the conclusions drawn by the researcher.

3.2.3 Qualitative Research

Qualitative research is “an umbrella term which covers several forms of enquiry” (Merriam, 1998, p. 11). These forms of enquiry could be loosely defined as a category of research designs or models which focus on understanding and explaining the meaning of social phenomena. This view suggests that all types of qualitative research are based on the assumption that reality is constructed by individuals interacting with their social worlds.

Qualitative research is “any type of research that produces findings not arrived at by statistical procedures or other means of quantification” (Strauss & Corbin, 1998, pp. 10-11). It can vary from research about persons’ lives, lived experiences, behaviours, emotions and feelings. Qualitative research can also be about organisational functioning, social movements, cultural phenomena and interactions between nations, and most of the analysis is interpretive (Strauss & Corbin, 1998).

Qualitative research “implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured, if measured at all, in terms of quantity, amount, intensity, or frequency” (Denzin & Lincoln, 2005, p. 10). “People often describe qualitative research as research that attempts to collect rich descriptive data in respect of a particular phenomenon or context, with the intention of developing an understanding of what is being observed or studied” (Nieuwenhuis, 2007, p. 50).

The focus of qualitative research is on describing and understanding the phenomena within their naturally occurring context – the naturalistic context in order to develop an understanding of the meaning imparted by the respondents so that the phenomena can be described in terms of the meaning that they have for the actors or participants (Nieuwenhuis, 2007). This study is about direct involvement with the real world, and also about interaction with people who are directly involved with the design and implementation of industrial policy. It is also about involvement with people in the clothing and textile industry workers and employers in firms that are targeted by industrial policy measures. Industrial policy measures could be

fairly assessed by considering the context within which they are implemented while policy measures cannot be assessed without taking into consideration their social reality which is not value-free but subjective.

3.3 RESEARCH DESIGN

Various designs used by qualitative researchers will differ depending on the purpose of the study (De Vos et al., 2011). A research design is "a plan or strategy which moves from the underlying philosophical assumptions to specifying the selection of respondents, the data gathering techniques to be used and the data analysis to be done" (Nieuwenhuis, 2011, p. 70).

According Creswell (as cited in De Vos et al., 2011), there are five research designs, namely narrative biography, ethnography, phenomenology, grounded theory and case study. Different interpretive approaches which included phenomenology, critical theory and constructivism emanated from the original conception of interpretivism (Nieuwenhuis, 2007). At the heart of phenomenology is an attempt by the qualitative researcher to explain and describe the phenomenon as accurately as possible (De Vos et al., 2011). The intention is to understand the phenomena under one study on their own terms and thus to provide a description of human experience as it is experienced by the subjects.

In this study, the aim is to investigate whether the clothing and textile industry in South Africa is globally competitive, examine and explain why industrial policy measures have not generated expected results, and reflect on possible recommendations for industrial policy measures that will make the clothing and textile industry globally competitive. The focus of the study is employers and employees of the clothing and textile firms as the people who are directly affected by the decisions of policy makers in constructing industrial policy measures. The researcher interviewed the people who are affected to understand how the world of the employees and employers in the clothing and textile factories is developed and experienced. It is for this reason that phenomenology as research design was used.

3.4 DATA COLLECTION

3.4.1 Primary Data

Qualitative research is based on the naturalistic approach that attempts to understand phenomena in context (or real world settings) and in general, the researcher will not try to manipulate the phenomenon of interest (De Vos et al., 2011). Qualitative research, unlike quantitative research, is carried out in real-life situations and not in an experimental (test–retest) situation (De Vos et al., 2011). Therefore, unobtrusive data gathering techniques like interviews and observations dominate the naturalistic (interpretive) paradigm (Nieuwenhuis, 2011). Three components of qualitative research are data, procedures and written and verbal reports (Strauss & Corbin, 1998). Data can be derived from various sources such as interviews, observations, documents, records and films. Interviewing "is the predominant mode of data or information collected in qualitative research" (Greeff, 2011, p. 342).

Interview is "a two-way conversation in which the interviewer asks the participant questions to collect data and to learn about the ideas, beliefs, views, opinions and behaviours of the participant" (Nieuwenhuis, 2007, p. 87). In qualitative research, interviews are aimed at seeing the world through the eyes of the participant and provide an important source of information if used correctly (Nieuwenhuis, 2007).

This study is about real-life challenges in South Africa's clothing and textile industry. The researcher wanted to obtain first-hand information about the challenges in the industry from the people involved in the day-to-day operations. Interviews were therefore used in order to obtain real life stories from people who have experienced challenges that included retrenchments and job losses that take place in the industry on a daily basis. The people interviewed in this study include policy makers, employees and employees' representatives, employers and employers' representatives, and community representatives.

To assist the clothing and textile industry in South Africa, the government has introduced laws and policy documents that prescribe measures aimed at addressing these challenges. In part this study aimed to analyse what is contained in such documents. The aim of the analysis is to check the appropriateness of these measures, to address the challenges in the industry and to establish whether these measures were implemented. To achieve this objective, the Industrial Policy Action Plan documents which aim to scale up and broaden intervention in the clothing and textile industry were analysed. Therefore, primary data in this study comprises interviews and documents analysis.

3.4.2 Secondary Data

Secondary data takes the form of literature reviews that explore concepts in the clothing and textile industry, primarily on industrial policy in South Africa as well as internationally, together with theories that outline the evolution of the concept of competitiveness. The purpose of doing a literature review is to find material related to the conceptual focus of the research problem (Du Plooy, 2009). Before trying to answer the question, it is logical to find out what is already known about that question (Neuman, 2006). It is about reviewing the accumulated knowledge about a question (Neuman, 2006). Literature review provides the background and context of the research problem and reflects the need for the research (Wiersma, 1995). It is where the limitations of existing knowledge are discussed and current research becomes clear and visible to the reader (Badenhorst, 2007).

Literature review indicates that the existing body of knowledge does not adequately address the problem raised in the question and should demonstrate that the researcher is knowledgeable about the area of research (Wiersma, 1995). It updates the reader about the results of other studies that are closely related to the current research problem (Fraenkel & Wallen, 1990). Literature review shows how the current research is linked with the broader ongoing dialogue in the literature about a topic, filling in gaps and extending prior studies (Marshall & Rossman, 1989).

Literature review in this study provides context, which includes political, social, economic, administrative and ethical context. This information, collectively called secondary data, was sourced through books from the libraries of various universities together with internet searches for papers and scholarly journal articles. This information pertains to industrial policy and its aim, which is competitiveness, and both topics were explored in some detail in Chapter 2 of this study.

3.4.3 Population

According to Bordens and Abbott (2008), population in a research process refers to all the subjects that are under study. The concept of population is sometimes used interchangeably with universe and refers to "the set of all units that the research covers, or to which it can be generalized (Neuman, 2006, p. 135). However, Arkava and Lane (1983) make the distinction between the concepts 'universe' and 'population'. While 'universe' refers to all potential subjects who possess the attributes in which the researcher is interested, 'population' sets boundaries on the study units (Arkava & Lane, 1983).

'Population' thus refers to individuals in the universe who possess specific characteristics (Arkava & Lane, 1983). In addition to specific characteristics, members of the population possess knowledge that the researcher would like to collect, analyse and use to arrive at a conclusion. It is usually not possible to study an entire population because of financial, human and other constraints (Randall & Gibson, 1990) and the researcher must thus be content to study only a sample of that population. There are three factors that researchers should consider when acquiring human participants for the research process (Bordens & Abbott, 2008).

Firstly, the setting in which the research will take place, whether it will be field experiment or laboratory, must be considered. The researcher will have less control over participants in the field experiment than in a laboratory. For the field experiment, participants are interviewed and express themselves within their own context and reality that they are accustomed to and are therefore not controlled through laboratory instruments. Secondly, it must be determined if there are any

special needs for a particular research. In other research, the researcher would need to screen potential participants for certain characteristics such as gender, age or personal characteristics. Thirdly, determine any institutional, departmental and ethical policies and guidelines governing the use of participants in research (Bordens & Abbott, 2008).

For this study the population consists of people from the clothing and textile industry in South Africa, including industrial policy makers in the sector. The clothing and textile industry in South Africa is concentrated in certain geographical areas, especially in provinces like the Western Cape, KwaZulu-Natal, the Free State, Gauteng and North West, in cities like Cape Town, Durban and Johannesburg and in certain rural areas in former homelands (Vlok, 2006). The population of the study included firms' owners, employees and employees' representatives, textile federations, and policy makers, particularly those responsible for policymaking in the clothing and textile industry.

It was not possible to cover all the industries in the different provinces of South Africa and a sample population was therefore used. For this research, the population comprised firms in the three provinces of Gauteng, KwaZulu-Natal and North West. However, in some provinces, especially the North West Province areas of Babelegi in Hammanskraal and Rosslyn in the Ga-Rankuwa Industrial area, only a few firms were still in operation. The population included people who are responsible for the day-to-day operations of the firm and are firm owners/management and employees in the firm, as well as employees' representatives.

3.4.4 Sampling Method and Sampling Size

A sample is described as "a small subgroup chosen from the larger population" (Bordens & Abbott, 2008, p. 158). A sample is defined as "a smaller set of cases a researcher selects from a larger pool and generalizes to the population" (Neuman, 2006, p. 219). The primary purpose of sampling is to collect specific cases, events or actions that can clarify and deepen understanding" (Neuman (2006, p. 219). Rather than studying an entire population, researchers choose a small segment from

the entire population, which is supposed to be representative of the whole population.

Research objectives and research questions often determine the sampling frame as to whom or what to sample, using one of the two different sampling techniques or methods that are probability and non-probability sampling (Palys, 1997). Two sampling methods are probability sampling, also called random sampling, which is based on randomisation such that all possible samples of fixed size *n* have the same probability of being selected; and non-probability sampling, also called non-random sampling, which does not implement randomisation and in which not all possible samples have the same probability of being selected (Strydom, 2011).

Non-probability sampling methods "do not make use of a random selection of population elements and it would therefore be dangerous to draw important conclusions about the population" (Maree & Petersen, 2007, p. 176). However, qualitative researchers tend to use non-probability or non-random sampling and rarely determine the sample size in advance and also have limited knowledge about the larger group or population from which the sample is taken (Neuman, 2006). Qualitative researchers tend to select cases gradually, with the specific content of a case determining its suitability for selection (Neuman, 2006).

This study is qualitative in nature and the researcher non-randomly selected firms from different provinces of KwaZulu-Natal, North West and Gauteng. Some of the firms have closed down mainly due to the crisis in the industry and it was therefore important to use non-random or purposeful sampling to select firms which were still in existence and functional. These provinces were preferred choices because it is where the clothing and textile industries are concentrated, and in some provinces like KwaZulu-Natal, North West and some parts of Gauteng, these industries are major employers.

A total of 11 firms were selected non-randomly across three provinces. Five of the firms produced clothing and six produced textiles. The arrangement was that in each

firm, if the situation allowed for it, the researcher would interview the owner/management, one employee and an employee's representative. In the majority of cases, this objective was achieved.

3.4.5 Interviews

Interviews can be structured or unstructured. Structured interview can be defined as a short-term question-and-answer interaction in which the interviewer "asks prepared questions (like in questionnaire) in advance and simply read the ordered questions to participants" (Bordens & Abbott, 2008, p. 204). In contrast, in unstructured interviews the interviewer has a general idea about the issues to discuss and does not have a predetermined sequence of questions. Each type of interview has its strengths and weaknesses.

While structured instruments facilitate quicker data analysis and reporting of results, the problem may be in finding what is expected and/or settling on an explanation too early (Devers & Frankel, 2000). According to Devers and Frankel (2000), several factors influence the type of interview to be followed. These include the purpose of the study, the extent of existing knowledge about the subject and resources available, particularly subjects' time, and the number or complexity of cases. For instance, when the study is more exploratory or is attempting to discover and/or refine theories and concepts, open-ended protocol or unstructured interviews are appropriate to consider. Devers and Frankel (2000, p. 268) explain that "Depending upon the type of feedback or mode of sharing research results agreed upon and the time frame for doing so, greater instrumentation may be required". During qualitative interviews, the researcher tries to understand the phenomenon from the subjects' point of view and to derive meaning from people's experiences (Kvale, 1996).

Semi-structured interviews were used in this study. To gain some advantages of both structured and unstructured interviews, the researcher combined the two methods in one interview. This was achieved by starting the interview in a structured format by asking prepared questions, and later in the interview switching

to an unstructured format to get more information. While structured questions assisted the researcher to ask focused and relevant questions, unstructured questions enabled the researcher to elicit more information about the setting of the people involved in the process (Bailey, 1996); to understand the phenomena from the subjects' point of view; and to derive meaning from people's experiences (Kvale, 1996).

A total of 30 participants shared their experiences with the researcher. The group comprised owners/managers, employees, policy makers, implementing agency, employee's representatives and other stakeholders. Participants were all asked the same questions on the price of the product, productivity of employees, models of machines, profitability of the firm (workers did not know how much profit the firms were making, and this became a question for owners/managers only), and the question on industrial policy measures proposed gave participants a chance to speak out on what they thought should happen in the industry.

3.5 DATA ANALYSIS

Previously, one of the common criticisms of qualitative research has been that data analysis were not made explicitly or open to inspection because few qualitative researchers explained how they analysed data (Neuman, 2006). Schurink, Fouche and De Vos (2011, p. 399) define qualitative data analysis as "a process of inductive reasoning, thinking and theorizing which certainly is far removed from structured, mechanical and technical procedures to make inferences from empirical data of social life". Qualitative data analysis tries to extract the meaning of reality through the experiences of participants. Nieuwenhuis (2007, p. 99) explains that, "It tries to establish how participants make meaning of a specific phenomenon by analysing their perceptions, attitudes, understanding, knowledge, values, feelings and experiences in an attempt to approximate their construction of the phenomenon". Schurink et al. (2011) define qualitative data analysis as a process of inductive reasoning, thinking and theorising. During qualitative data analysis, it is the role of the researcher to discover categories, themes or patterns based on gathered data (Marshall & Rossman, 2006).

These analytical categories which may be derived inductively from data are used to describe and explain social phenomena (Pope, Ziebland & Mays, 2000; Marshall & Rossman, 2006). Analytical categories may be derived inductively i.e. obtained gradually from data or used deductively – either at the beginning or part way through the analysis as a way of approaching the data (Pope et al., 2000). Nieuwenhuis (2007) believes that qualitative data analysis can best be achieved through a process of inductive analysis where the main purpose is to allow research findings to emerge from the frequent, dominant or significant themes inherent in raw data, without the restraints imposed by a more structured theoretical orientation.

This inductive process of identifying analytical categories as they emerge from data, developing hypotheses from the ground or research field upwards rather than defining them beforehand is referred to as 'grounded theory' (Pope et al., 2000). Glaser and Strauss (1965) regard qualitative research whether utilising observation, intensive interviews, or any other type of document, as a strategy concerned with the discovery of substantive theory. According to Pope and Mays (as cited in Lacey & Luff, 2007), qualitative research is an interdependent and subjective exercise, and the researcher is intimately involved in the process, not aloof from it.

Qualitative researchers usually follow stages to ensure rigour in the qualitative research process. According to Lacey and Luff (2007), analysis of qualitative data usually goes through some or all of the following stages (although the order may vary): familiarisation with the data through review, reading, listening etc.; transcription of tape recorded material; organisation and indexing of data for easy retrieval and identification; anonymising of sensitive data; coding (may be called indexing); identification of themes; re-coding; development of provisional categories; exploration of relationships between categories; refinement of themes and categories; development of theory and incorporation of pre-existing knowledge; testing of theory against the data; and report writing, including excerpts from original data if appropriate (e.g. quotes from interviews).

For this study, data analysis was done by undertaking the following stages: familiarising with data through reading; organising and indexing of data for easy retrieval and identification; coding and identification of pre-existing categories; exploring relationships between categories; refinement of themes and categories; incorporating pre-existing knowledge; and report writing including excerpts from original data.

3.6 VALIDITY AND RELIABILITY

According to Neuman (2006), the concepts of 'reliability' and 'validity' are central issues in all measurements and all social researchers want their measures to be reliable and valid. The basic reliability issue refers to the measurement method's ability to produce the same research result over and over again while the basic validity issue refers to whether the intended object of measurement actually is measured (Stenbacka, 2001). The issues of reliability, validity and generalizability are measurement concepts used in positivist studies and have little relevance in judging the merits of interpretive investigations of qualitative research (Carcary, 2009).

Many writers in qualitative research have rejected the use of the concept 'validity' in interpretive research and replaced it with 'trustworthiness' which could be demonstrated through credibility, transferability, dependability and confirmability, peer debriefing, audit trail, member checks, soundness, and triangulation (Lincoln & Guba, 1981; 1985; Marshall & Rossman, 1989; Begley, 1996; Creswell, 2002; Tobin & Begley, 2002: 2004).

Regarding credibility, Shenton (2004) argues that positivist researchers use internal validity to ensure that their study measures or tests what it is intended to test. For the qualitative researcher, the equivalent concept of internal validity is credibility which measures how congruent the findings are with reality (Guba & Lincoln, 1989; Merriam, 1998). Koch (1994) observes that credibility will be enhanced when researchers describe and interpret their experience as researchers. Some of the questions to test credibility may include the following: Do the findings capture what

is really there? Are the results believable from the perspectives of participants in the research?

Regarding transferability, Guba and Lincoln (1989) suggest that transferability is dependent upon the degree of similarity between two contexts – also called "fittingness". According to Merriam (1998), external validity in positivist research is concerned with the extent to which the findings of one study can be applied to other situations and can be tested by demonstrating that the results of the work at hand can be applied to a wider population. There are contrasting arguments relating to the transferability of research results.

According to Shenton (2004), although Erlandson, Harris, Skipper and Allen (1993) argue that even conventional generalizability is never possible as all observations are defined by the specific contexts in which they occur, Stake (1994) and Denscombe (1998) suggest that although each case may be unique, it is also an example within a broader group and, as a result the prospect of transferability should not be immediately rejected. It is due to these arguments that other researchers such as Lincoln and Guba (1985) and Firestone (1993) are of the view that the reader should be the one responsible for the transfer, having been guided by the investigator who ensured that sufficient contextual information about the fieldwork sites was provided.

One of the ways in which a research study may be shown to be dependable is for its process to be audited (Koch, 1993). Dependability, which is an alternative to reliability, asks the researcher whether the research process is logical, well documented and audited (Schurink et al., 2011). Koch (1993) proposes an inquiry audit that is based on the fiscal audit which implies that the auditor should authenticate the accounts of a business and by examining the process by which accounts are kept, the auditor excludes the possibility of error and fraud.

The positivist uses techniques to show that if the work is repeated in the same context with the same methods and with the same participants, results achieved will

be similar (Shenton, 2004). According to Sandelowski (1986), auditability is achieved when the researcher leaves a clear decision trail concerning the study from its beginning to its end. Confirmability captures the traditional concept of objectivity and asks whether the findings of the study could be confirmed by another (Lincoln & Guba, 1999; Schurink et al., 2011). It requires the researcher to show the way in which interpretations have been arrived at via the inquiry (Koch, 1993).

Shenton (2004) believes that the concept of confirmability is the qualitative researcher's comparable concern with objectivity in which steps must be taken to help ensure, as far as possible, that the work's findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher. Researchers show confirmability by writing up the procedure for checking and re-checking data throughout the study. The researcher can search for and describe negative instances, or those things that did not happen. After the study, the researcher can reflect on the data collection, analyse procedures and evaluate the potential for bias.

According to Schurink et al. *(*2011), qualitative researchers have become increasingly uncomfortable with the criteria used above, namely credibility, transferability, dependability and confirmability, and have challenged with renewed intensity the use of Lincoln and Guba's (1999) criteria to assess qualitative studies. Morse, Barrett, Mayan, Olson and Spiers (2002) observe that authors and researchers such as Sandelowski (1986) continue to use Lincoln and Guba's criteria while others such as Whitemore, Chase and Mandle (2001) have suggested different labels to meet similar goals and criteria.

This has resulted in a range of terms and criteria and such lack of clarity may have led to the introduction of standards in the 1980s for the post-hoc evaluation of qualitative inquiry (Howe & Eisenhardt, 1990; Hammersley, 1992; Lincoln, 1995; Greswell, 1997; Thorne, 1997; Rogers & Williams, 1998; Frankel, 1999; Morse et al., 2002). Kelly (as cited in Schurink et al., 2011) argues that standards for good

research should not contradict the fundamental interpretative epistemology of qualitative research and should, according to Marshall and Rossman (1999), defend the qualitativeness of the study through transparency with specific reference to the auditing trail, research story and reflexivity.

In addition, while standards are a comprehensive approach to evaluating the research as a whole, they remain primarily reliant on procedures or checks by reviewers to be used following completion of the research (Morse et al., 2002). Morse et al. (2002) criticise the post-hoc evaluation of the qualitative research on the following grounds: firstly, rigour does not rely on special procedures external to the research process itself. For instance, audit trails may be kept as proof of the decisions made throughout the research process, but they do little to identify the quality of those decisions, the rationale behind those decisions, or the responsiveness and sensitivity of the investigator to data. Therefore, audit trails are of little use in identifying or justifying actual shortcomings that have impaired reliability and validity.

Secondly, although Guba and Lincoln (1981) described member checks as a continuous process during data analysis, this has largely been interpreted and used by researchers as verification of the overall results with participants. Morse et al. (2002, p. 7) argue that "while it is an attractive idea to return the results to the original participants for verification, it is actually not a verification strategy". Other researchers (Guba & Lincoln, 1981; Hammersley, 1992; Morse, 1998) have argued against a tendency to define verification in terms of whether readers, participants or potential users of the research judge the analysis to be correct, stating that it is usually is a threat to validity.

Thirdly, introducing new terminology for reliability and validity in qualitative research may result in the criterion adopted by one qualitative researcher being stated as a goal by another researcher (Morse et al., 2002). For instance, Yin (1994) describes trustworthiness as a criterion to test the quality of research design, while Guba and Lincoln (1989) refer to it as a goal of the research. Morse et al. (2002)

suggests that qualitative researchers in their inquiry need to consider the importance of verification strategies so that reliability and validity are actively attained, rather than be considered by reviewers on the completion of the project.

Schurink et al. (2011) argue that there are various approaches to evaluate the quality of one's own research. While some researchers evaluate their research on the basis of the strengths and limitations inherent in the methodology applied (Nell, 2005), others focus on the research process and emphasise rigour and authenticity (trustworthiness), researcher credibility, the argumentative defensibility of the scientific report, and the transferability of findings (Schurink et al., 2011). According to Morse et al. (2002), verification strategies that will ensure rigour must be built into the qualitative research process. These include, among others, methodological coherence, sampling sufficiency, collecting and analysing data concurrently, thinking theoretically, and theory development. These verification strategies guided the researcher's attempt to achieve reliability and validity of this study and are explained below.

3.6.1 Methodological Coherence

Strauss and Corbin (1998) define methodology as a way of thinking about and studying social reality while method is defined as a set of procedures and techniques for gathering and analysing data. While methodology refers to a holistic approach that is followed in a specific research process, method refers to the tools and techniques that will be used in the research process. Therefore, methodology is broader than method and includes methods, social organisational context, philosophical assumptions, ethical principles and political issues, among others, where method is a set of specific techniques for selecting cases, measuring and observing aspects of social reality, gathering and refining data, analysing the data, and reporting results (Neuman, 2006).

The aim of methodological coherence is to ensure congruence between the research question and the components of the method (Morse et al., 2002). Methodological coherence requires the research question to align with the method, which matches

data and the analytical procedure. For instance, if the reality of the research question is subjective in nature, knowledge should be dependent on individual experiences (Long et al., 2000). Ontological and epistemological assumptions about reality and knowledge dictate the methodology that the research process will adopt.

Nieuwenhuis (2007, p. 70) defines research design as "a plan or strategy which moves from the underlying philosophical assumptions to specifying the selection of respondents, the data gathering techniques to be used, and the data analysis to be done". Subjective reality can best be investigated through qualitative research (Long et al., 2000) which could take the form of conceptual studies, historical research, action research, case study research ethnography, and grounded theory. Data gathering techniques in the qualitative research process may include documents, observation, interviews and focus groups (Nieuwenhuis, 2007).

According to Schurink et al. (2011), data analysis in qualitative inquiry necessitates a twofold approach. "The first involves data analysis in the field during data collection, while the second involves data analysis away from the field following a period of data collection" (Schurink et al., 2011). This study investigates whether the clothing and textile industry in South Africa is globally competitive. Clothing and textile firms are closing down with employers losing profits and employees losing jobs. This research was carried out to get information from these employers and employees who shared their daily experiences with this study.

From an ontological point of view, the type of social reality explored from these participants is subjective. This social reality is subjective because the knowledge shared with the research thesis is dependent on individual experiences. For this reason, the scientific approach used in this research thesis is the critical approach. Although the subjective reality described above is interpretive/phenomenology, it goes beyond only studying and understanding the phenomenon but extends to also improving the situation.

Interpretive method moves from the premise that knowledge of reality, including the domain of human action, is subjective and therefore a social construction of human actors (Walsham, 1993). Critical approach not only studies the social reality that is subjective, but it also tries to improve the social reality. For this study, the researcher not only investigates whether the clothing and textile firms in South Africa are globally competitive, whether the current industrial policy measures will make the industry globally competitive, but the study also suggests measures to improve the conditions at the firms. Therefore, it is more of a critical than interpretive approach.

In line with the methodology of subjective reality is the qualitative research design used in this research thesis. Merriam (1998) suggests that all types of qualitative research are based on the assumption that reality is constructed by individuals interacting with their social worlds. Nieuwenhuis (2007, p. 50) observes that "people often describe qualitative research as research that attempts to collect rich description data in respect of a particular phenomenon or context with the intention of developing an understanding of what is being observed or studied".

The critical approach theory was used as research design in this research thesis. Nieuwenhuis (2007) observes that different interpretive approaches which included phenomenology, critical theory and constructivism emanated from the original conception of interpretivism. According to De Vos et al. (2011), at the heart of phenomenology is an attempt by the qualitative researcher to explain and describe the phenomenon as accurately as possible.

The intention is to understand the phenomena under one study on their own terms and therefore to provide a description of human experiences as experienced by the subjects. However, this study not only aims to describe the human experiences as they are experienced by the subjects (phenomenology), but also aims to change them, hence the use of the critical approach which goes beyond just experience.

Regarding sampling of the population, the researcher in accordance with qualitative research non-randomly selected firms from the provinces of KwaZulu-Natal, North West and Gauteng. According to Neuman (2006), qualitative researchers tend to use non-probability or non-random sampling and rarely determine the sample size in advance, and they have limited knowledge about the larger group or population from which the sample is taken. Qualitative researchers tend to select cases gradually with the specific content of a case determining its suitability for selection (Neuman, 2006).

Figure 9 below illustrates that the criteria for methodological coherence were met in this study. The philosophical assumption about reality (ontological) is that industrial policy measures are subjective in nature since they are selected based on existing conditions in the sector and will thus differ from situation to situation. This implies that knowledge (epistemological) is, if reality is assumed to be subjective, dependent on individual experiences (Walsham, 1993).

This study aims not only to investigate industrial policy measures and how they are implemented in the clothing and textile industry, but to also change conditions in the industry for the better. It is for this reason that the critical approach is the most appropriate methodology. Industrial policy measures being opinions and knowledge of policy makers based on individual experiences imply that the qualitative method of research is the most appropriate for this study (Merriam, 1998). In a qualitative method of research, data collection is best achieved through interviews.

Firms were selected non-randomly and the sample size was not determined in advance (Neuman, 2006). The researcher visited the firms first to check whether the firms were in existence and still operational before they could be chosen to participate. The explanation above proves that this study meets methodological coherence criteria.

3.6.2 Sampling sufficiency

Nieuwenhuis (2007, p. 79) defines sampling as "the process used to select a portion of the population for study". Although some researchers such as Patton (2002) argue that there are no rules for sample size in qualitative research, some researchers such as Sandelowski (1995) believe that inadequate sample sizes can undermine the credibility of the research findings. According to Strydom and Delport (2011), sample size depends on what we want to know, the purpose of the inquiry, what is at stake, what will be useful, what will have credibility, and what can be done with the available time and resources.

The sample should consist of participants who best represent or have knowledge of the research topic such that sufficient data is available to account for all aspects of the phenomenon (Morse et al., 2002). According to Nieuwenhuis (2007), the qualitative research process usually involves a smaller sample size than the quantitative research process, is flexible and often continues until no new themes emerge from the data collection process – called data saturation.

For this study, the researcher first visited firms in the industries in Ga-Rankuwa and Babelegi and telephonically called other firms in Johannesburg and KwaZulu-Natal to find out if they were still operational. The firms that participated in the study in GaRankuwa and Babelegi were among the few remaining firms in the industrial area. Therefore, with a few more firms in Johannesburg and KwaZulu-Natal, together with additional information from other key stakeholders in the industry such as textile federations, policy makers, SACTWU and IDC representatives, sufficient data was made available to account for all aspects of the phenomenon (Morse et al., 2002).

Participants interviewed were telephonically contacted to ensure that they have knowledge of the research topic. Interviews were combined with document analysis to consolidate the data. This means that the sample size chosen was sufficient to obtain information on what the study wanted to establish, the purpose of the inquiry,

what is at stake, what would be credible, and what could be done with the available time and resources (Strydom & Delport, 2011).

3.6.3 Collecting and Analysing Data Concurrently

According to Morse et al. (2002), collecting and analysing data concurrently forms a mutual interaction between what is known and what needs to be known. The pacing and iterative interaction between data and analysis is the essence of attaining reliability and validity (Morse et al., 2002). Data analysis is described as the process of reducing the volume of raw information, sifting significance from trivia, identifying significant patterns, and constructing a framework for communicating the essence of what the data reveal (Schurink et al., 2011).

Greeff (2011) argues that the researcher must transcribe and analyse the interviews while they are still fresh in his/her mind because preliminary coding may be useful. This is also useful for saturation because the researcher can raise the credibility of the research by giving the summary of the interview to the participant for approval. By employing qualitative analysis, an attempt is made to capture the richness of themes emerging from the participant's talk, rather than reducing the response to quantitative categories (Greeff, 2011, p. 360).

In this study, the researcher was able to collect information through interviews at the firms during the day and analyse data before the next day's interviews. This helped the researcher to distinguish between information that will be significant for the research and information that will not add value to the research. The researcher at one point realised that there was no longer a need to continue with interviews because there was no new information emerging from the interviews, indicating that saturation point had been reached (Monette, Sullivan & DeJong, 2005).

3.6.4 Thinking theoretically

Thinking theoretically is described as the process through which research ideas emerge from the data and are reconfirmed in new data; this gives rise to new ideas that, in turn, must be verified with data already collected (Morse el al., 2002). However, this will require the researcher to be theoretically sensitive. According to Glaser and Holton (1978), a researcher should have two important characteristics for the development of theoretical sensitivity. First, the researcher must have the personality and temperament to maintain analytical distance, tolerate confusion and regression while remaining open and trusting to preconscious processing and to conceptual emergence. Secondly, the researcher must have the ability to develop theoretical insight into the area of research combined with the ability to make something of these insights (Glaser & Holton, 1978).

Thinking theoretically requires macro-micro perspectives, inching forward without making cognitive leaps, constantly checking and rechecking and building a solid foundation. According to Glaser and Holton (1978), thinking theoretically requires that the researcher has the ability to generate concepts from data and tolerate them according to normal models of theory in general, and theory development in sociology in particular, i.e. the essence of theoretical sensitivity. The first step in gaining theoretical sensitivity is to enter the research area without any predetermined or especially logically deducted idea (Glaser & Holton, 1978).

In this study, the researcher had a general prior knowledge of the problems in the clothing and textile industry but did not have the specifics, except for information that there was an increase in imports from mainly China and India. The common thinking amongst policy makers was that the cause of the increase in imports was higher prices of products due to higher wages and salaries in the clothing and textile industry. The researcher was patient and asked questions that will ensure that participants provide their experiences of the industry.

After listening to some of the participants it became evident that the relationship between employers and employers' representatives was not sound, that in some

firms, some of the workers had been expelled because of being members of a trade union and in other cases, employers did not allow workers to be interviewed independently. The researcher also realised that in some instances, employers chose interviewees based on their good relations with the employer. Despite these observations, the researcher continued to gather information and learned about some of the dynamics in the industry.

3.6.5 Theory Development

Theory development is described as a move with deliberation between a micro perspective of the data and a macro conceptual/theoretical understanding (Morse et al., 2002). Glaser and Holton (1978) argue that generating a theory from data means that most hypotheses and concepts not only come from data but are systematically worked out in relation to the data during the course of the research. The researcher must have the ability to conceptualise and organise, make abstract connections, visualise and think multivariately.

Morse et al. (2002) argue that theory is developed through two mechanisms. Firstly, theory is developed as an outcome of the research process, rather than being adopted as a framework to move the analysis along. Secondly, theory is developed as a template for comparison and further development (Morse et al., 2002). Valid theories are well developed and informed, comprehensive, logical, parsimonious and consistent (Morse et al., 2002).

For this study, the researcher went into the firms to collect as much information as possible. While information was being collected through interviews, the researcher perused current industrial policy documents from the Department of Trade and Industry, to observe whether what is in the documents had been correctly translated into action at the firms. Although the researcher had read about clusters in literature from Porter (1990), Chlebiková and Mráziková (2009), Morosini (2004), Delgado et al. (2014) and Slaper and Ortuzar (2015), the other instances in which clusters were mentioned was firstly during the interviews when one firm proposed well-functioning clusters, secondly, when clusters were mentioned by the government

coordinator of clusters, and thirdly, it was mentioned by the IDC as being responsible for improvement in the performance of firms.

Sometime after the interviews, the researcher received a call from one of the firms asking about clusters. On further examination, the researcher found that there were problems and that clusters were not well coordinated. The researcher discovered that most of the learning about the industry is supposed to happen at these clusters. Firms were keen to produce for the domestic market and to manufacture uniforms for government employees in particular. Firms were also visiting foreign countries to identify new technologies when this information was supposed to be discussed at clusters with experts from the government.

These, together with the article by Morris, Robbins and Barnes (2006), presented an opportunity for the researcher to consider how clusters could be re-established so that they function optimally. The researcher developed the Adopt-A-Cluster Model and other proposals in relation to industrial policy measures such as encouraging exports of manufactures, encouraging technology, and promoting education. Even though Adopt-A-Cluster is a model and not a theory, it is nevertheless an outcome of the data collected, intensive investigation of this study, and a new contribution to industrial policy in the industry.

According to Morse et al. (2002), verification strategies that will ensure rigour must be built into the qualitative research process, including, among others; methodological coherence, sampling sufficiency, collecting and analysing data concurrently, thinking theoretically, and theory development. The above discussions showed how these were satisfied in this study. The study therefore meets the criteria of validity and reliability.

3.7 LIMITATIONS OF THE STUDY

Originally, the researcher identified two possible limitations to the research. The first one relates to industrial policy legislation for countries in East Asia in that these may not be available in English and that interpretations may distort the original

meaning. This situation was made complicated by the fact that in some countries two industrial policies are designed, with one intended for the public and foreign countries and another private one with the country's hidden objectives.

These problems were avoided by the researcher's approach whose narrative took a historical perspective and reported on the success of East Asian countries and other developmental states without having to find out what was in the original documents. Therefore, the focus has been on what other experts observed as the causes of the success of the East Asian countries, and what South Africa can learn from these experiences.

The second possible limitation has been the possibility that conditions of employment in firms may be affected by the firm's physical location. Industries in Babelegi in Hammanskraal and Rosslyn in GaRankuwa, both in the former homeland of Bophuthatswana, came about as a result of South Africa's central government industrial decentralisation policies which provided incentives to firms that relocated from cities such as Johannesburg, Cape Town, Durban and Pretoria as well as other locations to former homelands including Bophuthatswana.

One of the incentives given for relocating firms was to pay wages and workers' salaries for the first twenty years of relocation on behalf of the firm. This made the wages and salaries of employees in the former homelands very low compared to their counterparts in cities. The situation was exacerbated by different working conditions in the homelands which did not permit trade union activities. Since 1994 the conditions of service have been the same between firms in the homeland areas and firms in cities. The differences between clothing and textile firms in Hammanskraal and Ga-Rankuwa compared to others in Johannesburg and KwaZulu-Natal were found to be negligible and the researcher was able to make fair claims about all the firms.

3.8 ETHICAL CONSIDERATIONS.

According to Neuman (2006, p. 129), researchers need to prepare themselves and consider ethical concerns as they design a study so that sound ethical practice is built into the study design. Ethical issues are the concerns, dilemmas and conflicts that arise over the proper way to conduct research. Ethics define 'what is' or 'what is not' legitimate to do, or which 'morals' research procedure involves (Neuman, 2006). Walsham (2006) argues that there is no agreement on the classification of ethical issues in research. For instance, Diener and Crandall (1978) identify four main areas of concern which are being harmful to participants, lack of informed consent, invasion of privacy, and deception. The tensions and grey areas encountered suggest that there are few ethical absolutes.

Walsham (2006) proposes three specific domains of practice in ethics which are confidentiality and anonymity, working with the organisation, and reporting on the literature. Anonymity would inevitably include privacy. According to Neuman (2006), survey researchers invade a person's privacy when they probe into beliefs, backgrounds and behaviours in a way that reveals intimate private details.

Researchers protect privacy by not disclosing a participant's identity after information is gathered and this takes two forms: anonymity and confidentiality (Neuman, 2006). Anonymity means that people remain anonymous or nameless. Anonymity protects the identity of specific individuals. Confidentiality means that information may have names attached to it, but the researcher holds it in confidence or keeps it secret from the public. The information is not released in a way that permits linking specific individuals to responses and is publicly presented only in an aggregated form (Neuman, 2006). However, a researcher may provide anonymity without confidentiality or vice versa. Neuman (2006) argues that anonymity without confidentiality means that all the details about a specific individual are made public, but the individual's name is withheld. Confidentiality without anonymity means that information is not made public, but a researcher privately links an individual name to specific responses.

Walsham (2006) identifies two problems or tensions that are normally encountered in confidentiality and anonymity. Firstly, "when reporting back to the organisational sponsors after a field site visit … it may be possible for individual sponsors to make an informed guess as to whom particular views may be attributed, even though the researcher uses no names or positions" (Walsham, 2006, p. 327). Secondly, "when reporting in the literature on the views of senior people …. a little detective work on the part of the reader may enable them to make a good guess as to who is being discussed" (Walsham, 2006, p. 327).

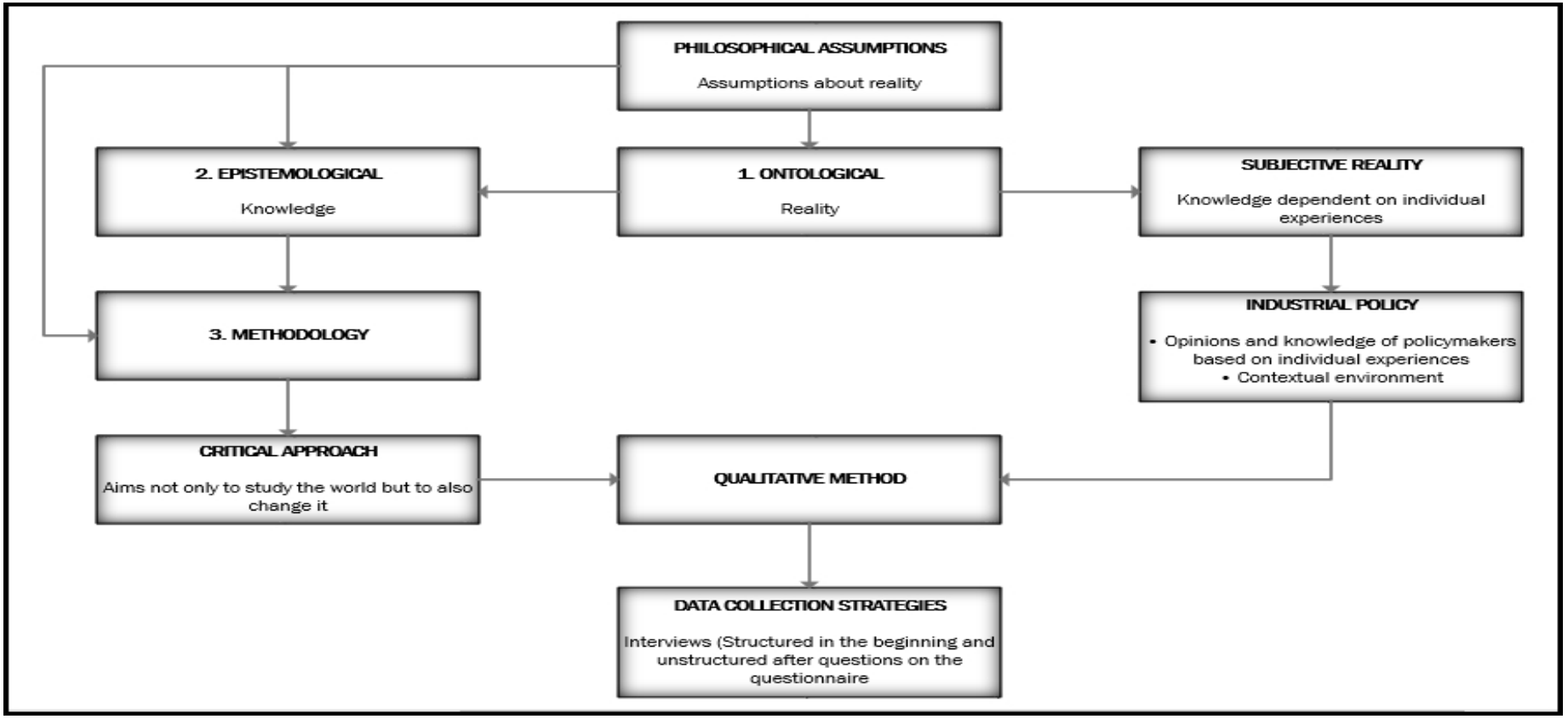
The second specific domain of practice in ethics identified by Walsham (2006) involves working with, or for, the organisation. This problem emanates from the gap between the expressed purpose of the research and the broader agenda of the field research. The same problem would arise if the research is sponsored, especially in respect of applied research (Neuman, 2006). Power is endemic and important to all activity and yet it is not included in the research agenda and this indicates personal tension for the researcher. For instance, the researcher may want to report on things the organisation may not want reported on (Walsham, 2006) or the sponsor may make illegitimate demands on the researcher (Neuman, 2006).

Interviews with all the respondents/interviewees and any other information that was obtained in the course of the research process was kept confidential and anonymous. This may be problematic because if the name of a firm is revealed, the owner of the firm is also indirectly revealed if the firm is owned by a single person. For this study, neither the names of firms or participants were mentioned. Instead, pseudonyms were used in order to protect all the research subjects, and respondents were informed that their names were not going to be reflected in any document when consent was sought to collect information.

Protocol and any other restrictions were applied to request information. The Department of Trade and Industry, which is the custodian of most of the information, was informed that information requested would be purely for the purpose of this academic research and not for any other purpose. Although the

researcher is employed by the Department of Trade and Industry, this did not compromise any ‘truth’ or ‘reality’ regarding the appropriateness of industrial policy measures. The aim of this study is to contribute towards resolving problems faced by the clothing and textile industry in the country. The outcome is likely to benefit policy makers in the department, workers, owners of firms, consumers of clothing and textiles and South Africa in the long term.

Figure 9: Methodological Coherence in this study



Source: Own, 2017

3.9 SUMMARY

This chapter described the research methodology that was used in this research thesis. A clear distinction was made between methodology and method of the research. These distinctions and explanations are important in understanding what informed some of the methodology choices made by the researcher. The importance of research assumptions and philosophies was also discussed to illustrate how the researcher arrived at choosing qualitative over quantitative method as well as subsequent choices related to qualitative research method.

Issues of reliability and validity of the research were also discussed. The discussions of these concepts illustrated that they could not be adequately applied to qualitative research and that they were more suitable for quantitative research. For this study, the criteria used to check whether this research meets the required standard and rigour include methodological coherence and sampling sufficiency, collecting and analysing data concurrently, thinking theoretically and theory development. Elements of ethics as they applied to this research thesis were also discussed. Data collection for this study is the subject of the next chapter.

Table 11A: Brief conceptualisation of the research process

RESEARCH PROBLEM	PURPOSE	RESEARCH QUESTIONS	LITERATURE REVIEW	CONCEPTUAL FRAMEWORK	RESEARCH METHODS
The clothing and textiles firms in the industry has been closing down and shedding jobs while others continue to perform poorly in terms of both production and employment (Flatters and Stern, 2008). This is partly due to the surge in imports from foreign countries especially China and India (Vlok, 2006). The industry has for long been protected against foreign competition; and this protection may have allowed inefficiencies to go unchecked; resulting	To investigate the challenges of constructing and implementing industrial policy measures that could make the clothing and textiles industry globally competitive and to reflect on alternative measures Investigate if the firms are selling at competitive prices Investigate if the firms are employing productive workers Investigate if the	Why are South Africans continuing to buy clothing and textiles from other countries while these products are produced domestically? Prices do influence whether to buy or not to buy. What makes up a price: Costs and entrepreneur profits are the main determinants of price. If costs are kept	Definitions of industrial policy Previous industrial policy measures in South Africa Approaches to industrial policy Industrialisation strategies The concept of competitiveness Various theories of achieving competitiveness (The origins of competitive advantages of nations) International experiences as	The origins of the concept "competitiveness" is explored especially the contributions made by Adam Smith, 1776 (Absolute Advantage), David Ricardo, 1870 (Comparative Advantage) Heckscher – Ohlin Theorem (H-O), The Leontief Paradox (1953) that encouraged more research following the failure of the H-O theorem The contributions by Vanek (1959) on the importance of Natural Resources leading to Heckscher-Ohlin- Vanek (1959)	The object of the study which is industrial policy and its aim of competitiveness The philosophical assumption about ontology/reality is that a study on industrial policy measures would be Subjective. Epistemologically, knowledge is dependent on individual experiences. Industrial policy is aimed at changing the economic structure/improving competitiveness of firms in the clothing and textiles industry. Therefore the methodology will not be phenomenology but

Table 11B: Brief conceptualisation of the research process

RESEARCH PROBLEM	PURPOSE	RESEARCH QUESTIONS	LITERATURE REVIEW	CONCEPTUAL FRAMEWORK	RESEARCH METHODS
in failure to develop export capacity; and a concentration of production in low value-added products (Rangasamy and Harmse, (2003), (2005). The problem may be that the industrial policy measures that have been used in the industry were not successful and the industry may not be globally competitive to withstand the competitiveness of similar industries in other countries.	firms are making profits Investigate if the firms are using the latest technology available in the industry Reflect on alternative industrial policy measures	to the minimum, so will price. (i) What are the current prices of products by local firms? (Competitive Pricing) (ii) How productive are workers employed by local firms? (Productive Workers) (iii) What degree of profitability is achieved by firms? (Profitability) (iv) Which kinds, types or models of	lessons to South Africa's policy makers Amongst the international experiences from which South Africa could learn are: 1. Lessons from the early industrialisers 2.Lessons from the Newly Industrialised Countries – the Developmental States of East Asia 3. Lessons from Brazil in Latin America – Cohesive - capitalist State	The contribution by Webster (1984) on the importance of factor content approach The contribution by Porter's Diamond Framework of Competitiveness (1990) that include factor conditions, demand conditions, related and supportive industries and firm strategy, structure and rivalry The contribution by the New Economic Geography. The researcher reflected on the role that a Developmental State would have played in the origins of competitiveness and list other services	critical because the study is not concerned only with understanding social and psychological phenomena from the perspectives of people involved (Welman and Kruger, 1999), but also to help people change conditions and build and build a better world for themselves (Neuman, 2006). In line with the philosophical assumptions about studies on industrial policy, qualitative method was used together with appropriate instruments of collecting data which was done through interviews. Purposeful sampling was done to get firms that were operational and

Table 11C: Brief conceptualisation of the research process

RESEARCH PROBLEM	PURPOSE	RESEARCH QUESTIONS	LITERATURE REVIEW	CONCEPTUAL FRAMEWORK	RESEARCH METHODS
		machines are currently being used by local firms? (Technology) (v) What industrial policy measures could be appropriate to make the clothing and textiles globally competitive?		rendered by a developmental state such as infrastructure, institutions, property rights etc.	people who know about the conditions in the clothing and textiles industry.

Source: Own, 2017

CHAPTER FOUR
CURRENT OPERATING CONDITIONS IN THE CLOTHING AND TEXTILE INDUSTRY

4.1 INTRODUCTION

This chapter presents data from the responses to the interviews. Questions were divided and classified into five categories. These categories are: the current prices of products; whether the factories are making profits or losses; productivity of employees; technology and models of machines; and the proposed industrial policy measures. The presentation of data from the responses to the interviews is logically divided into themes derived from the classification of the questions.

The clothing and textile factories could make sustainable profits if the revenues increased and adequately cover the costs of production and other operating costs. The clothing and textile factories should strive to keep the cost of production and other operating costs as low as possible, while at the same time increasing the productivity of employees through training and skills development, in addition to using state-of-the-art technology machines.

4.2 SUMMARY OF PEOPLE INTERVIEWED

A total of 30 participants shared their experiences with this research, including owners/managers, employees, employee's representatives, the IDC and SACTWU. Participants were all asked the same questions on the price of the product, productivity of employees, models of machines, profitability of the firm (workers did not know how much profit the firm was making, and this became a question for owners/managers only), and industrial policy measures proposed. Table 12 lists the people interviewed and the organisations they represent:

Table 12: Factories and Individuals Interviewed

LOCATION OF FACTORY	TYPE OF FACTORY	CATEGORIES OF PEOPLE INTERVIEWED	NUMBER OF PEOPLE INTERVIEWED
Johannesburg (Gauteng Province)	1) Clothing	Owner, Union Representative, and Worker	3
	2) Clothing	Owner, Union Representative, and Worker General Manager, Worker	3
	3) Textiles	Senior Manager, Factory Foreman	2
	4) Textiles		2
Ga-Rankuwa Own two factories (textiles and clothing) situated at the same place	5) Textiles	Owner and three workers (supervisors) selected by the owner	4
	6) Clothing	Owner and three workers (supervisors) selected by the owner	
Hammanskraal (Gauteng Province) Own two factories (textiles and clothing) situated at the same place	7) Clothing	Owner (did not allow interviews of workers and their representatives)	1
	8) Textiles	Owner	1
KwaZulu-Natal	9) Textiles	Two Supervisors (Technical Director and	3
	10) Clothing	Training Officer); and Union Representative	2
	11) Textiles	Production Manager and Financial Manager Chief Executive Officer and Human Resources Officer	2
Department of Trade and Industry	Policy Makers	Chief Director, Director and Deputy Director Executive Director	3
	Cluster	Employee of the dti	1
Textile Federation			1
Clothing and Textiles Implementing Agency	Industrial Development Corporation		1
Union	SACTWU		1
TOTAL			**30**

4.3 PRESENTATION OF DATA

Interview questions to establish the current operating conditions in the clothing and textiles industries were classified under the following headings: 1) Current prices of products; 2) Productivity of employees/workers; 3) Models of machines (Technology); 4) Profitability of the firms; and 5) Proposed industrial policy measures.

In line with ethical considerations during the research process, the names of respondents used below are pseudonyms. This was done in order to protect all the research subjects. A total of nine firms participated in the study, with two firms each having separate sections for clothing and textiles, making a total of 11 firms.

Additional interviews were conducted with the following: three policy makers from the Department of Trade and Industry to provide preliminary information; an organiser of clusters from the Department of Trade and Industry; one official from the Textile Federation; one official from the Industrial Development Corporation as the Implementing Agency; and one official from the South African Clothing and Textile Workers' Union.

4.3.1 Current prices of products

This question was asked to determine which one(s) amongst the components of the cost of sales increases the price of a product. Cost of sales in this study is made up of cost of labour, capital cost, land and natural resources cost, entrepreneur's cost, and any other cost item which directly contributes towards total cost of production. Therefore, the question posed for interviews was: Please indicate how much each of the costs of production contribute to the selling price? The responses below came from owners and supervisors while employees and union representatives did not have knowledge about the cost of sales.

4.3.1.1 (Labour) Salaries and wages cost contribution to selling price

One firm did not provide cost of sales figures. Three firms gave labour cost per unit of output in terms of percentages of selling price at 20%, 36% and 55%, all of selling price. The remaining three firms provided labour cost per unit in terms of Rands at R22, R75, R45 and another at R786 per week; at 40 hours per week that translated into R19,65 per hour.

4.3.1.2 (Capital) Interest cost contribution to selling price

While most of the firms did not use borrowed capital, even those that used borrowed capital did not treat interest cost as being a significant cost to cost of production/selling price. Two of the firms did not provide interest cost per unit figures. Two of the firms did not use borrowed capital and therefore did not pay interest costs. The remaining three firms paid interest cost per unit of R1, 1% and 4, 5% of selling price.

4.3.1.3 (Land and Natural Resources) Rent cost contribution to selling price

Rent cost per unit was not a significant cost of sales component to the firms. Some of the firms owned the land and buildings on which production was taking place. Two of the firms did not provide cost of sales figures. One of the firms owned the building and did not pay rent. Three of the firms provided rent cost per unit in terms of Rands at R2,20 and at R110 per unit of output while the third firm pays R24 000 per week at 40 hours week which translated into R600 per hour.

4.3.1.4 (Entrepreneur) Profit cost contribution to selling price

Two of the firms did not provide information on profit percentage. Four of the firms provided profit per unit in terms of percentages at 2%, 2,5%, 10% and 19% of selling price. One of the firms was making R10 per unit of output.

4.3.1.5 Other comments on the contribution to selling price

Almost all the firms were concerned about the escalating cost of manufacturing components such as energy, wage rates and foreign exchange rates (regarding the price of inputs from foreign countries). For instance, some firms indicated that the cost of energy has doubled in the last five years. In one firm, sections using a lot of

energy had to close down and workers were retrenched. Almost all the firms were concerned about increasing wage rates, with two of the firms indicating that while wage rates go up, productivity does not go up. Some of the firms were concerned about the central bargaining system with other firms indicating that workers' unions were political and that workers had negative attitudes. One firm was concerned about the foreign exchange which fluctuates and sometimes increases the cost of imports, particularly in fabric and yarn.

A firm owner, Mr De Soto, interviewed on 15th August 2013 was "*fed up with the IDC and **the dti***" in that the prices were still not correct – rising wages and labour cost were up to 36% of the price of product, and labour relations were not good. One employee from the management, Jack, interviewed on 13th August 2013 indicated that "*wage rate goes up but productivity does not go up and therefore the central bargaining system was not good for the industry"*. Another firm owner, Mr Smith, interviewed on 13th August 2013 indicated that in terms of overheads, *"electricity is a big cost"*. *Energy costs doubled in the last five years and sections using a lot of energy had to close, leading to retrenchments"*.

4.3.2 Productivity of Employees/Workers

This main question was asked because employees' wages and salaries were important components of the cost of production/sales and therefore it was important to find out what could be done to improve employees' productivity so that firms get more value for money. The concept of productivity is made simpler in the actual questions posed to participants by using its dimensions as follows: What does the firm produce? What activities are required to produce a finished product? How long does it take to complete each activity? How many employees were involved in each of these activities? How long does it take to complete a finished product? Do employees have the required qualifications? Any additional information on the competencies of employees? These questions were responded to as follows:

4.3.2.1 What does the firm produce?

Clothing factories that participated in the research produced socks and underwear; shirts, trousers and ladies wear; and all types of ladies' wear excluding knitwear, blouses and corporate wear/uniforms. Textile firms were producing dyeing fabrics, blankets, printing, dyeing, weaving and designing.

4.3.2.2 What activities are required to produce a finished product?

For clothing factories that participated, most of the activities are common such as designing the pattern of the garment, cutting the garment, sewing the garment, cleaning the garment, pressing, packing, machining and dispatching; for shirts, activities include securing the fabric, securing trims and designing the patterns; for socks activities include knitting, processing, seaming, dyeing and designing. For textiles factories, activities included fabric preparation, dyeing, printing, finishing, packing, weaving and dispatching.

4.3.2.3 How long does it take to complete each activity?

This was dependent on what was being produced, as some items take longer to produce. It takes one day to design the garment, two days to cut, four days to sew, one day to clean, one day to press and another day to pack the garment. It took four weeks to produce socks. For the textiles factory, it took 10 days' lead time while for others it was an average of four weeks.

4.3.2.4 How many employees were involved in each of these activities?

In one clothing factory, there were 949 employees, of which 90 were salaried employees (senior workers) and 859 were waged employees (lower-ranked employees). In another ladies clothing factory, there were 450 employees with 40 workers in cutting, 200 in machining, 20 in pressing, 40 in dispatch and the remaining employees spread around in sales, administration and support staff. In the socks factory there was a total workforce of 640 employees. For another ladies clothing factory, five employees are responsible for designing, 20-30 people for cutting, 300 people for sewing, 100 people for pressing and another 100 people for packing. Other factories had 240, 425 and 250 employees without breaking down the responsibilities.

Phillip, interviewed on 21st August 2013 said the firm *"used to employ 300 people and now they are down to 40. "The firm used to have three shifts and now has only one shift". The ladies clothing factory had 5 employees for designing, 20-30 people for cutting, 300 people for sewing, 100 people for pressing, and 100 people for packing"*.

One textiles factory had 240 employees with 190 responsible for direct manufacturing and 50 as support staff. Another textiles factory had a total of 242 employees but did not indicate their responsibilities.

4.3.2.5 How long does it take to complete a finished product?

In a ladies clothing factory it took an average 4 to 6 weeks to produce a finished product. In a particular clothing factory (blouses), the lead time was two weeks from start to finish, and a unique feature of the factory was said to be an "express" of 20 hours turnover translating into 2 000 garments a week. An employee in this factory indicated it took only 3,5 hours to complete one blouse. Kedibone, interviewed on 16th August 2013 said that *"preparation was more important because once preparation is completed other activities become much easier"*.

In a clothing factory that produces mostly ladies wear, a union representative indicated that the time taken to complete a finished product depends on the style and ranges between 30 minutes and one hour. In a factory that produces textiles it took four weeks on average to produce most of the textile products.

4.3.2.6 Do employees have the required qualifications?

In all the clothing factories, employees had the necessary qualifications with at least two of these factories responsible for their own training. These qualifications were classified into two categories which are senior with formal qualification, and junior with qualification through experience. One employee representative, Isaac, said that although *"people have the necessary skills, there were problems when people needed to use these skills because they were not given a chance. Promotion should start from within the firm"*. This was echoed by a worker in another firm who indicated that the factory sends workers to SETAs for training and that workers

thought promotion of workers should start from within the factory instead of promoting people from outside.

A manager from the socks and underwear factory indicated that there was a lack of technical skills in the country especially technicians and designers, and proposed internal training systems which may help to address the problem. In a blouse factory, all the workers had the necessary qualifications with the owner qualified as a Chartered Accountant (CA, SA) and with more than 40 years of experience, some of which was with the leading Edgars Retail Clothing company. In the ladies' clothing factory, workers were being trained by the firm. A workers' representative complained that there were problems and that even when the skills were acquired, the workers were not promoted according to newly acquired skills. In the socks and underwear factory, the Senior Manager had a Master's Degree in Business Administration (MBA) with 16 to 20 years of experience, while in another clothing factory, the Production Manager had Textiles Manufacturing Skills.

Of the six textile firms, employees in four firms had the required qualifications and employees in two firms did not have the required qualifications. Textile firms spend a lot of time training employees and two of the textile firms were registered as Textiles Training Centres with the Department of Education. The managers of these firms had qualifications in Textiles Technology, Chemical Supplies and Technical Management as well as experience of up to 31 years.

4.3.2.7 Additional information on the competencies of employees

At one clothing firm, factory manager Joyce interviewed on 13th August 2013 said that there was a *"lack of technical skills in the country especially technicians and designers and I propose internal training systems"*. At another clothing firm an employee responded that firms employ workers at a certain level of competence and train them to become very competent. At another clothing factory an employee representative indicated that the factory sends workers to Skills Education Training Authorities (SETAs) for training, and workers hoped that promotion of workers would start from within the factory.

At another firm, a workers' representative indicated that there was an enormous pool of qualified labourers available and that the industry was said to be a "poorly paid industry". Martin, a designer interviewed on 14th August 2013 said the labour force was *"a qualified and an ageing workforce and the industry was low paying and attracting new entrants into the industry"*, who were being trained through SETAs but that experience remains of utmost importance to the industry. One employer, Mr Martins, interviewed on 23rd August 2013, said that, *"productivity of workers was low because insufficient units were being produced despite much more advanced machines which were used and well taken care of"*.

At the textile industry, two firms were achieving a high level of productivity using computerised systems and spent a lot of time developing staff. Employees' representatives indicated that the factories were doing their best to ensure that staff was multiskilled in all spheres of production in order to promote versatility and reduce the chances of retrenchment. There was also specialization in technical skills. Another two firms in the textiles industry screened employees before appointment and used internal tests, learnership programmes and contracts.

Workers' representatives at two firms in the textile industry indicated that employees were exposed to three months' probation period and their competence was dependent on the competence of the learnership programme, with options on the time it took to complete the learnership. Productivity of workers was very low compared to the salaries. Although they spent time training workers, workers often lowered their productivity rates during night shifts with machines set to operate at a lower speed.

4.3.3 Models of machines

This main question was asked to determine the extent to which the country's clothing and textile machinery is aligned with the latest international technology. To assist the participants to answer this question, it was divided into sub-questions as follows: What are the specifications of the machines that are used in the firm? When were the machines acquired by the firm? How long does it take for the

machine to complete a task? Are machine operators trained to operate the machines? Any additional information on the quality/technology of the machines? These questions were responded to as follows:

4.3.3.1 What are the specifications of the machines that are used in the firm?

One clothing factory indicated they had technologically state-of-the-art machines which produced 8 000 units a day. In this firm, they used the speed of machine to describe technology. Another clothing factory producing socks and underwear indicated they were using state-of-the-art technology which was mixed with a little bit of the old. New machines were said to indicate state-of-the-art technology. Another clothing factory which specialized in ladies' clothing indicated that the factory bought the latest machines available with the help of the IDC funded through the Production Incentive Scheme.

Since the machines were still new and recently acquired, they were thought to be of the latest technology available in the market. Employees' representatives in the factory indicated that the factory was using heavy industrial machines. An employee in the factory stated that the factory was using new machines with recent technology. Another clothing factory explained that the factory was not using state-of-the-art machines because they were small-runs in a non-automated factory although their machines were in good condition.

Employees' representatives in another factory indicated the machines were new models safety-stitch-machine, all-in-one, while others were just plain machines. An employee in the factory, Dick, interviewed on 21st August 2013 described the machines and was able to classify them into different categories, "*we have one that is button-and-button holding machines, another one is safety over lock machine, we also have flat-bed machine for sewing, another is elasticating machine, and cover-scam machine*".

All textiles factories indicated the machines they were using were state-of-the-art and described them as up-to-date and state-of-the-art technology. When there was something wrong with the machine, it automatically stopped; the machines were

advanced and well taken care of; and workers were exposed to safety programmes with safety representatives on every shift. Few of the machines might have needed replacement, upgrading and even additions. The good performance of the new machines was interpreted as up-to-date and state-of-the-art technology. Some of the machines were state-of-the-art technology, others utilised chemicals which were also fully computerised.

4.3.3.2 When were the machines acquired by the firm?

Clothing factories have on average been buying new machines for the past four years since 2010. At least two of the clothing factories started buying new machines since 2011; another two firms started buying new machines in 2010, while one firm only started buying new machines in the previous two years. Some factories buy machinery on an ongoing basis while others have always been replacing and upgrading machines through assistance from the Department of Trade and Industry.

In the textile factories there was a mix of the old and the new machines. In two firms there were three machines which were two, four, and 13 years old. These factories had started to replace their old machines in 2003 and had bought dyeing and finishing machines. In another two firms they were able to procure high level equipment through the Production Incentive Scheme which was pro-capital investment, and their machines were being replaced on a regular basis. The last two firms had acquired a finishing machine worth R300 million in 2011 and started operating the machine in 2012 and their production capacity was beginning to improve as a result of upgrading and increasing versatility.

4.3.3.3 How long does it take for the machine to complete a task?

One clothing firm indicated the question was broad because of the structure of their operations which were diversified. A factory employee indicated that the entire process of manual loading and offloading one garment took about five to seven minutes. Employees' representatives noted that the machines were very fast and dependent on the machine operator.

Another clothing firm stated that depending on the task, it can take 1 to 2 minutes to complete a task. Employees' representatives in the factory indicated that it depends on the person and the task required for completing a task. An employee in the factory explained that it was dependent on the activity performed. Another clothing factory producing socks and underwear indicated that it depends on what is being produced but was an average of four minutes while another clothing factory also felt that it was dependent on what was being produced.

At the textiles factories, it took seven hours for dyeing, while for finishing it depended on what was being produced. Employees' representatives at the factories thought it depended on the quality of the material used and what was being produced. Machines are capable of increasing speed per minutes.

4.3.3.4 Are machine operators trained to operate the machines?

Management in all of the clothing factories indicated that machine operators were trained to operate the machines. In two clothing firms, while employees' representatives agreed that all machines operators were trained, workers in these factories disagreed and observed that some were employed with prior experience. Lilian, an employee representative interviewed on 21st August 2013 said that: "*some of the machine operators were not trained and companies had recently started training them"*. In the same firms, employees explained that some machine operators came to the factory already experienced and those that did not have prior experience were trained.

In all the textiles factories, both management and employees' representatives indicated that machine operators were trained to operate the machines.

4.3.3.5 Any additional information on the quality/technology of the machines?

Management in two clothing firms stated that factories were small-run. Employees' representatives in these firms noted that the firms' mechanics were good and so were the machines. Employees in the factories indicated that automated machines were of better quality and that machines were more precise compared to manual machines. In one firm, employees' representatives explained that the machines had

up-to-date technology but that workers needed to be trained. In another firm, management stated that the machines had the latest technology with automation. The last clothing firm did not provide additional information on this point.

In two textile firms, management explained that the machines were fully computerised and automated. Management in another two firms thought that textile firms needed energy-efficient schemes which would reduce the energy bill by switching from electricity to steam. The last two textile firms did not provide additional information on the matter.

One employee in the textile firm, Mr Zungu, interviewed on 19th August 2013, remarked that *"if illegal imports can be reduced, people will revert back to manufacturing because right now it is only conversion"*. This implies that many of the firms that people thought were manufacturing products from inception were in fact buying half-finished products and converting them into finished products, the so-called Single Stage Transformation in which value-addition is minimal.

4.3.4 Profitability of the firms

This main question was asked to determine the extent to which firms were making profits/losses and assumed that in cases where profits were being made, some of these profits would be reinvested into the business, and that in cases where losses were being made, there would not be any additional investments from profits in those factories.

The researcher asked questions that would enable firms to provide information from which profits could be easily computed. Of 11 firms, only six provided this information (i.e. Firm A to Firm F). Only Firm G provided information regarding total profits for 2012 and 2013; Firms D and E did not provide sales revenue figures and as a result, profit made could not be calculated. The questions asked were as follows: What was the total cost of sales in the previous year? What was the total sales revenue in the previous year? What was the amount of profit made? What was

the percentage of profit to total revenue? What was the percentage of profit in the two previous years? The responses to these questions

4.3.4.1 What was the total cost of sales in the previous year?

Firm	Total Cost of Sales	
Clothing Firm A	R85 million	
Clothing Firm B	2012 - R53 million	2013 - R58 million
Clothing Firm C	R179 million	
Clothing Firm D	R100 million	
Textile Firm E	Did not provide figures	
Textile Firm F	R224 million	
Textile Firm G	Did not provide figures	

4.3.4.2 What was the total sales revenue in the previous year?

Firm	Total Sales Revenue	
Clothing Firm A	R93 million	
Clothing Firm B	2012 - R64 million	2013 - R69 million
Clothing Firm C	R256 million	
Clothing Firm D	Did not provide figures	
Textile Firm E	Did not provide figures	
Textile Firm F	R295 million	
Textile Firm G	Did not provide figures	

4.3.4.3 What was the amount of gross profit made (i.e. Sales Revenue – Cost of Sales)?

Firm	Gross Profit Made	
Clothing Firm A	R8 million	
Clothing Firm B	2012 - R11 million	2013 - R11 million
Clothing Firm C	R77 million	
Clothing Firm D	Did not provide sales revenue figures	
Textile Firm E	Did not provide sales revenue figures	
Textile Firm F	R71 million	
Textile Firm G	2012 - R14 million	2013 - R6,7 million

4.3.4.4 What was the percentage of profit to sales revenue (i.e. Gross Profit/Sales Revenue x 100)?

Firm	Percentage of Profit to Sales Revenue
Clothing Firm A	8/93 = 8.6%
Clothing Firm B	2012 - 11/69 = 15.9% 2013 - 11/64 = 17.2%
Clothing Firm C	77/256 = 30.1%
Clothing Firm D	Did not provide sales revenue figures
Textile Firm E	Did not provide sales revenue figures
Textile Firm F	71/295 = 24.1%
Textile Firm G	Cannot calculate without total sales revenue figures.

4.3.4.5 What was the gross profit percentage in the two previous years?

Firm	Gross Profit % in 2 Previous Years
Clothing Firm A	2011 - ±10% 2012 - ±10%
Clothing Firm B	Did not provide figures
Clothing Firm C	2011 - 25% 2012 - 28%
Clothing Firm D	Did not provide figures
Textile Firm E	Did not provide figures
Textile Firm F	2% - 2.5% for the last three years
Textile Firm G	Did not provide figures.

4.3.4.6 Any additional information on the profitability/losses of the firm?

Management in two clothing firms indicated that their firm's turnover was increasing. Another firm indicated that they had received funding from **the dti** and that this had improved profitability. Two firms in the clothing industry did not provide any additional information on this point. Management in two textile firms indicated that most of their raw materials/inputs (yarn, dye and chemicals) were imported and their prices were dependent on and influenced by the foreign exchange rate, resulting in average imported losses of R6 million in a year. The other four textile firms did not provide additional information on the issue. A factory owner, Mr Patel, interviewed on 20th August 2013 said, "*At the moment I*

am making profit merely to survive". The amount of profit made by firms was not significant and there was no surplus to be reinvested into the business.

4.3.5 Proposed Industrial Policy Measures

This main question was asked to elicit opinions of the people involved in the industry as to what measures are needed to be implemented to improve the performance of the factories in the industry. These sub-questions align with the questions already asked relating to the cost of production.

What can be done to reduce the cost of production? Sub-questions from this question are as follows: What can be done to reduce the cost of output produced by the firm? What can be done to increase the productivity of employees in the firm? What can be done to increase the profitability of the firm? What can be done to ensure that firms use machines that employ the latest technology available? What can be done to assist firms to reduce the price of output produced, increase the productivity of employees, increase the profitability of firms, and introduce the latest technology available? The responses to these questions are provided below.

4.3.5.1 What can be done to reduce the cost of output produced by the firm?

In one clothing firm, management believed that due to the high cost of raw materials, which were all being imported, they should be duty free and that training should be provided to address the low productivity of labour. Employees' representatives in the firm believed that the costs of fabric, fusing and cotton should be reduced while retaining quality. An employee in the firm proposed the establishment of more textile manufacturers to provide cloth in the country.

In another clothing firm, management observed that labour unions should be abolished and that labour laws were too stringent and influenced the workers to not work to their full potential and capacity. An employee in the firm believed that local raw materials/inputs would reduce the cost of outputs. In another firm, management believed that increasing productivity/efficiency through training was a prerequisite to reducing the price of output. Management in another firm believed that

increasing productivity by curbing/reducing absenteeism was of paramount importance in reducing the price of output.

Management in two textile firms noted that the cost of raw materials including chemicals was a problem as most of these were imported. Additionally, the exchange rate and the price of electricity were central problems. In one textile firm, Germaine, interviewed on 22nd August 2013, *was to visit Germany to look for, and buy machines which will consume less electricity*. Employees' representatives in these firms believed that switching off some of the lights, tightening water pipes and recycling paper and plastic could reduce the price of output.

Another two textile firms believed that firms should be compensated for the fluctuating currency and be assisted to reduce the cost of energy. Mr de Soto said that it was important that the government "*get textiles mills up again and reduce/stop importation of fabrics"*. Employees' representatives in these firms believed that to reduce the price of output, firms should reduce the cost of labour and be provided with water and electricity subsidies, and that government should combat illegal imports. An employee's proposal was to "*stop the inflow of imports into South Africa and people will start manufacturing*".

4.3.5.2 What can be done to increase the productivity of employees in the firm?

Management in the four clothing firms believed that training was essential to increase the productivity of employees. From these firm's management, employees' representatives and employees in one firm believed that in addition to training, incentives (motivation) and labour stability were also important. One employee, Jack, interviewed on 15th August 2013, believed that employee productivity could be increased through *"training and motivation and that workers should take their work seriously"*.

Of the four firms, management from one firm believed that in addition to training, change in attitudes, a reduction in absenteeism, and honesty were essential. In another firm, management believed that making workers responsible for their jobs

and discouraging them from calling on the union to assist them could increase their productivity.

In the textile firms, management in two firms believed that training, quality circle teams and remedial action were essential to increasing the productivity of employees. Employees' representatives in these firms believed that good cooperation among workers, employees' awareness, and encouraging workers to seek advice was important.

In two firms, management believed that efficiency was poor and that there were few good people on the management floor, and furthermore that the negative attitudes of workers and labour unions were issues that needed to be addressed. The price of labour (wages and salaries) was being increased annually without a concomitant increase in workers' productivity. One firm owner, Albert, interviewed on 23rd August 2013, proposed that "*workers should be paid per production instead of by labour laws"*.

4.3.5.3 What can be done to increase the profitability of the firm?

Management in four clothing firms believed that the profitability of the firm could be increased if the productivity of the workers was increased. Management from one of the four firms believed that employees' productivity could be increased by reducing absenteeism. In another firm, management believed that in addition to increasing productivity of the labour force, the duties on imported fabric should be reviewed if the productivity of the firm were to be increased. The third firm of the four believed that productivity of employees could be increased if the labour laws were reviewed and there was greater commitment from workers.

In the last of the four firms, management suggested that the profitability of the firms could be increased if there were cheaper electricity rates and negotiations with customers. Employees' representatives in one firm believed that motivation of employees through provision of incentives was important and could increase the profitability of the firms. Employees in another firm believed that employees need training and also needed to take their work seriously to increase profitability. One

manager, Raphael, interviewed on 13th August 2013 observed that *"there should be review of labour laws and a commitment that somebody is going to work"*.

Management in the four firms believed that bringing down the price of utilities (electricity and water) and foreign exchange would increase the profitability of firms. In another two firms, management's view was that the attitudes of workers and unions needed to change and that workers and unions should recognise that production is an important factor of the firm. In one of the firms, the employees' representative observed that firms need to ensure that jobs went out on time, firms should avoid cancelling orders and produce quality products.

4.3.5.4 What can be done to ensure that firms use machines that employ the latest technology available in the market?

In all five clothing firms, management believed that their firms were using the latest technology available. The definition of the latest technology explained in section 4.3.3.1 above includes heavy industrial machines described as safety-stitch, all-in-one, button-and-button holding, safety overlock, flat-bed, elasticating and cover-scam. Other descriptions of technology include the high speed of machines, automatically stoppage when something was wrong with the machine, reducing electricity consumption, and that machines could be set to move at a faster speed.

In three of the firms, employees observed that the firms were using machines with the latest available technology. In the remaining two firms, employees' representatives believed that firms were using the latest technology available. In all the textile firms, management noted that the factories were using machines that had the latest technology available. In three of the firms, employees' representatives agreed with management that firms were using the latest technology available.

4.3.5.5 What can be done to assist the firms to achieve the following?

4.3.5.5.1 Reduce the price of output produced?

Management in all the clothing firms observed that government should assist factories to reduce the price of output produced, remove duty on fabrics, and control

the price of electricity and water. Employees' representatives from one of the firms believed that the government could help by reducing the price of inputs (fabrics, fusing and cotton) while retaining quality. An employee from another firm believed that funding automation could help, while an employee from a different firm suggested that buying fabrics locally could help.

An employees' representative, Marcus, interviewed on 14th August 2013 thought it was important to *"minimise illegal imports which are currently the problems of the industry"*. Owners were against labour unions with one owner, James, interviewed on 14th August 2013 indicating that for the firms to reduce the price of output, there should be *"no unions because labour laws were already stringent and that workers do not work to their full capacity and that there was a need to make workers more responsible to do a day's job and not hide behind the union's cloak"*.

Management from four textile firms agreed that keeping the price of inputs (tariffs on imported inputs, problems associated with foreign exchange, cost of energy) low could reduce the price of output produced. Management from two textile firms observed that firms should improve on efficiency and technical back-up to reduce the price of output. Employees' representatives from two firms agreed that the cost of inputs (labour, water and electricity) should be kept low, and firms should be encouraged to use more efficient machines and stop imposing rebates on imported fabrics. The employees' representatives from two firms believed there was nothing wrong with the price of output from local factories, and the problem was illegal imports.

In one firm, a delegation was visiting Germany to look at machines with lower electricity consumption in order to reduce the cost of electricity and the cost of production and price of output.

4.3.5.5.2 Increase the productivity of employees?

Management, employees' representatives and employees from two clothing firms believed that incentives/motivation (its funding) and training were key to increasing

the productivity of employees. Employees in these firms believed SETAs should bring education to the house floor/in-service training/on-the-job-training and that facilitators should visit and train employees at firms. In another firm, management observed that purchasing the latest machinery and creating better systems to work easier and smarter could increase the productivity of employees.

Employees' representatives in these firms also believed that SETAs should play a role in training workers and exposing them to factory experiences through practice training, while employees felt that motivation and training were important for workers who should also take their work seriously. In another two firms, management observed that government's subsidising of modernised equipment was important and that the government should also get textile mills operating again and for factories to reduce or stop importing fabrics. Management believed that textile mills would assist in employing more people. In the last clothing firm, management believed that labour laws should be reviewed and that companies should form clusters like the Textiles Cluster in China in order to promote vertical integration.

In four textile firms, both management and employees' representatives were in agreement that training was essential in increasing the productivity of employees. Training should be carried out in relation to materials to be used and should be at the same level and state where local firms would be in a position to compete with imports that were cheap but also of lower quality. In two textile firms, management believed that the attitudes of labour unions and workers need to change, and that labour unions should not be aligning themselves to political parties.

4.3.5.5.3 Increase the profitability of the firm?

In one clothing firm, management felt that there were loopholes in laws regarding imports which resulted in illegal imports which were encouraged by the biggest buyers, namely the large chain stores. For instance, Madagascar's imports from Mauritius more than doubled the capacity of the local firms. The employees' representative in one of the firms, Maria, interviewed on 22nd August 2013, believed that "*workers incentives (subsidised by the government) were crucial to increasing*

the profitability of firms", while employees in the firm believed that factories should reduce the cost of raw materials and increase productivity using advanced automation/machinery.

In two clothing firms, management believed that lowering the cost of production (lowering electricity costs, dropping duties on fabrics, easing labour laws, attending to rebates) was crucial to increasing the profitability of firms. An employee in one firm believed training and motivation was essential. In another clothing firm, management noted that production incentives and grants from government were important and needed to be extended to encourage investors.

In four textile firms, management and employees' representatives observed that reducing the price of inputs (water and electricity, discouraging cheaper imports of inputs, removing the disadvantageous effects of foreign exchange and exploring the possibility of manufacturing some fabrics locally) were important. In two textile firms, management believed importing under the current rate of exchange environment was not the best solution and that textile factories received only 35% back from raw materials, thus making it difficult to compete.

4.3.5.5.4 Introduce the latest technology available in the industry?

In the four clothing firms, management stated that their firms were using the latest technology available and this was mainly due to government grants. They proposed that these grants should not be a one-year programme only but should be extended to five years to enable more acquisition of technology by firms. This was important because firms would then not wait to invest because of the Production Incentive Scheme, and that *"the sooner the investment was made, the better",* said Mr. Martins.

In these four firms, two employees' representatives from two of the firms agreed that the firms were using the latest technology available in the industry. In the fifth clothing firm, management suggested that more trade shows were needed, including inviting shows from other countries.

In the six textile firms, management believed that factories have introduced the latest technology available. Management in two of these firms observed that firms needed to send more people for training, and proposed the organisation of more trade shows, both locally and internationally, while an employees' representative from one of the firms, Marcus, believed that *"there should be strong links between Employers' Associations and the Government"*. In another two firms, management noted that the new machinery acquired was an incentive to firms while in the last two firms, employees' representatives believed that more training on how to use the machines that had been acquired was required.

4.4 INTERVIEW WITH GOVERNMENT CO-ORDINATOR OF CLUSTER

The Cluster Unit at the Department of Trade and Industry is responsible for Industrial Cluster Development, particularly Regional Industry and Special Economic Zones. There are opportunities within the value chain – Primary, Processing, and Beneficiation. Some of the sectors within these value-chains can become self-sustaining if properly developed. Clusters operate within a geographical area (of a sector). The aim of clustering is to pull the companies together (and benefit from economies of scale); and to provide shared services that will enhance competitiveness, such as warehousing services. Cluster Management Organisation and Benefits includes making finance available, benchmarking companies and providing marketing support.

Other types of assistance that may be available includes diagnostics and providing information, improving competitiveness through high quality human resources, HR; and the Clothing and Textiles Competitiveness Programme.

4.5 INTERVIEW WITH THE TEXTILE FEDERATION OF SOUTH AFRICA

The Textile Federation is an industrial trade organisation that aims to provide an excellent service to its members by advancing and promoting their trade and trade-related interests. It provides information to a wide range of industry stakeholders

and proactively represents the industry on important issues. The Textile Federation of South Africa comprises the following Constituent Associations: the South African Cotton Textile Manufacturers' Association (SACTMA); the South African Worsted Manufacturers' Trade Association (SAWMTA) and the National Fabric Knitters' Trade Association (NFKTA).

According to the representative of the Textile Federation, textile trade in the 1960s was dominated by Japan and a few countries in Europe. By the 1980s, Taiwan and Korea dominated the textile trade. This period was characterised by instability through a sequence of contraction and stabilisation and later developed quickly with higher wages, rendering the sector in these countries no longer competitive. *"The textile sector is currently dominated by China which is large, with the dominance being deep-rooted and endemic. However, many other sectors in South Africa such as rubber, glass and plastic are also being adversely impacted by China"*. (Personal interview, 30th September 2014).

China was considered highly competitive and efficient. According to the Textiles Representative, *"there was a perception that South Africa was highly indebted to China and was paying this back through the exportation of raw material commodities and the importation value added goods such as clothing and textiles, most of which was dominated by import fraud involving under-valuation and under-invoicing of imports"*.

The Textile Federation was cooperating with the Customs Division of the South African Revenue Service (SARS) to combat such illegal imports but progress was slow. As an example of the extent of the under-valuation of imports from China, recently the declared import value of bed-linen from China was R12/kg while the input raw material price of cotton was R17/kg.

The following factors were also discussed during the interview with the representative of the Textile Federation of South Africa on 30th September 2014:

Inputs: Most of the raw materials into the textile sector were currently being imported and without these inputs one cannot produce textiles. These included cotton – grown in South Africa but most being exported in an un-beneficiated form; polyester which was produced locally and also imported; acrylic which was imported; and nylon which was imported.

Transport: The competitiveness of manufacturers could be improved if located at the coast because they would save on transport costs which are prohibitively high, especially local transport costs.

Rent: Rent was not considered a major cost factor in the textile industry.

Real Wages: The cost of labour (real wage rates) was relatively high compared to South Africa's competitors in the East.

Skills Development: Training was taking place through SETAs although there was a lag in skills development in the textiles sector. Vocational training was necessary as was tertiary education. Training funds were available but were not being utilised efficiently and a disproportionate quantum of these funds was being used by the SETAs for their own administration.

Technology: As explained, *"South Africa had been lagging in its use of the latest technology some 20 years ago but this improved during the transition to democracy"*. Incentives were introduced and assisted in the move to upgrading the technology being utilised. These incentives were earned based on previous performance. Production incentives have enabled the use of the latest available technology. Most current textile machinery and equipment was imported.

Volatile exchange rates: This has had a negative impact on imports of raw material inputs.

4.6 INTERVIEW WITH AN OFFICIAL FROM THE INDUSTRIAL DEVELOPMENT CORPORATION (IDC)

4.6.1 Productivity of Workers

Productivity of the workers in the clothing and textiles industry improved significantly from 2009 and was driven by clusters, training, and improvement in performance measurement systems (visual management), as explained by the IDC representative: *"Scorecards and boards were used to write incentives based on agreed upon targets) – with incentives having changed the mindset of workers and managers alike; and operations were currently at a higher level due to upgraded equipment"* (Personal interview, 22 August 2015).

This higher productivity has led to competition at factory level. Factories have acquired capacity and there was reliability and flexibility in production. The IDC representative further explained that *"factories are flexible in that in cases where there were sudden changes in fashions, they are able to produce orders quicker, and can easily change from non-selling to selling products quicker"*.

The government had introduced incentives that were used to train workers and also introduced training schools for this purpose. These training incentives made it possible for the industry to have a pool of labourers available. Training has contributed to enabling better product development, manufacturing process improvement, market development and access to new markets, and the use of natural light instead of using electricity.

4.6.2 Types of Machines

Factories used to have only old equipment that were subject to breakdowns which interrupted production and contributed to increased maintenance costs. The IDC representative clarified that *"some parts of this old equipment were no longer available in the market, and all these interruptions made the final product expensive due to time taken to produce"*. Currently, there may be a few cases where old

equipment remains a challenge but mainly the incentive programme allowed for upgrading. Incentives from government and funding provided were relatively skewed towards the clothing and textile industry compared to other sectors.

Factories were therefore able to upgrade production equipment and acquire state-of-the-art technology, as the IDC official explained *"These acquisitions were preceded by attendance of international machinery expos. The acquisition of this latest technology was contributing towards higher production, on-time deliveries, quick-responses, and turning orders around quickly, and reliability and flexibility in terms of readily switching from non-selling products to selling products"*. The latest sewing, printing and dyeing equipment was also acquired. This indicates that while South Africa is not yet at the same level of technology with the leading countries, this is being addressed over time.

Some factories acquired machinery that saves on electricity by using alternative sources of energy in an effort to upgrade to environmentally friendly or 'green' technology, thereby contributing to improved energy efficiency. The IDC representative warned that factories in the *"clothing and textiles sector should continuously improve on technology and not wait until it is old, and these factories should be able to do these improvements on their own"*.

4.6.3 Profits of the Firms

Profits for the factories in the clothing and textiles industry were improving and some of the profits were being reinvested into the businesses. As noted by the IDC, *"the mood in the industry especially in the cluster areas of KwaZulu-Natal and Western Cape have been positive recently"*. There has been increased cluster collaboration, not only within horizontal clusters but also vertical clusters within the value-chain for factories themselves as well as retailers. State-owned enterprises were buying from local factories, especially footwear and uniforms.

4.6.4 Wages and Salaries of Employees

Salaries, wages, and general conditions of employment for workers have improved in line with increased profitability in the sector. Unions in the sector have seen an improvement in wages and salaries, and relations between employers and unions have also improved. The IDC indicated that, *"wages and salaries in the industry were in some areas relatively slightly higher compared to other countries, although wages and salaries were increasing in these countries, especially in China"*. However, South Africa was learning from these countries through study tours undertaken by consultants to countries such as Turkey. Although there have not been extensive additional jobs created, there had been some increase in jobs and employment in the industry has stabilised.

4.6.5 Problem Areas Identified

The following factors were identified as problem areas in the industry: currency strength, surge of global imports, illegal imports and fraudulent under-invoicing, inadequate compliance with 'country of origin' labelling legislation, lack of skilled personnel and management's failure to develop and implement skills development plans, outdated capital equipment technology, and limited innovation and research. The IDC agreed with this list and included import duties as another problem area often raised by factories.

The IDC further indicated that *"the problems are not solved, although customs have improved"*. Firms in the sector expressed satisfaction that the government was not proposing solutions but noted that all stakeholders within the industry were involved in identifying the problems and discussing potential solutions. It is for this reason that the uptake of incentives has been good. There has been an improvement in the industry and generally the conditions are no longer the same as manufacturing value-addition was increasing.

4.7 INTERVIEW WITH SOUTH AFRICA CLOTHING AND TEXTILE WORKERS' UNION (SACTWU) REPRESENTATIVE

4.7.1 Productivity of Employees in the Industry

According to the SACTWU representative interviewed on 8th September 2015, since 2005 the productivity of workers in the clothing and textiles industry has been increasing over time and available productivity data points to a relatively larger productivity increase in labour over productivity increase in capital.

Even when labourers were being retrenched, productivity was stable in the absence of any additional capital introduced in the production process or when older capital equipment was used, indicating higher productivity per worker – as clarified by the SACTWU representative during the interview held on 8th September 2015: "*even when employers were using old capital equipment (e.g. ironing board of the 1950s), workers were working harder and faster and output stayed stable irrespective of worker retrenchments"*.

Factory Incentives from IDC (Government):

The incentives from government (new machinery in companies) have been taken up by all companies, although some factories remain undercapitalised. Generally, the contribution to productivity from capital was also increasing. The Union was classifying factories into non-compliant – those paying less than the minimum wages and competing on the wage component, and compliant companies – those paying the minimum wage. There was widespread animosity in industrial relations (conflicts, slow protests) in non-compliant companies, and less downtime for those companies that were compliant. This led to higher productivity in companies/factories with industrial stability with the increase in productivity outstripping increase in wages.

Suggestions:

According to the SACTWU representative interviewed on 8th September 2015, one way of increasing productivity is *"to find deficiencies in the production process and improve on those deficiencies"*. The identification of deficiencies could be done in collaboration with workers. Although identification of bottlenecks could be done by management and workers, it would not be the best approach because workers are likely to view this process as an additional burden.

A collaborative process would be a better way of improving the production process through redesigning the production lines or streamlining the production process as well as addressing developmental issues, that is, obtaining buy-in from workers and creating scope to improve productivity. The SACTWU representative interviewed on the 8th September 2015 was of the view that, *"dispensation in wages can also be a productivity incentive"* in the form of an improved wage system that could lead to value-added service and the development of an improved productivity programme.

4.7.2 Types of Machines Used in the Industry

Generally, older machines at the end of their life-cycle were being used, although gradual changes were in evidence as a result of the introduction of machines through the incentive programme. In terms of technology, according to the SACTWU representative interviewed on 8th September 2015, *"overall, although not state-of-art, there was introduction of new technology as a lot of companies were beginning to acquire new machines,"*, and that furthermore,

- If officials at the IDC could provide an asset register, it can be taken to industry experts to assess technology gaps in the existing machines.
- There was the Mbizo in which new technology machines were showcased and included machinery with low energy requirements compared to other machines.

4.7.3 Profit Making in the Industry

The industry is not a high profit sector. The design houses offer services to the retailer and the retailer absorbs all the profits. Retailers and design houses are profitable but wasteful enterprises. The SACTWU representative argued that *"the vast amount of profit is eaten up by the retailers and design houses"*. Clothing and textile manufacturers are not highly profitable and are disadvantaged by financial penalties that contribute to low profit margins, and as a result the industry is in a vicious cycle with the workers at the bottom.

What can be done to improve profits? Training of workers is essential, developing niche designs, avoiding competition with countries such as Bangladesh, more investment in people and machinery, reducing some of the input costs and overheads, using green production techniques and eliminating wastage (referencing a company called NTCP), reducing pollution by reusing water and reducing the cost of water, applying other measures to reduce costs, and duty rebates relief (which remains a contentious subject in the sector).

4.7.4 Wages and Salaries in the Industry

Some workers were earning R960 a week after 30 years in the industry. The wages and salaries are not adequate and progressive increases should be implemented. Companies were being classified as either compliant or non-compliant companies. A salary of R960 a week is paid in the compliant company while some non-compliant companies were paying as little as R400 a week, and others paying as little as R200 which is considerably below the minimum wage.

South African wages are higher than those in West and North Africa and below those of the United States and Eastern Europe, and approximately 30% lower than wages in Turkey which is a global leader in the clothing and textiles sector. The SACTWU representative interviewed on 8th September 2015 observed that, *"in China, wages have been going up progressively over the last five years and can even be higher than those in South Africa"*. In Bangladesh, wages in the clothing

and textiles sector are much lower than that of South Africa at around $35 a month for a clothing machinist.

Improvements in wages and salaries could be achieved through collective action by employers who make decisions regarding remuneration of employees, stronger trade unions, improved industrial policy and trade policy, penetration of the market and general improvement in the working conditions of workers. The SACTWU representative revealed that, "*Many of the problem factors in the clothing and textile industry identified by the **dti** are not contentious; however, issues of non-compliance and compliance of companies as well as government procurement which is not working, could be included as additional factors for attention*".

4.8 SUMMARY

This chapter presented data collected from interviews. The interview questions were divided into headings that include questions on current prices of products, productivity of employees, models of machines, profitability of the firms, and proposed industrial policy measures. In addition to employers and employees in the clothing and textiles industry, representatives from the following stakeholder institutions were also interviewed: Government Coordinator of Clusters, Textile Federation of South Africa, the IDC and SACTWU. Data from all these sources is analysed in the next chapter in order to attach meaning to the operating conditions in the clothing and textile industry in South Africa.

CHAPTER FIVE
DISCUSSIONS AND ANALYSIS

5.1 INTRODUCTION

This chapter presents thematic analysis of the current operating conditions in the clothing and textile industry. The following was used to analyse current operating conditions in the clothing and textile industry; responses from interviews, literature on industrial policy, competitiveness and lessons from the East Asian economies; and South Africa's current industrial policy documents.

Interviews were conducted with people involved in the day-to-day operations in the firms and also with other important stakeholders in the industry. Interview questions were classified into five categories or themes. The analysis of the responses to the questions in the questionnaire is logically divided into themes derived from the categories used to classify the questions. The themes are used for discussions in this chapter and are current prices of products; improving the productivity of employees; improving models of machines/technology; improving the profitability of the firms; and reducing electricity and energy use.

The clothing and textile factories could make sustainable profits if the revenues were higher and adequately cover the costs of production and other operating costs. The clothing and textile factories should strive to keep the cost of production and other operating costs as low as possible, while at the same time increasing the productivity of employees through training, skills development, and using state-of-the-art technology machines.

5.2 CURRENT PRICES OF PRODUCTS

The price of a product is determined after taking the cost of producing the product into consideration. The cost of production includes wages and salaries costs, rent cost, interest cost and the profit margin for the entrepreneur, among others. These cost items are the payment for the factors of production which are labour, land and natural resources, capital, and entrepreneurship. Building on the foundations from Classical Theories of Adam Smith (1776) being Absolute advantage; of David Ricardo (1817) being Comparative advantage; and of the Heckscher-Ohlin (H-O) Theorem which postulates that a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor, i.e. the relatively labour-rich nation exports the relatively labour-intensive commodity and imports the relatively capital-intensive commodity (Minabe, 1966; Södersten, 1980; Salvatore, 1995; Cho & Moon, 2013).

Although there are factors of production such as water and electricity, infrastructure and others, whose contribution to the production process is critical, there are also those factors whose presence or absence in the country determine the competitiveness of a country in relation to its trading partners. The H-O theorem identifies these factors as labour, capital, land and natural resources, and entrepreneurship. These factor costs are not the only components of the cost of production, but they are considered the main cost items or direct costs from an accounting point of view.

According to Porter's (1990) thesis, the *Competitive Advantage of Nations*, the country's environment that includes values, culture, economic structure, institutions and history contributes towards the competitiveness of nations. Porter's (1990) *Diamond Framework of Competitiveness* comprises Factor Conditions (labour, capital, land and natural resources, and capital), Demand Conditions, Related and Supporting Industries, and Firm Strategy, Structure and Rivalry. Several authors have provided a list of competitive priority items and these include

Porter, Ward and Durray (2000), Chan and Burns (2002), Hill (2000) and Krajewski and Ritzman (1996).

Price and quality of a product are listed many times and are the most common competitive priorities on the list of many competitors including Krajewski and Ritzman (1996), Hill (2000) and Ward and Durray (2000). According to the H-O theorem, the cheaper or abundant factor makes a country competitive in a product that requires intensive use of the cheap or abundant factor. Therefore, competitiveness would imply ensuring that factor costs are kept to a minimum to reduce the cost of production and more importantly, the selling price.

The H-O theorem is also specific about the type of exports that are to be exchanged in international trade. A product whose manufacture requires the intensive use of the nation's relatively abundant and cheap factor will be exported, while a product whose manufacture requires the relatively scarce and expensive factor will be imported (Minabe, 1966; Södersten, 1980; Salvatore, 1995; Cho & Moon, 2013). Therefore, the H-O theory refers to the export and import of manufactures, and the importance of factors of production in determining which products will be exported and which will be imported.

Increasing the export of manufactures is one of the objectives of industrial policy and economic development (Kaplan, 2007). Industrialisation is best achieved by using export-oriented industrialisation policies (Schmitz, 1984; 2007; Alavi, 1996; Stiglitz, 1996; Krueger, 1997). Arguments by Schmitz (1984; 2007), Alavi (1996), Krueger (1997) and Pahariya (2008) illustrate that the import substitution industrialisation has not worked in many economies. According to Stiglitz (1996), the East Asian economies succeeded in their economic development partly because they encouraged exports and there are advantages that could be derived from encouraging exports (Stiglitz, 1996; Hernandez, 2005; Weiss, 2005).

Firstly, export markets are likely to be competitive, and even if they are not, it is of little concern as the profits of the firms are then at the expense of foreign consumers.

In addition, exporting by exposing firms to foreign competition, technology and marketing can lead to productivity gains that would not be obtainable from sales in the domestic market (Weiss, 2005). Secondly, firms learn a great deal in international markets, benefitting from spillovers related to both marketing and production expertise. Weiss (2005) argues that if economies could break into export markets, they will be able to overcome the constraints on sales imposed by the absolute size and dynamism of the domestic market.

Thirdly, exporting firms discover new markets and develop new supplier relationships. According to Weiss (2005, p. 9), the East Asian firms obtained access to foreign designs or technologies that allowed them to upgrade their production to international standards through contacts with foreign buyers in the clothing sector and branches of electronics. Fourthly, success in exporting provides policy makers with an objective way to award credit and foreign exchange (Stiglitz, 1996, p. 169). In terms of quality, "Japanese firms established brand reputations by improving the quality of exports illustrating a good example of interaction between cooperate behaviour and individual incentives" (Stiglitz, 1996, p. 171).

The above lessons from the NICs of East Asia illustrates that industrial policy implementation in these countries focused on selected activities aimed at making local firms globally competitive. Their export-led industrialisation focused on:

- the transfer of technology (technology);
- human development through skills transfer (productive workers);
- aggressive attraction of foreign direct investment in strategic firms (investment);
- promotion of high-value manufacturing activities (advanced manufactures), research and development;
- infrastructure development to promote innovation and diversification (diversification);
- maximum productivity (high productivity); and
- internalising management spillovers through foreign investment ventures (Murakami, 1992; Wong, 2004).

These activities are the crux of the main research question and sub-questions of this study. Are the characteristics mentioned above present in the clothing and textile industry in South Africa? Are existing industrial policy measures capable of leading to the above characteristics and outcomes? The overarching aim of industrial policy measures should be to produce high quality manufactured products that are globally competitive in both quality and price. One way of achieving this objective is to ensure lower cost of production by reducing the price for each factor of production. The findings relating to the cost of production in the clothing and textiles industry are discussed below.

5.2.1 Interest and Rent Costs

The findings from the interviews conducted in the clothing and textile firms revealed that the majority of the firms that took part in the study did not consider interest and rent costs as significant parts of the total costs. Land and buildings on which production operations were being carried out belonged to the owners of the firms and therefore they were not paying rent. In addition, firm owners did not borrow capital and were not paying interest costs. Therefore, interest and rent costs did not form part of the total cost of production. This finding has further implications for the competitiveness of the firms.

By not taking interest and rent costs into consideration when calculating cost of production, rent and interest costs are not viewed as cost factors which must be taken into consideration when calculating the profit of the firm. These figures are supposed to reduce the revenue of the firm and not taking them into account implies that the cost of production is underestimated. Furthermore, since the cost price forms part of the selling price, this means that the selling price is also underestimated. Therefore, the selling price is actually more than the price at which the product is currently being sold, and this reduces the competitiveness of firms in terms of pricing relative to foreign competitors.

Secondly, if the cost of production is underestimated, it suggests that the entrepreneur's profit is overstated. This may partly explain the reason why most

firms, although claiming to be making profits, were not reinvesting some of the net profits into expanding their firms. There is a possibility that the firms are not making profit, and that the profit that they think they are making may be 'fictitious' profit. It is therefore not surprising that although the firms are making profits, none of the firms is reinvesting profits into the firm.

These profits are supposed to be saved and utilised as new capital into the firms to invest in physical capital. Although firms in East Asian economies managed to raise capital from adequate savings, this was not sufficient and they were assisted by their governments to raise the required capital. Stiglitz (1996, p. 157) observes that the rapid industrialisation of countries in East Asia was not only as a result of high saving rates in these countries but was also due to the decision to discourage, through financial market regulations, the allocation of capital to areas such as real estate and this meant that more capital was made available for areas with higher technology benefits, such as plant and equipment.

According to **the dti** (2010), interest on capital is prohibitively high in South Africa. Ketels (2017) argues that the investment-driven state of economic development is when the economy's advantage shifts to high productivity driven by access to human and physical capital and other conditions that drive efficiency. At the investment-driven stage is where the 'coordination system' becomes crucial and where government must play its role of transformation (Esteban & Stiglitz, 2013; Felipe, 2015; Moran, 2015; ODI, 2016). The incentive-creating government intervention is required to encourage entrepreneurship by providing incentives to raise capital and invest in the industry (Lin & Monga, 2010, 2012).

5.2.2 Cost and Availability of Labour and Materials

Labour costs, availability of labour and material costs were found to be the most important drivers of manufacturing competitiveness. The central bargaining system was at the centre of conflicts between employers and employees. On the one hand, employers were concerned about the increases in salaries and wages that were not

as a result of an increase in productivity or increases in profits. On the other hand, employees thought that they were not earning enough.

According to SACTWU, some workers with 30 years' experience in the industry were earning R960 per week while other workers were earning as little as R200 per week. This situation was exacerbated by employers who were not complying with agreed minimum wage rates. However, if South Africa is compared with its regional Southern African Customs Union (SACU) and other international competitors in Asia, labour wages in the country were high (relative to productivity levels) with little flexibility within a highly unionised workforce (**the dti**, 2012).

That the cost of labour is higher in South Africa compared to other foreign competitors is supported by many stakeholders in the industry. For instance, SACTWU argues that South African wages were higher than those in the West and in North Africa but below those of the United States and Eastern Europe. Wages in South Africa were around 30% lower than in Turkey, which was regarded as a global leader in the clothing and textile sector. According to SACTWU, for example, in Bangladesh wages were much lower than in South Africa at around US$35 a month.

According to the Textile Federation of South Africa, the textile trade is currently dominated by China and cost of labour (real wage rates) was relatively higher in South Africa than its competitors in the East. A representative from the Industrial Development Cooperation (IDC) argued that wages and salaries in South Africa's clothing and textile industry were improving in line with the increase in the profitability of the firms. Although wages and salaries were slightly higher in South Africa than in other countries, these were also increasing in other countries, notably in China.

However, it should be noted that South Africa's productivity and pay ratio is the lowest among the emerging markets group, making South African labour the least favourable choice for foreign investors. Additionally, "Rigidity in the hiring and

firing practices contributes to making South Africa's labour market less and less attractive" (Deloitte, 2013a, p. 29). Other parts of labour market efficiency which are negative include low cooperation in labour-employer relations, which is a power base of labour unions, and lack of flexibility in wage determination which reinforces South Africa's weak competitive standing in the global market (Deloitte, 2013a).

Raw material inputs that were being imported from other countries were negatively affected by foreign currency volatility and this increases prices well above the reach of many clothing and textile firms. Table 13 below, which was adapted from Statistics South Africa (Stats SA), illustrates how a weak Rand relative to other currencies of trading partners negatively affects manufacturing production in the clothing and textile industry.

Table 13 below illustrates that there are vast differences in the performance of manufacturing divisions, and within the divisions the differences can also be substantial. Some manufacturers will be much more sensitive to the rand exchange rate than others, and those that are sensitive would have quite different responses at times. Looking at total manufacturing production as a whole, it seems as if the Rand weakness since 2011 has not provided the stimulus to manufacturing that many may have hoped for.

Table 13: Annual percentage change in manufacturing production (in volume)

Product	**2011**	**2012**	**2013**
Food and beverages	2,3	1,7	3,8
Textiles and clothing	-4,2	-0,6	2,3
Wood, paper and publishing	1,5	1,6	0,2
Petroleum, chemicals, rubber and plastic	2,1	4,9	0,5
Non-metallic mineral products	3,4	0,4	1,7
Metals and machinery	3,1	1,7	1,8

Source: Adapted from www.statssa.gov.za, posted 14 September 2016

In the case of clothing and textiles, however, the expected negative impact occurred. Many important inputs into the clothing and textile manufacturing are imported from trading partners. A weaker Rand will make these inputs expensive and less clothing and textile manufactures will be produced. This is reflected in the cut in production of clothing and textiles by -4,2 percent in 2011 and by 0,6 percent in 2012.

When the Rand is strong, the negative impact will be low sales figures for the export market because clothing and textiles have become expensive due to the strong Rand relative to currencies of trading partners and cheap imports from trading partners. According to Statistics South Africa (September 2010), the percentage change in sales of textiles, clothing, leather and footwear between September 2009 (R3 226 billion) and September 2010 (R3 166 billion) was -1, 9 percent while the percentage change in manufacturing production between September 2009 and September 2010 was -2, 3 percent. The percentage change in sales of textiles, clothing, leather and footwear between December 2012 (R2, 8 billion) and December 2013 (R3 billion) was 5, 7 percent (Stats SA, December 2013).

The Department of Trade and Industry was looking at promoting a local based inputs sector that would enable the import of inputs especially in the textile sector to be reduced. This is accompanied by another initiative whereby the International Trade Administration Commission (ITAC) looks into reducing tariffs of imported inputs into the sector. South Africa's poor performance in the US clothing and textiles market is often attributed to various stringent conditions that South Africa faces compared to other AGOA countries (Morris et al., 2004).

One of the conditions is that third party country provisions restrict South Africa to procuring fabric and raw materials only domestically, or from other AGOA members. South Africa could become as competitive as any other country, including those in AGOA, if it were allowed to import yarn for knitwear and fabric for woven clothing from other more efficient producers outside Africa such as

China, India and Taiwan as was the case with other AGOA members (Morris et al., 2004).

According to IPAP 2007/8, the clothing and textile firms are amongst the most labour-intensive industries in South Africa, employing approximately 127 000 people – which is 11% of total manufacturing employment – and contributing around 0. 6% to Gross Domestic Product (GDP). The sector has been under intense pressure since the mid-1990s, negatively impacted by periods of currency strength and fierce import competition, particularly from China.

The sector contributes to regional employment and has built a strong core of capabilities and can therefore not simply be left to wither away. The H-O theorem argues that with so many labourers in South Africa, the country is supposed to export labour-intensive manufactured goods. However, although labour is an abundant factor in South Africa, it is not cheap and this is due to historical factors that need to be properly understood.

The clothing and textile industry at the present time is a product of industrial decentralisation under the previous apartheid government. Although the origins of the decentralisation policy date from the 1930s, it was not until the late 1950s that the government established a system of decentralisation to "growth points" in "border areas" next to the then "Native Reserves" (Wellings & Black, 1986, p. 2). According to Bell (1973, pp. 401–402), the function of the growth points was twofold: "(a) to provide people in the surrounding labour supply areas of the Bantu homelands with the opportunity to commute to jobs in the manufacturing industry in the growth centres; and (b) to diffuse benefits throughout the surrounding areas via some sort of income and employment multiplier mechanism".

The colonial land policies were characterised by two conflicting approaches: firstly, division of landownership into exclusive racial areas, reflecting both altruistic and xenophobic motives (in various extreme forms); and secondly, approaches seeking to destroy existing patterns of tribal landholdings in order to create a single

landownership pattern, where all races could enjoy equal access to ownership of land (Wickens, 1983b, p. 10).

The National Party gained power in 1948 during a time of rapid industrial growth and urbanisation, and the appointment (1950) and Report (1954) of the Commission for the Socio-Economic Development of the Black Areas within the Union of South Africa (Tomlinson Commission) was principally twofold; first to justify ideologically the policy of separate development, and secondly to suggest mechanisms to achieve it (Pretorius et al., 1986a, p. 47).

Kotzenburg (1973, p. 142) explains that the "Government accepted a proposed 'border area' industrialisation policy and the first measures applied to implement the policy were positive. For the purpose of implementation, a border area was defined as an industrial centre located within thirty miles of a homeland". These inducements were intended to act as positive incentives to industrialists who intended to establish a new industry or extend an existing one.

"The 1960 incentives included assistance with transport costs, assistance with cost of provision and consumption of water, electricity and housing, financial incentives on industrial land and buildings, plant, relocation costs, customs tariff and loans" (Pretorius et al., 1986b, p. 238). Furthermore, "periodic changes were made to the policy. In 1962, tax concessions to manufacturing concerns in border areas were announced, investment allowances were increased" (Bell, 1973, p. 209). Despite the added incentives, it was evident that a more attractive package on incentives would be required to achieve satisfactory results. A revised package was announced in May 1964. However, despite the improved incentives, no improvement in industrialisation of border areas was noticeable (Pretorius et al., 1986b).

In September 1968, further changes were made to the incentive measures under the policy. The White Paper in 1982 announced a new industrial decentralisation incentive package, introducing cash payments rather than tax concessions. The 1982 incentives also favoured labour-intensive industries as well as attempting to

provide the framework of informal business to be eligible for incentives (Pretorius, et al., 1986b). From 1960 to 1980 applications for decentralisation assistance never exceeded 300 and were mostly at a much lower level (Pretorius et al., 1986b).

However, in 1982 and 1983 interest expressed was much higher than in any previous year, totalling 861 applications in 1982/83 (Board for the Decentralisation of Industry, 1983) and 1 190 applications in 1983/84 (Board for the Decentralisation of Industry, 1984). It is no surprise that this coincided with the announcement of the most favourable industrial decentralisation incentive package in April 1982, after consultation between the Government and representatives of business at the Carlton and Good Hope Conferences of 1979 and 1981 respectively (Pretorius et al., 1986b).

Addleson et al. (1984, pp. 22–27) provide more detailed information on decentralised companies' dependence on incentives for profitability. The majority of the surveyed companies indicated that they would not have chosen the decentralised location in the absence of incentives, but 75 percent of the companies indicated that the incentives did sufficiently compensate them for location disadvantages. When taking the incentives into account, 56 percent of the companies felt that their location did not place them at a competitive disadvantage in relation to their metropolitan based competitors.

Furthermore, the companies indicated that the 'short term incentives' (mostly cash incentives applicable to cost of labour and capital) were widely enjoyed and were regarded as most important. Although it is frequently argued that the new firms in 'infant areas' may have to be subsidised until the areas generate agglomeration economies, it is disturbing to find that the decentralised firms attach so much more importance to short term incentives in their location decisions (Addleson et al., 1985, p. 197).

It is interesting to note that whereas 58 percent of the companies felt they might be able to operate at a profit if the incentives were withdrawn, 75 percent responded

that in such a case, price increases would be necessary to maintain margins due to higher effective cost of production (Addleson et al., 1984). In addition to the fact that the profitability of a number of firms depends on their receiving incentives, the importance of the short-term incentives also suggests the possibility of relocation, or even closures, once these incentives are terminated (Addleson et al., 1985). From the limited detailed information that is available concerning the financial situation of decentralised firms, it appears, too, that in spite of the incentives many are not in a sound financial position.

It appears that firms were not decentralising to gain competitive advantages, and furthermore, that profitability of a substantial proportion of decentralised companies is due to subsidised margins resulting from incentives obtained under the industrial decentralisation policy ((Pretorius et al., 1986b). Addleson et al. (1985, p. 199) argue with appropriate qualification that profits could serve to indicate economic efficiency and for firms which depend on subsidies for their continued existence, by implication the 'value added in production' is negative. The value of output created in the production process is less than the combined value of the inputs into that stage of production.

Ward (1980, p. 17) argues with regard to the Ciskeian situation that, *the logic of growth centre approach, with its emphasis on promoting dynamic internal economic change, is fundamentally inconsistent. It is in conflict with the necessity to meet the needs of those left behind in the economic growth process. Indeed, it may well be that growth centres succeed only when they evolve without government intervention. If an area has failed to develop without outside help of official support, then there would appear to be little reason for assuming that it will ever succeed as a growth centre as a result of deliberate government action. There is even less reason for believing, especially in a "homeland" context, that there will be desirable "spread effects"*.

The explanation above is an illustration that forced industrial decentralisation through incentives did not succeed in creating decent employment for the black

people who were in the majority, particularly in the homelands. Although the incentives kept increasing for industrialists to move to the border areas, no incentives were provided for workers. The situation was exacerbated by the fact that no Workers' Union activity was allowed in the homelands and therefore the wages and salaries remained low.

Altman (1989; 1996) and Harrison and Dunne (1998) observe that during the apartheid period, a segment of clothing producers relocated their production from the metropolitan areas, either fully or partially, to cheap labour locations, primarily peripheral growth points in or close to the Bantustans which received extensive government decentralisation incentives. According to Altman (1996), during the early 1990s wage differentials between formal clothing factories in metropolitan as opposed to decentralised locations were observed as being anywhere between three and six, and up to nine times greater.

The incentives were provided for a period of 20 years and when they expired, many of the firms closed down and people were left unemployed and part of the current unemployment rate, where the majority of the unemployable are the outcome of the failed policy of industrial decentralisation. The policy effectively contributed to industrialists making quick profits while it contributed to unemployment and the continuation of slave wages (Wickens, 1983a, 1983b; Pretorius et al., 1986a, 1986b; Altman, 1989, 1996; Harrison & Dunne, 1998).

5.3 PRODUCTIVITY OF EMPLOYEES

There were production standards set in both the clothing and textile firms and this was demonstrated by agreement by different workers/employees on the amount of time required to complete various tasks of the production process. Employees also agreed that the most difficult and important task of the production process was preparation and that once the process was completed, the other tasks became easier. Although management personnel at the firms had the required qualifications and work experience, employees were still being trained and in many of the cases, firms were responsible for training their workers. Therefore, a lot of time was being taken

to train workers and only a few of the workers in each firm were being trained. This indicates that unavoidably, some of the production time was being lost during training of workers.

Firms were also involved in promoting multi-skilling in their training of workers. This was done to ensure that workers mastered all spheres of production to promote versatility and reduce the possibility of retrenchment. However, there was also a challenge in that in the clothing firms, the labour force was ageing and more workers would have to be replaced by a younger workforce in the foreseeable future. SACTWU observes that since 2005, the productivity of workers has been steadily increasing over time, and available data points to relatively greater productivity increases in labour over productivity increase in capital. Even during periods of retrenchment, productivity was stable in the absence of any additional capital introduced.

The IDC representative agreed that the productivity of labour had increased over time, although in their view the productivity of labour started to increase in 2009 and not in 2005, as observed by the SACTWU representative. The IDC representative attributed the increase in the productivity of labour to clusters, training and new methods of measuring performance improvement, among others, as well as the use of scorecards and boards to publicise incentive-based targets that had been agreed to. The increase in the productivity of workers has led to competition at factory level. Figure 10 below illustrates that while the United States has higher labour costs, it also has the highest labour productivity.

As revealed by Deloitte (2013a, p. 15), “On the other end of the spectrum, although China and India have made significant improvements in labour productivity over the last decade, their starting points are low, and therefore, they remain far behind the US”. Furthermore, individual companies have recognised that making sourcing decisions in order to simply gain access to low cost labour and materials is neither a strategic benefit nor a sustainable strategy over the long term because many

multinational companies were expected to continue to expand and grow operations in these low cost destinations.

A report by Deloitte (2013b) separates labour markets efficiency into 'flexibility' and 'efficient use of talent'. Flexibility is represented by cooperation in labour-employer relations, flexibility on wage determination, hiring and firing practices, redundancy costs, and the extent and effect of taxation. Efficient use of talent is represented by pay and productivity, reliance on professional management, countering the loss of skills, and improved female participation in the labour force (Deloitte, 2013b). Under the labour market efficiency, North African countries score low in the African continent. For instance, Morocco is ranked 122 with a score of 3, 84; Egypt is ranked 142 with a score of 3, 06; Algeria is ranked 144 with a score of 2, 79; while Libya is ranked 137 with a score of 3, 46 (Deloitte, 2013b).

South Africa is also within this performance band with a ranking of 113 with a score of 3, 94. The African countries' performance is low compared to Rwanda's ranking at 11 with a score of 5, 10 (Deloitte, 2013b). The average score of BRICS countries is 4, 37 while Latin America and the Caribbean average is 4, 01 and Southeast Asia is at 4, 61. South African Manufacturing CEOs identified the availability and cost of labour as the most problematic factor currently influencing manufacturing competitiveness in South Africa (Deloitte, 2013c).

Unit labour cost (the ratio of wages to labour productivity) in the manufacturing sector rose by an average of 5.8 percent per year from 1998 to 2012 while over the same period, unit labour costs in many European countries have fallen due to productivity gains (Deloitte, 2013c). The South African unit labour costs are high relative to other newly industrialised countries which compete with South Africa in developed country markets (Edwards & Golub, 2004). The Textile Federation of South Africa emphasises the importance of addressing the skills deficit in the industry, and any industrial policy measure that is not accompanied by skills development in the industry is likely to be inadequate to address the challenges.

The Department of Trade and Industry is establishing skills development initiatives in the clothing and textile industry, but these initiatives may not be sufficient. It is of primary importance that the textiles industry be supported because compared to the clothing sector, the textile sector is knowledge-intensive. According to Stiglitz (1989), among the 'commodities' which the market is imperfect in providing are those associated with knowledge and information and which included learning and technology. Although labour is abundant in South Africa, it is the government that must intervene and direct the market to make the abundant labour a competitive factor for the country.

The H-O theory postulates that a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor; therefore, the relatively labour-rich nation exports the relatively labour-intensive commodity and imports the relatively capital-intensive commodity (Sődersten, 1980; Salvatore, 1985). However, following the Leontief Paradox, the Factor-Content Approach was conceived.

The Factor-Content Approach advocates that particular types of skills that a country possesses may determine what is produced, specialised in, and exported (Webster, 1984). It is the role of industrial policy to improve the competitiveness of the factor of production, whether the factor is abundant and cheap or scarce and expensive. Improvements to the inherited factors may thus be necessary before specialisation and exports occur. This indicates that investment in human resources such as training and skills development is of paramount importance.

SACTWU identifies animosity in industrial relations (conflicts, slow protests) in non-complying (those paying less than the minimum wages) firms compared to less downtime for firms that are compliant (those paying minimum wages and higher). The workers' union proposes that to increase the productivity of workers, workers and owners in collaboration must identify deficiencies in the production process

and improve these through redesigning the production lines/streamlining the production process.

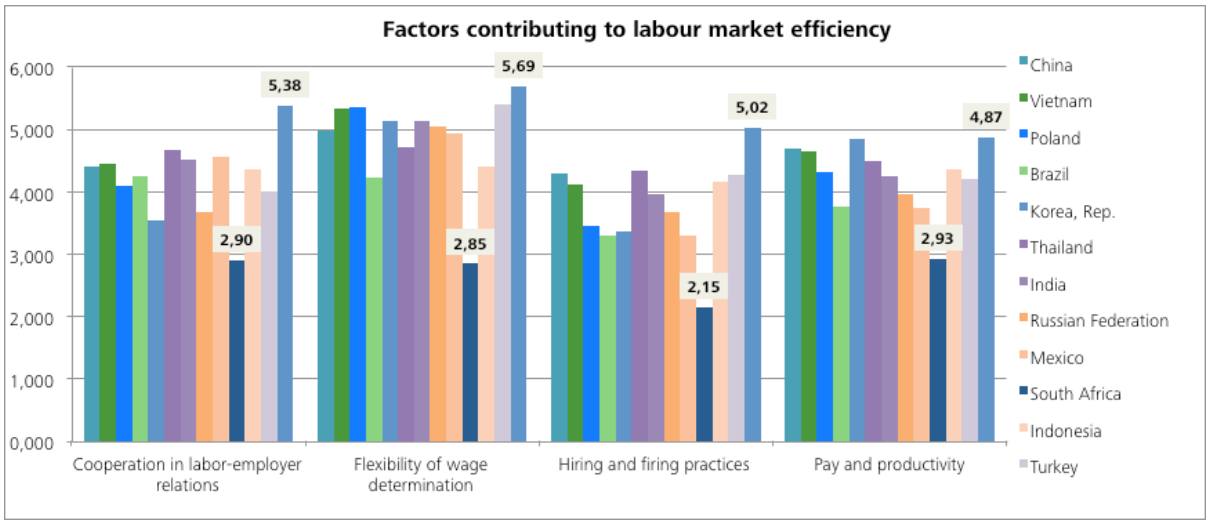
The East Asian economies provide lessons on the role education can play in economic development and industrialisation. Economic policies were led and implemented by a developmental state model characterised by a powerful, competent and insulated economic bureaucracy that enjoys the highest possible political support, but which is allowed to operate without political interference (Leftwich, 1994; 1995). According to Wong (2004), one way of maximising productivity was through investments in human capital development which was viewed as economic investment rather than a social policy. In these economies, "it was a widely held view that having a relatively well trained and educated labour force was a critical element in the rapid export growth and that in general education plays a critical role in growth" (Weiss, 2005, p. 10).

The support for education, particularly in engineering and science education, provided an intellectual infrastructure that facilitated technological transfer in East Asian economies (Stiglitz, 1996). Weiss (2005) argues that having a relatively well trained and educated labour force was a critical element in the rapid export growth of the East Asian economies and that, in general, education plays a central role in growth. "One of the major initial advantages of the Newly Industrialised Economies (NIEs) was their comparatively high education standards" (Weiss, 2005, p. 11).

A high level of education on its own, however, does not guarantee strong export growth. For example, the Philippines, whose achievements in the education sphere are widely recognised, has had the most disappointing growth performance of the region and has only experienced rapid export growth relatively recently, as did Sri Lanka (Weiss, 2005). A lesson that could be learned from East Asian countries is that while the support for education is important for economic growth and industrialisation, educational attainment should be seen as a critical facilitating mechanism where other appropriate stimuli are in operation. According to Hernandez (2005, p. 9), "investment in skills and infrastructure explain a great deal

of how Japan, Korea, Taiwan, China and Singapore moved up the technology ladder".

Figure 10: Labour-factors contributing to labour market efficiency



Source: Global Competitiveness Report 2012–2013, World Economic Forum

One way through which learning could be shared throughout the industry is the use of Clusters. According to Porter (1998), the concept of clusters rests on a broader, more dynamic view of competition among firms and locations based on the growth of productivity. In other words, interconnections and spillovers within a cluster often influence productivity growth more than does the scale of individual firms. However, in cluster theory, instead of targeting particular industries, all existing and emerging clusters desire attention, all offer the potential to contribute to prosperity and all clusters can improve their productivity.

The findings of the study by Gońi and Maloney (2014) explain the importance of factors complementary to Research & Development, such as education, the quality of scientific infrastructure, the overall functioning of the national innovation system, and the quality of the private sector, which becomes increasingly weak with distance from the frontier and the absence of which can offset the 'catch-up' effect. Therefore, education and learning should be prioritised if there is to be diffusion of technology in any industry. Competitiveness is defined by an overall increase in

productivity (Amsden, 1991; Krugman, 1994; Dickerson, 1995; Salinger et al., 1999; Porter, 2004).

5.4 IMPROVING MODELS OF MACHINES/TECHNOLOGY

The majority of firms in the clothing and textile industry indicated they were using machines with the recent technology combined with the old machines and that these machines were well maintained. The SACTWU representative did not believe that the machines incorporated state-of-the-art technology but agreed that there was improvement in the technology. The IDC representative concurred that although in terms of technology South Africa was not yet aligned with the leading countries, improvements were being made. The IDC representative encouraged firms in the industry to continuously improve on technology and not wait until machines are old.

According to Deloitte (2013a), technology falls under a main driver of manufacturing competitiveness called 'Government investments in manufacturing and innovation' (R&D). Of a total score of 10 ranked as being 'Most Competitive', China is ranked first among the focus nations of the study with a score of 8.42, followed by Germany with a score of 7.57 and Japan third at 6.80. With regard to technological advancement, China is the first of the focus group of the study. According to Deloitte (2013c), South Africa's global ranking in terms of Government investments in Manufacturing is 10th with a score of 6.18.

Deloitte (2013b) further refers to Technological readiness of countries which is made up of: availability of the latest technology, firm-level technology absorption, Foreign Direct Investment (FDI) and technology transfers, individuals using internet, broadband internet subscriptions, international internet bandwidth, and mobile broadband subscriptions. The first three of these components of technological readiness are relevant to this study because they directly measure technological capability in firms, while the other components have much to do with the technological capability of a nation.

According to the Report (2013b), South Africa is ranked 39 out of 144 focused countries under the availability of latest technology criteria with a score of 5.7 in a 1-7 score, with 7 as the most desirable outcome. In terms of firm-level technology absorption, South Africa is ranked 38 with a score of 5.4 while for FDI and technology transfer the country is ranked 38 with a score of 5.0. According to the Textile Mapping Report (**the dti**, 2012), South Africa's position regarding technology has been improving and this improvement could be attributed to the government industrial policy measure called Production Incentives for the clothing and textile industry.

The Textile Federation of South Africa has noted that South Africa was lagging behind in its use of the latest technology available. While there has been some suggestion that South Africa was using state-of-the-art technology in the clothing and textile sector, this position is not completely accurate. The Textile Federation of South Africa noted that a lot of the textile machinery and equipment using the latest technologies available was imported. However, the IDC representative stated that old equipment in the industry was being replaced by new machinery and equipment and this has reduced the extent of production interruptions.

According to the IDC representative, the acquisition of new machinery and equipment was preceded by a process of international market research, such as attendance at trade expos, and new machinery is contributing towards higher production, on-time deliveries, quicker responses, and faster turnaround on orders. Furthermore, although technology in South Africa is not on a level with the best countries, South Africa was catching up. A further advantage was that some of the machines being imported were saving on electricity by using alternative sources of energy and achieving greater energy efficiency. The SACTWU representative agreed that in general the old machines whose life-cycle had ended were being phased out and change was beginning to happen.

A country that is abundant in capital will export the capital-intensive good according to H-O theory (Sődersten, 1980; Cho & Moon, 2013). According to the

Factor-Content Approach (Webster, 1994), the productivity of capital can be improved by the introduction of technologies in physical capital or production machinery. Introduction of new technology is more often preceded by innovation, research and development. Greenwald and Stiglitz (1986) showed that whenever information was imperfect or markets were incomplete, government could devise interventions that compensated for these imperfections and this could have broad benefits.

For a variety of reasons, markets may under-invest in research and development. According to Stiglitz (1988, p. 928), most expenditures on R&D are, by their very nature, sunk costs. The resources spent on a scientist to do research cannot be recovered once that time is spent. Therefore, the incentive for private individuals and entrepreneurs to spend and invest in research and development is inadequate. If the market cannot assist in improving the technological capacity of machines, government can through the use of industrial policy, assist firms to acquire physical capital with the required technologies.

Private markets have inadequate incentives for investing in the production and acquisition of technology largely because it is difficult to appropriate returns to knowledge (Stiglitz, 1996). During the late 1980s, some declining industries in North Korea received temporary support and subsidies for equipment upgrading on condition that they achieved certain targets in relation to technology upgrading (Chang, 1993; 1999). Stiglitz (1996) observes that East Asia's success was based on a combination of factors, particularly the high savings rate interacting with high levels of human capital accumulation in a stable market-oriented environment, but one with active government intervention that was conducive to the transfer of technology.

According to Stiglitz (1989), among the commodities which the market is imperfect in providing are those associated with knowledge and information, and which includes learning and technology. It is for this reason that governments may intervene to provide those goods which individuals do not have the incentive to

provide. Export-led industrialisation of East Asian economies was significantly supported by forces that drove globalisation, as explained by Westphal (2000, p. 1): "These forces fuelled transfers of technology by innovative means in unprecedented volumes, and in a variety of industries including those at frontiers of global technological change".

This transfer of technology would not have been possible if the firms were not incentivised to embrace these activities as well as selective interventions that encouraged rapid technological development (Westphal, 2000). Export of foreign direct investment was discouraged where local firms were strong and there was strong technology support for local R&D and upgrading by SMEs and government orchestrated high-technology development (Lall, 2004).

Singapore relied heavily on FDI to attract foreign technology and invested heavily in increasing the ability of local firms to absorb foreign technology through linkage and training programmes, while Thailand, Malaysia and Indonesia have also relied on foreign investors to bring new technology to their countries, but in a less selective way than Singapore (Hernandez, 2005). Development is, to a large extent, the process of acquiring and adapting existing technologies. The importance of technology in manufacturing provides the rationale for government intervention to support manufacturing growth.

According to Gońi and Maloney (2014), much of the available literature suggests that developing countries should invest heavily in research and development. This literature estimates that the return to R&D expenditure for advanced countries has been argued to be so high as to justify levels of investment multiples of those actually found (Jones & Williams, 1998, Hall, Mairesse & Mohnen, 2010; Sveikauskas, 2007). The argument is in fact stronger for poor countries where R&D is essential to the 'absorptive' or 'national learning' capacity required to exploit technological advance in the advanced countries (Gońi & Maloney, 2014).

Gońi and Maloney (2014, p. 3) observe that other proposed facilitators of technological transfer which would affect the return to R&D include human interactions across geographical space (Comin, Dmitriev & Rossi-Hansberg, 2012), trade (Eaton & Kortum, 1999; 2001; Caselli & Coleman, 2001; Keller, 2004; Comin & Hobijn, 2004), adoption of predecessor technologies (Comin, Easterly & Gong, 2010; Comin & Hobijn, 2004), and political barriers (Parente & Prescott, 1994; Caselli & Coleman, 2001; Comin & Hobijn, 2009), all of which plausibly worsen with distance from the frontier.

This is where technology foresight comes in to predict the competitive advantages of the future. Foresight experts must assemble to identify activities that could be used to passively predict, reactively manage, and proactively create a still uncertain future with a focus on ways to steer development in a desired direction (Altenburg et al., 2016, p. 17). Technology foresight is important because the future-oriented approach is able to identify drivers, anticipate what might happen under certain circumstances, and examine variations and interactions. It helps to predict and anticipate emerging opportunities and problems, and thus identify priorities and design commensurate strategies (Altenburg et al., 2016).

Developing countries are able to achieve economic development once they narrow the gap of technology with developed countries (Fagerberg 1988; Stiglitz, 2015; Stiglitz at al., 2013; Dietsche, 2017; Ketels, 2017). There is also evidence that technology speeds up the production process (Power, 2008; Altenburg et al., 2016). Therefore, the conditions in the clothing and textile industry in South Africa can be improved by investing in productive knowledge and technological capabilities.

According to South Africa's industrial policy documents, the government intends to intervene in the clothing and textile industry through product-related supply chain interventions that include quick and reliable delivery time; fashion design, pattern design and manufacturing integration process; process development focusing on new processes into mainstream production; and technology focus (automation).

5.5 IMPROVING PROFITABILITY OF FIRMS

The clothing and textile firms were making profits during the period 2012-2013. The sum of all the profits made by the five firms that provided figures equates to R173,7 million and if this is divided between the five firms, an amount of R34,74 million indicates what each firm is making per year on average. These firms indicated that the share of profit was approximately 20% of total revenue. Firms believed that funds that were provided as incentives by government made it possible for them to make profits.

Firm owners believed that the profitability of the firms could increase if the productivity of workers could be increased. Productivity of workers could be increased by curbing absenteeism, through more flexible labour laws, achieving greater commitment from workers, proper negotiations and bargaining with customers, motivating employees through incentives, encouraging skills development through training, bringing down prices of utilities (electricity and water), managing foreign exchange used to buy imports from foreign countries especially in the textile industry, and improving the attitudes of workers and unions.

The SACTWU representative argued that the clothing and textile industry was not a high profit sector. The design houses offer services to the retailers and the retailers absorb all the profits. In order to improve the profits, the training of workers was essential, as was creating niche designs, avoiding competition with countries such as Bangladesh, more investment in people and machinery, reducing some of the input costs and overheads, using green production techniques and eliminating wastage, reusing water, and identifying other forms of cost and wastage reduction.

According to Stiglitz (1996) and Weiss (2005), many of the activities to increase the profitability of the firms cited above, such as reducing input costs, training of workers, using green production techniques, developing new designs, diversifying, and eliminating wastage can be achieved if firms are encouraged to export. For instance, exporters can establish brand reputation by improving the quality of exports (Stiglitz, 1996). In addition, profits from exporting firms are derived at the

expense of foreign consumers and export markets are likely to be competitive (Stiglitz, 1996). Domestic firms chasing maximum profits in the domestic market are likely to increase prices, making local firms uncompetitive.

Weiss (2005) argues that exposing firms to foreign competition, technology and marketing can lead to productivity gains that would not be obtainable from sales in the domestic market. Export firms discover new markets and develop new supplier relationships. Access to foreign designs and technologies allow local firms to upgrade their production to international standards through interaction with foreign demand (Weiss, 2005).

It was encouraging to learn that some State Owned Enterprises (SOEs) were supporting firms by purchasing footwear and uniforms from local factories. This is one way in which the clothing and textile industry could be significantly assisted and SOEs should be encouraged to support domestic firms in their procurement chain. However, it was disappointing to discover that although almost all the firms were consistently making profits, there was no single firm that was reinvesting any profits into the business for expansion.

Reinvesting profits into the firm for expansion provides additional resources for investment. These resources could be used to acquire additional capital to increase the productive capacity of the firm. Stiglitz (1996, p. 159) argues that "a firm that expands production lowers its future production costs and undercuts its rivals". One of the arguments of 'infant' industry protection is that protection is important so that the young firm can gain the experience required to lower its production costs and allow it to become viable (Stiglitz, 1996). Reducing production costs in both the short-run and the long-run is at the centre of this study.

The availability of profits provides additional resources to firms to carry out research and development since R&D assists in decreasing the cost of production and also reveals innovation that could lead to diversification. Private investment requires a generally supportive environment such as the support for property rights,

macro stability, general 'openness to trade', foreign investment, and foreign technology (Quibria, 2002). A developmental state should also provide an enabling environment that includes institutions, macroeconomic environment, health and education, goods market efficiency, financial market development, technological readiness, market size and innovation, amongst others.

According to Weiss (2005), closure of the technology gap with the developed economies was clearly a major part of the explanation for the high growth years in East Asian economies. However, successful diffusion and assimilation of foreign technology requires not only a transfer of knowledge in a passive sense, but also the active engagement of local firms in the mastery and adaptation of foreign technology (Weiss, 2005). Lin and Monga (2010, 2012) encourage entrepreneurs and governments to identify competitive advantage.

In their evaluation of different methodologies and tools to identify comparative advantage, Altenburg et al., (2016) found Cassingena Harper's (2013) technology foresight to be the most advanced. The advantage of such technology foresight is that it is future-oriented and able to identify drivers, anticipate what might happen under certain circumstances, and examine variations and interactions. It helps to predict and anticipate emerging opportunities and problems, and thus can identify priorities and design commensurate strategies (Altenburg et al., 2016). It is by looking into the future that entrepreneurs in the clothing and textile industry can propose feasible strategies that could make the industry more globally competitive and more profitable.

5.6 REDUCING ELECTRICITY AND ENERGY COSTS

Electricity costs were cited by firms as one of the most significant cost factors. Unlike rent, electricity cost is, for accounting purposes, treated as a variable cost factor because as more and more units of output are produced, the units of electricity that must be used to produce those additional units of output increases, increasing the cost of electricity in the process. South African firms have had to deal with intermittent power supply for a number of years and in 2015 it was coupled with an

increase in the price of electricity. According to the World Bank's Africa Competitiveness Report (2013), for firms and other business ventures to work unimpeded, electricity supplies should be free from interruption and shortages.

According to Deloitte (2013a, p. 21), "while the level of investment in energy infrastructure as well as the comprehensiveness and efficiency of energy policy also contributed to a nation's competitiveness, increasing demand and limited supply coupled with market forces that drive prices up resulted in energy costs being the most important driver in the category of energy costs and policies". Deloitte's Report (2013a, p. 21) ranked six nations (focused nations as leading in terms of manufacturing competitiveness) in relation to the cost of energy and according to this ranking.

According to the World Bank (2013, p. 70), "China's electricity costs (7.4 cents per KWH) were on par with Canada (7.4 cents per KWH) and higher than the US (6.9 cents per KWH); however, they were significantly lower than that of other emerging economies, including Brazil (15.4 cents per KWH) and India (10.1 cents per KWH) and also developed nations such as Japan (17.9 cents per KWH) and Germany (15.7 cents per KWH). Well-developed energy, transportation and communication infrastructure networks are prerequisite for linking less-developed communities to markets in a sustainable way".

According to Deloitte (2013c), energy costs and policies were ranked as the third-most critical issue faced by South African manufacturing executives (after cost and availability of labour and local market attractiveness), and have attracted much attention in the recent past. Over the last three decades, electricity prices in South Africa had been low and declining and this trend has changed from 2008 (Deloitte, 2013c).

Bogetić and Fedderke (2006) support this view and argue that South Africa's electricity which is produced exclusively from coal is comparatively cheaper, although a good part of the capital stock has already been depreciated as there has

been little investment in the sector over the past two decades. Eskom, South Africa's electricity supplier, increased its electricity tariffs by 27.5% in 2009 and was also granted an annual average tariff increase of 16% in 2012.

The cost of electricity has been increasing in South Africa and was considered necessary to finance a significant increase in power-generation capacity. Producers of clothing and textile in South Africa expressed their dissatisfaction with the high price of electricity since electricity tariff increases were proving to be a significant cost component to manufacturers around the country, impacting negatively on their cost competitiveness with international competitors.

Electricity cost is one of the direct costs in the process of production because if units produced are increased, the cost of electricity increases concomitantly. Although electricity can be denied to anyone who refuses to pay for it, it is so important that it is factored into decisions made regarding foreign direct investment destinations. Therefore, it can be classified with infrastructure and other competitive factors that are outside the control of the firm.

This classification means that the absence of, and/or high price of electricity, could be regarded as market failure and justify government intervention in the market. In such cases, government intervention would focus on provision of electricity and provision of incentives or subsidies to make the price of electricity affordable to firms. According to Bezuidenhout (2001), the Porterist approach to industrial policy advocates for industrial strategy that includes improving competitiveness through providing a market-based enabling environment for firms to operate and compete from strengthened factor markets on which firms draw.

If a state creates an environment where the conditions are favourable for business and where the state gives maximum support for companies that perform operations in local and global markets, these conditions will give the nation competitive advantage, which could also be implemented at regional level (Porter, 1990).

5.7 INDUSTRIAL CLUSTERS IN SOUTH AFRICA

Cluster variables form part of the business environment, as explained by Porter et al. (2008, p. 48): "A higher-quality business environment including the presence of well-developed clusters significantly affects the capabilities that a company can access, the competitive choices it can make, and the productivity that it can generate using its internal assets". Few of the various cluster definitions explained above are relevant to the clothing and textile industry in South Africa.

The definitions by Schmitz and Nadvi (1994) and Delgado et al. (2014) use geographical concentrations and groups of producers that are founded on, or related by, forming similar products, similar knowledge, skills, inputs, demand and/or other linkages. Some of the most important benefits of clusters include job creation, patenting, and new business formation (Feldman & Audretsch, 1999; Porter, 2003; Feser, Renski & Goldstein, 2008; Glaeser & Kerr, 2009; Delgado, Porter & Stern, 2010, 2014; Neffke, Henning & Boschma, 2011).

Morosini (2014) proposes that the role that can be played by the government in cluster activities should include fostering the development of clusters and associated learning activities, facilitation and resource allocation, general promotion including accruing of benefits, coordinating certain cluster-related activities, and acting as manager of the cluster process. The research in this study supports these roles as proposed and makes recommendations on that basis.

Morris et al. (2006) share the experiences of clusters in South Africa's automotive sector and identify the following weaknesses: **the dti's** attempts to impose a specific agenda on firms; lack of relationship (trust) building processes; lack of evidence of 'quick wins'; a cluster model founded on national priorities as opposed to localised common concerns between firms disconnected from the agenda; a government-driven governance model without the creation of real partnerships; lack of credibility/knowledge of **the dti** facilitators; and the highly centralised approach of **the dti** which has resulted in very little meaningful interaction with

other spheres of government and even less any ‘grassroots’ interaction with firms in their specific locations, contributing to a strong top-down delivery bias.

The weaknesses described above are mainly man-made and could be overcome if properly communicated to the relevant authorities. The establishment and proper coordination of clusters should be a priority, taking into account the benefits that could be derived from industrial clusters. Recognition and management of stakeholders’ relations, promotion of democratic values in the day-to-day operations of clusters, as well as proper training and skills development of important personnel, are some of the key areas that must be addressed.

The current South African industrial policy document IPAP (**the dti**, 2010) lists two programmes aimed at enhancing skills development in the clothing and textile industry, namely skills development aimed at upgrading skills in the sector, and an audit of textile capabilities to audit the capacity and the technology currently in the textile industry. The document also acknowledges the importance of clusters. According to Morosini (2004, p. 307), “it is the nature, quality, and strength of a cluster’s underlying social fabric that determines how it integrates existing and new knowledge in order to create superior products and services”.

The CIP document outlines the requirements for cluster formation and makes a clear distinction between ordinary cluster and national cluster. The document requires the formation of clusters in the clothing and textile industry to be a model of best practice and this clearly illustrates how much the concept of clusters is taken seriously, and how it plays an important role in competitiveness improvement.

The document also identifies the following weakness regarding Clusters in South Africa: “Industrial structural deficiencies in South Africa are due to lack of coordination of firms in economic “clusters”: firms are focused on production for government rather than for consumers and competitors; exports are focused on commodities rather than adding value; lack of skills integrated with technological

capability; lack of competition in local markets; and lack of government bureaucratic capability".

5.8 SUMMARY

In this chapter, analysis of data from the interviews was discussed. The themes that were used during interviews and presentation of data on interviews were also used in the discussion on the analysis of data from interviews. Discussions and analysis included theories on industrial policy and competitiveness from the literature review. This was done to illustrate how data from interviews is connected to existing theories and the role these theories could play in improving conditions in the clothing and textile firms.

The importance of factors of production was outlined. It is evident that export-oriented industrialisation strategy brings with it a lot of competitiveness for firms. The benefits of export-oriented industrialisation include up-to-date technology, competitive labour skills, high profits, foreign consumers, and how these could be encouraged through industrial policy. Industrial Clusters in South Africa were also explored with specific reference to the weaknesses identified. These discussions will be used in the next chapter to draw conclusions and make recommendations.

Table 14: How Different Theories are linked and contribute in the Research

Adam Smith: Absolute Advantage	David Ricardo: Comparative Advantage	Heckscher-Ohlin Theory	Porter: Diamond Framework	Competitiveness Interventions
Absolute advantage on factors of production determines specialisation and exports	Comparative advantage in factors of production determines specialisation and exports	Factors of production determines specialisation and exports	Factors of production conditions is part of the Diamond Framework of Competitiveness	Include People, Process, Product, Market Development and Other and other policies are supposed to be done in Clusters as proposed by the Adopt-A-Cluster Model Approach
Land and Natural Resources	Land and Natural Resources	Land and Natural Resources	Land and Natural Resources	Vanek's Natural Resources contributions to competitiveness
Labour	Labour	Labour	Labour	People competitiveness interventions should include training and skills development. Training should be aimed at people in different levels in the firm and for all other purposes including shop stewards, and on wellness (HIV/AIDS)
Capital	Capital	Capital	Capital	Product and process – diffusion of technology and capital equipment with the latest technologies available in the market
Entrepreneurship	Entrepreneurship	Entrepreneurship	Entrepreneurship	Competitiveness interventions should include training in marketing, exposure to foreign competition, increase in productivity and improvements in quality of exports and attract foreign investments

Source: Own, 2017

CHAPTER SIX
CONCLUSIONS, POLICY IMPLICATIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

Some firms in the clothing and textile industry in South Africa are closing down while many others continue to perform poorly in terms of both production and employment. The poor performance in the industry is often attributed to a rapid and sustained surge in imports, particularly from China and India.

The purpose of this study is to investigate whether the clothing and textile firms in South Africa are globally competitive, examine and explain why industrial policy measures have not generated expected results, and reflect on possible recommendations for industrial policy measures that will make the clothing and textile industry globally competitive. The main question in this study is: “How can the South African government assist to make the clothing and textile industry globally competitive?” The objective is to contribute to debates on what industrial policy measures will be appropriate for the clothing and textile industry, what competitiveness is, and how competitiveness could be achieved.

This chapter draws conclusions based on the findings in this study, explains policy implications of the findings and conclusions, and makes recommendations to improve conditions and performance in the clothing and textile industry. Conclusions are presented under the themes from the interviews which are current prices of products, cost and availability of labour, productivity of employees, models of machines, and profitability of firms.

6.2 THEMATIC CONCLUSIONS

6.2.1 Current Prices of Products

According to the findings in the interviews, many firm owners also own the properties from which they produced clothing and textile. Firm owners do not borrow capital in order to buy physical capital and increase the productive capacity of the firms. Therefore, factory owners do not pay interest and rent costs. Owners also explained that since they do not pay interest and rent costs, they do not include these expenses to the total cost when calculating profit. This implies that the total cost of production is being understated while the profits of the firms are overstated. Therefore, the selling prices are actually more than the current price at which the products are being sold and this means that foreign competitiveness is worse than currently determined. Furthermore, the profits that the firms claim to be making may be 'fictitious'.

Entrepreneurs in the clothing and textile industry do not seem to realise the importance of capital in their firms. While in the East Asian economies governments intervened in order to allocate capital to important and supported industries by discouraging capital allocation in other sectors, including real estate, owners of the clothing and textile industry in South Africa do not borrow capital for expansion or to purchase the latest technology equipment that is required. Instead, these owners wait for the government incentives to buy their capital equipment.

The research in this study thus concludes that clothing and textile owners do not have the incentive to borrow capital because the cost of capital is, according to **the dti** industrial policy documents, among the highest in the world. The other reason for disincentive to borrow capital and invest in their firms may be because of the significant increase in imports from foreign industries, in particular from China and India. Furthermore, the study concludes that the clothing and textile industries in South Africa are not motivated to produce for the export market. This may be due

to the fact that the South African clothing and textile industry is currently competing with foreign firms for the domestic market.

Lack of confidence in local brands may also be one reason for disincentive in borrowing capital to expand production in the industry. Current industrial policy documents do not aggressively promote exports and this does not provide an incentive to firms to expand productive capacity in the industry. The importance of exports in industrialisation is best explained through the lessons provided by East Asian economies.

Firstly, export markets are likely to be competitive and even if they are not, it is of no concern as the profits of the firms are then made at the expense of foreign consumers (Schmitz, 1984, 2007; Alavi, 1996; Krueger, 1997; Pahariya, 2008). In addition, the process of exporting, by exposing firms to foreign competition, technology and marketing, can lead to productivity gains that would not be obtainable from sales in the domestic market (Weiss, 2005).

Secondly, firms learn a great deal in international markets, benefitting from spillovers related to both marketing and production expertise. Weiss (2005) argues that if economies could break into export markets they will be able to overcome the constraints on sales imposed by the absolute size and dynamism of the domestic market.

Thirdly, exporting firms discover new markets and develop new supplier relationships. According to Weiss (2005, p. 9), “The East Asian firms received access to foreign designs or technologies that allowed them to upgrade their production to international standards through contacts with foreign buyers in the clothing sector and branches of electronics” (Fagerberg, 1988; Stiglitz, 2015; Stiglitz et al., 2013; Dietsche, 2017; Ketels, 2017).

Fourthly, “Success in exporting provides policy makers with an objective way to award credit and foreign exchange” (Stiglitz, 1996, p. 169). In terms of quality,

Japanese firms established brand reputation by improving the quality of exports, illustrating a good example of interaction between corporate behaviour and individual incentives (Stiglitz, 1996).

Based on the benefits of exports of manufactures explained above, the research in this study concludes that the promotion of exports should be an overarching industrial policy objective for economies, particularly for developing countries including South Africa, and that governments in developing countries should intervene in the economy to help firms to produce manufactures for the export market.

6.2.2 Cost and Availability of Labour

The findings in this research revealed that labour costs, availability of labour, and material costs were found to be the most important drivers of manufacturing competitiveness. While employers were more concerned about the central bargaining system that prescribes annual increases in wages and salaries which were not related to increases in productivity by workers, employees argued through their unions that they were not earning enough.

The clothing and textile industry in South Africa is concentrated in certain geographical areas, especially provinces like the Western Cape, KwaZulu-Natal, the Free State and Gauteng and in cities like Cape Town, Durban and Johannesburg, as well as in certain rural areas in former homelands such as Babelegi in Hammanskraal and Rosslyn in Ga-Rankuwa (Vlok, 2006). In its traditional geographic concentrations, the industry has existed for many decades and is rooted in the unique history and cultural traditions of these areas and provides a significant proportion of employment. In its rural concentrations, the industry is often the only source of formal employment and many families depend on it for survival.

Wages in South Africa were found to be high relative to productivity levels and also high when compared with Southern Africa's regional structures such as SACU and international competitors in Asia and Bangladesh. In terms of productivity of

employees, South Africa's productivity and pay ratio was found to be the lowest among the emerging market groups, which is not a positive indicator for foreign investment. However, wages and salaries in South Africa should be examined by taking cognisance of the historical industrial decentralisation of the apartheid past.

Some of the clothing and textile firms were given incentives to relocate from towns to rural homelands due to the National Party government policy of industrial decentralisation aimed at keeping black majority people away from towns. For instance, the 1960 incentives included assistance with transport costs, assistance with the costs related to the provision and consumption of water, electricity and housing, financial incentives on industrial land and buildings, plant, relocation costs, customs tariffs, and loans (Pretorius et al., 1986b). These incentives were followed in 1962 by tax concessions provided to manufacturing concerns in border areas and increased investment allowances (Bell, 1973).

Despite the added incentives, it was evident that a more attractive package on incentives would be required to achieve satisfactory results. The most favourable industrial decentralisation incentive packages were announced in April 1982. When a survey on companies receiving incentives was undertaken, the companies indicated that the 'short term incentives (mostly cash incentives applicable to cost of labour, wages and salaries, and capital) were most widely enjoyed and were regarded as the most important (Addleson et al., 1984).

Addleson et al. (1985) observe that although it is frequently argued that the new firms in infant areas may have to be subsidised until the areas generate agglomeration economies, it is disturbing to find that the decentralised firms attach greater importance to short term incentives in their location decisions. In addition to the fact that the profitability of a number of firms depends on their receiving incentives, the importance of the short term incentives also suggests the possibility of relocation or even closures once these incentives are terminated (Addleson et al., 1985).

Although industrialists were given incentives which were being increased to encourage the movement of more firms from the metropolitan areas, salaries and wages of employees remained very low. According to Altman (1996), during the early 1990s wage differentials between formal clothing factories in metropolitan areas as opposed to decentralised locations were observed as anywhere between three and six, or even nine times greater.

Wages and salaries in South Africa should also be seen in the context of the broader context of poverty, unemployment and inequality which continues to increase between the very rich citizens and a poor black majority. This study therefore argues for increasing the productivity of employees through skills development and education which should in the long term compensate for the relatively high wages and salaries in the clothing and textile industry. This measure of increasing productivity of employees will in the long term lead to a high productivity/pay ratio in the clothing and textile industry in South Africa.

6.2.3 Productivity of Employees

Management staff in the clothing and textile firms who participated in this study thought that they had a qualified but ageing labour force. Managers also felt that the central bargaining process in South Africa was unfair since it tends to advocate for the increase in wages and salaries without a corresponding increase in productivity. Therefore, productivity is one element that could be used to settle the dispute between management and labour if wages were determined by the productivity of employees. Although productivity of workers in South Africa is generally low, it is believed to be improving and the IDC representative attributed this improvement to clusters, training, improvement in measuring performance systems, and upgraded equipment.

Other elements which played an important role in increasing productivity were reliability and flexibility in production (reaction to fashion changes, quicker turnaround in producing orders, and changes from non-selling to selling products). Incentives to train workers has led to a pool of skilled labourers, better product

development, manufacturing process improvements, market development and access to new markets, and cost-saving environmental improvements such as use of natural light instead of electricity. Education, training and skills development remains central to improving the productivity of workers.

Education, training and skills development could be achieved through investments in human capital development which was viewed in other countries as economic investment rather than as a social policy. In countries where there is unequal distribution of wealth such as in South Africa developmentalism would mean the simultaneous achievement of industrialisation through industrial policy and redistribution of income through other policies that are designed to promote education and achieve other social and political goals.

The H-O theory postulates that a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor, i.e. the relatively labour-rich nation exports the relatively labour-intensive commodity and imports the relatively capital-intensive commodity (Sődersten, 1980; Salvatore, 1985). However, following the Leontief Paradox, the Factor-Content Approach was conceived.

The Factor-Content Approach advocates that particular types of skills that a country possesses may determine what is produced, specialised in, and exported (Webster, 1984). Therefore, improvements to the inherited factors may be necessary before specialisation and exports take place. This suggests that investment in human resources such as training and skills development is of central importance for economic development and industrialisation. However, the incentives of private firms to support training for their workers is inadequate because once workers are trained they can move to other firms (Stiglitz, 1996). Therefore, government should intervene and use industrial policy to encourage the training of workers.

The support for education, particularly in engineering and science education, provided an intellectual infrastructure that facilitated technological transfer for the East Asian economies (Stiglitz, 1996). Weiss (2005) argues that having a relatively well trained and educated labour force was a critical element in the rapid export growth of the East Asian economies and that in general, education plays a critical role in growth. According to Weiss (2005, p. 11), "One of the major initial advantages of the Newly Industrialised Economies (NIEs) was their comparatively high education standards". Therefore, a lesson that could be learned from East Asian countries is that the support for education is important for economic growth and industrialisation, but education attainment should be seen as a critical facilitating mechanism where other appropriate stimuli are in operation. According to Hernandez (2005, p. 9), investment in skills and infrastructure is a key explanation for how Japan, Korea, Taiwan, China and Singapore were able to move up the technology ladder.

One way through which learning could be shared throughout the industry is the use of clusters. According to Porter (1998), the concept of clusters rests on a broader and more dynamic view of competition among firms and locations based on the growth of productivity. In other words, interconnections and spillovers within a cluster often influence productivity growth more than does the scale of individual firms. However, in cluster theory, instead of targeting particular industries, all existing and emerging clusters desire attention, all offer the potential to contribute to prosperity, and all clusters can improve their productivity. The comprehensive benefits of clustering as captured by Pisa et al., (2015) have been explained in Section 2.10.4.1. Furthermore, the functions of government as proposed by Morosini (2004) are of critical importance to promote harmony within all cluster activities.

Industrial structural deficiencies in South Africa are due to lack of coordination of firms in economic clusters because firms tend to be focused on production for government rather than for consumers and competitors; exports are focused on commodities, rather than adding value; there is a lack of skills integrated with

technological capability; lack of competition in local markets; and lack of government bureaucratic capability (IPAP, 2010). These conditions render clusters dysfunctional and unable to serve the purpose for which they were created. Therefore, a restructuring of clusters, together with improvements in the competence of bureaucrats and government facilitators of clusters should be addressed with urgency.

6.2.4 Improving Models of Machines

Although the majority of firms in the clothing and textile industry indicated that they were using machines with recent technology combined with the old machines and that these machines were well maintained, the SACTWU representative did not agree that the machines use state-of-the-art technology but agreed that there was improvement in the technology employed by firms. The IDC representative concurred with this view, and suggested that although in terms of technology South Africa was not yet aligned with the top countries, gains were being made. The IDC representative encouraged the industry to continuously improve on technology and not wait until machines were old before obtaining new technology.

In the context of globalisation and economic crisis, policy initiatives should aim at improving the structural competitiveness of the economy and in particular enhance technological capabilities, shift production towards more knowledge-intensive activities, promote new linkages and interconnections among actors, secure resources to boost investment and redress activities in regions that were severely affected by the crisis, and create new employment opportunities. Technology is important to both competitiveness and industrialisation.

The export-led industrialisation of East Asian economies was strongly supported by forces that drove globalisation. These forces fueled transfers of technology by innovative means in unprecedented volume and in a variety of industries including those at the frontiers of global technological change (Schmitz, 1984; 2007; Alavi, 1996; Krueger, 1997; Westphal, 2000; Pahariya, 2008). This transfer of technology would not have been possible if the firms were not encouraged to embrace these

activities as well as selective interventions that encouraged rapid technological development (Schmitz, 1984; 2007; Stiglitz, 2015; Stiglitz et al., 2013).

While export-led growth contributes to industrialisation, the competitiveness of firms would be promoted by encouraging manufactured exports which would allow domestic producers to move up the technology and skills 'ladder' (Fagerberg, 1988; Stiglitz, 2015; Stiglitz et al., 2013; Dietsche, 2017; Ketels, 2017). Diffusion of technology has been found to be the most sustainable strategy in keeping up with the best competitors in the market. Developing countries typically operate at a level of technology far below that of industrial economies. Industrialisation successes in LDCs depends essentially on how they are able to manage the process of mastering, adapting and improving on existing technologies (Schmitz, 1984; 2007; Lall, 2003; Stiglitz, 2015; Stiglitz et al., 2013).

Development is, to a large extent, the process of acquiring and adopting existing technologies (Stiglitz, 1996). Private markets have inadequate incentives for investing in the production and acquisition of technology, largely because it is difficult to appropriate returns to knowledge (Stiglitz, 1996; Neary, 1999; Lhuillery, 2009). According to Lhuillery (2009), outgoing knowledge spillovers dissuade a firm from investing in R&D (disincentive effect) whereas incoming knowledge spillovers encourage firms to reduce their own production of knowledge by free-riding other firms (efficiency effect).

Czarnitzki and Toole (2006) suggest that public research and development (R&D) subsidies may reduce market failures affecting private R&D investment caused by incomplete appropriability of knowledge and financial constraints due to capital market imperfections (Sakong & Jones, 1980; Evans & Alizadeh, 1984; Amsden, 1985; Luedde-Neurath, 1986; Stiglitz, 1989; Mody, 1999). In Taiwan, China, public research institutions played a greater role in promoting the diffusion of new technologies and coordinating industry-specific R&D (Hernandez, 2005).

For South Africa to compete with the best in the world, the most advanced and latest technology available in the market must be used in the clothing and textile industry. This study concludes that the objective of using the latest technology available in the industry should be a priority. The clothing and textile industry in South Africa will have to use technology foresight and identify the types of technology which would be useful in the future, identify the challenges associated with these technologies, and plan to overcome any related technological challenges (Altenburg et al., 2016).

According to Altenburg et al., (2016, p. 17), "The future-oriented approach is able to identify drivers, anticipate what might happen under certain circumstances, and examine variations and interactions". This should help the firm to anticipate emerging opportunities and problems, and thus the firm can identify priorities and design appropriate strategies (Cassingena Harper, 2013; Altenburg et al., 2016). Therefore, a choice should be made between high technology developments that support engineering ambitions than commercial entrepreneurial realities (Altenburg et al., 2016).

6.2.5 Profitability of Firms

All the firms that shared information with this study were making profits. Firm owners believed that the profitability of the firms would increase if the productivity of workers could be increased. Productivity of workers could be increased by curbing absenteeism, through flexible labour laws, more commitment from workers, proper negotiations and bargaining with customers, motivating employees through incentives, encouraging skills development through training, reducing the cost of utilities (electricity and water), managing foreign exchange used to buy imports from foreign countries especially in the textile industries, and changing the attitudes of workers and unions.

The SACTWU representative argued that the clothing and textile industry was not a high profit sector. The design houses offer services to the retailers and the retailers absorb all the profits. In order to improve the profits, SACTWU proposes that

training of workers be prioritised, that niche designs are developed, competition with countries such as Bangladesh is avoided, investments in people and machinery are made, input costs and overheads are reduced where possible, green production techniques are utilised and wastage eliminated, water is recycled and reused, and cost and waste reduction prioritised.

Stiglitz (1996) and Weiss (2005) argue that many activities that increase profit such as reducing input costs, training of workers to increase their productivity, using green production techniques, creating new designs and diversifying, and eliminating wastage could be achieved if firms are encouraged to produce for the export market (Prahalad & Hamel, 1990; Barnley, 1991; Imbs & Wacziarg, 2003). Exporters can establish brand reputation by improving the quality of exports; furthermore, profits from exporting firms are made at the expense of foreign consumers and export markets are likely to be competitive (Stiglitz, 1996).

According to Weiss (2005), exposing firms to foreign competition, technology and marketing can lead to productivity gains that would not be achievable from sales in the domestic market. These firms discover new markets and develop new supplier relationships and their access to foreign designs and technologies allow them to upgrade their production to international standards through engaging with foreign demand (Weiss, 2005).

Firms can also increase their profits by expanding their production through new investments into the firms or by reinvesting some of the profits into the firm. Stiglitz (1996, p. 159) argues that "A firm that expands production lowers its future production costs and undercuts its rivals". One of the arguments of 'infant' industry protection is that protection is important so that the young firm can gain the experience required to lower its production costs and allow it to become viable (Stiglitz, 1996). Reducing production costs in both the short-term and the long-term is at the centre of this study. The clothing and textile firms that claim to be making profits and not expanding their productive capacity are not able to benefit from the advantages of expanding production.

Therefore, besides expanding the production level and increasing its share of the market, a firm can strive to obtain a share of the export market which could lead to establishing important contacts that promote learning and increase making profits. Firms that focus on attaining maximum profit from domestic markets are likely to increase prices, and as a result become uncompetitive. Therefore, profits from exports should be prioritised above profits from the domestic market. In addition, entrepreneurs in the clothing and textile industry should be forward-looking and strategise to be sector leaders by identifying their future comparative advantages and strategically plan to achieve them. One way of forward-looking is through development that is not only associated with a shift into different activities, but also with diversification into a broader set of activities (Prahalad & Hamel, 1990; Barnley, 1991; Imbs & Wacziarg, 2003; Hausmann & Klinger, 2007).

6.2.6 Reducing Electricity Consumption

Electricity costs were cited by firms as one of the most significant cost factors. Unlike rent, electricity cost is, for accounting purposes, treated as a variable cost factor in that as more units of output are produced, the greater the units of electricity that must be used, and in the process, the cost of electricity is increased; whereas rental cost remains the same whether there has been productivity or not. South African firms have had to deal with intermittent power supply for a number of years, and in 2015 unreliable power supply was followed by an increase in the price of electricity. The increase was considered necessary to finance a significant expansion in power-generation capacity. Producers in the clothing and textile industry in South Africa cited the high price of electricity as a factor contributing to high costs of production and electricity tariff increases were proving to be a significant cost component to manufacturers around the country, impacting negatively on their cost competitiveness against international competitors.

Policy makers have stated the importance of an enabling environment to attract foreign investment, and the availability of electricity is one of the factors contributing to an enabling environment together with other factors such as roads,

transport and water. The World Economic Forum's Africa Competitiveness Report (2013) suggests that for factories and other business ventures to work unimpeded, electricity supplies should be free from interruption and shortages. The shortage of electricity and energy leads to a significant productivity handicap that undermines competitiveness especially in countries in the African continent such as Kenya and Cameroon. Therefore, there is a need to use electricity sparingly and optimally utilise the electricity supply that is available. In South Africa the government should ensure the continuous provision of electricity to firms and private individuals because this is factored in when decisions regarding investment destinations are made by foreign investors.

6.3 POLICY IMPLICATIONS

Thematic conclusions about clothing and textile firms and the state of clusters as outlined in the current industrial policy documents inform the policy implications in this study. There is lack of coordination of firms in economic clusters because firms are focused on production for government rather than for consumers and competitors; exports are focused on commodities rather than adding value and producing manufactures for exports; there is a lack of skills related to technological capability; a lack of competition in the local market; and limited bureaucratic capability.

6.3.1 Theoretical Reflection

The main shortcomings inherent in the classical theories is that, firstly, they advocate for as little government interference in the economic system as possible or a policy of *laissez-faire*. Secondly, the classical theories tackle the same problem by providing models that clarify competitiveness of international trade based on differences in productivity levels between countries without explaining why these differences exist. The Heckscher-Ohlin theory is broader and differs with absolute and comparative advantage over the classical theories in four ways.

Firstly, the theory provides better tools to explain observed trade patterns. Secondly, it is able to develop implications about how trade affects wages and returns to capital. Thirdly, it shows the impact of economic growth on trade. Fourthly, it explains the effect of political groups on trade. According to the H-O theory, a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor, i.e. the relatively labour-rich nation exports the relatively labour-intensive commodity and imports the relatively capital-intensive commodity. Put simply, the country that is abundant in capital will export capital-intensive goods, and the country that is abundant in labour will export labour-intensive goods.

While the theories mentioned above advocate for as little government intervention as possible, there is evidence from the literature that supports the notion that all the countries that followed the 'Washington Consensus', especially those countries from the periphery, including countries in the African continent, struggled to achieve growth, economic development and industrialisation (Stiglitz, 1989; Stewart, 1991; Rodrik, 1994; Bond, 2000; Mhone, 2003; Stiglitz, 2005; Shafaeddin, 2006a; 2006b; 2006c; 2010; Chang 2009a; Ketels, 2017).). It is those countries that assisted their economies through industrial policies and other active interventionist policies that achieved successful industrialisation similar to that of the developmental states of East Asia.

Literature review, interviews with stakeholders at the clothing and textile firms, the current industrial policy documents, discussions and conclusions have collectively exposed several thematic recommendations which call for government intervention in the clothing and textile industry. The Developmental State of East Asia used Capacity Development of Policy Formulation and South Africa can derive lessons from this method which is explained in Figure 11 below. The countries of East Asia realised that the neoclassical school and the Washington Consensus imperatives were delaying the development of countries (Stiglitz, 1989; Rodrik, 1994; Mhone, 2003; Hernandez, 2005; Weiss; 2005; Chang, 2009a).

Although initially there was denial about the role of government and industrial policy in the successful development of East Asian countries (Ranis & Fei, 1975; Balassa, 1982; Mody, 1999; Hernandez, 2005) the World Bank Report (1993) on the East Asian Miracle (EAM) added credibility to East Asian industrial policy (Sakong & Jones, 1980; Evans & Alizadeh, 1984; Amsden, 1985; Luedde-Neurath, 1986). These countries implemented industrial policies to achieve economic development. It is thus important that developing countries including South Africa should implement broad industrial policies for transformation and which move beyond the GDP objectives (Esteban & Stiglitz, 2013; Felipe, 2015; Moran, 2015; Oqubay, 2015; Stiglitz, 2015; ODI, 2016; Dietsche, 2017). The formulation and implementation of industrial transformation should be coordinated through the coordination system (Shafaeddin, 2004; 2006a; 2006b; 2006c; Hall & Soskice, 2001), such that each component of the system (market, state and firms) is allowed to perform its role.

South Africa's industrial policy documents identified focus areas that include people (training of workers), processes (activities in the value-chain including improvements in technology), product (improving quality of production for export markets and establishing brands), and markets (both local and foreign and not limited to the domestic market).

6.3.1.1 The Current State of Clusters

According to South Africa's current industrial policy documents, clusters in the clothing and textile industries are not functioning optimally and are characterised by industrial structural deficiencies. The problems arising out of these deficiencies indicate lack of capacity and lack of government bureaucratic capability. The importance of clusters in economic development suggests a need for strong coordination and a strong central role for government.

A democratic developmental state should have competent bureaucrats who will assist producers to make decisions that are beneficial to firms, the industry and the country as a whole. Clusters in particular have the potential to create jobs, patent inventions, and establish new business (Feldman & Audretsch, 1999; Porter, 2003;

Feser, Renski & Goldstein, 2008; Glaeser & Kerr, 2009; Delgado, Porter & Stern, 2010, 2014; Neffke, Henning & Boschma, 2011).

Government bureaucrats therefore need to be capacitated and take leadership of clusters processes as proposed by Morosini (2004) and adopted by this study. According to Morosini (2004), these include a role for government in terms of facilitation and resource allocation, general promotion including accruing of benefits, coordinating certain cluster-related activities, and acting as the manager of cluster processes. Some of the problems in clusters are also part of the thematic conclusions and are explained below.

6.3.1.2 Encouraging Technology

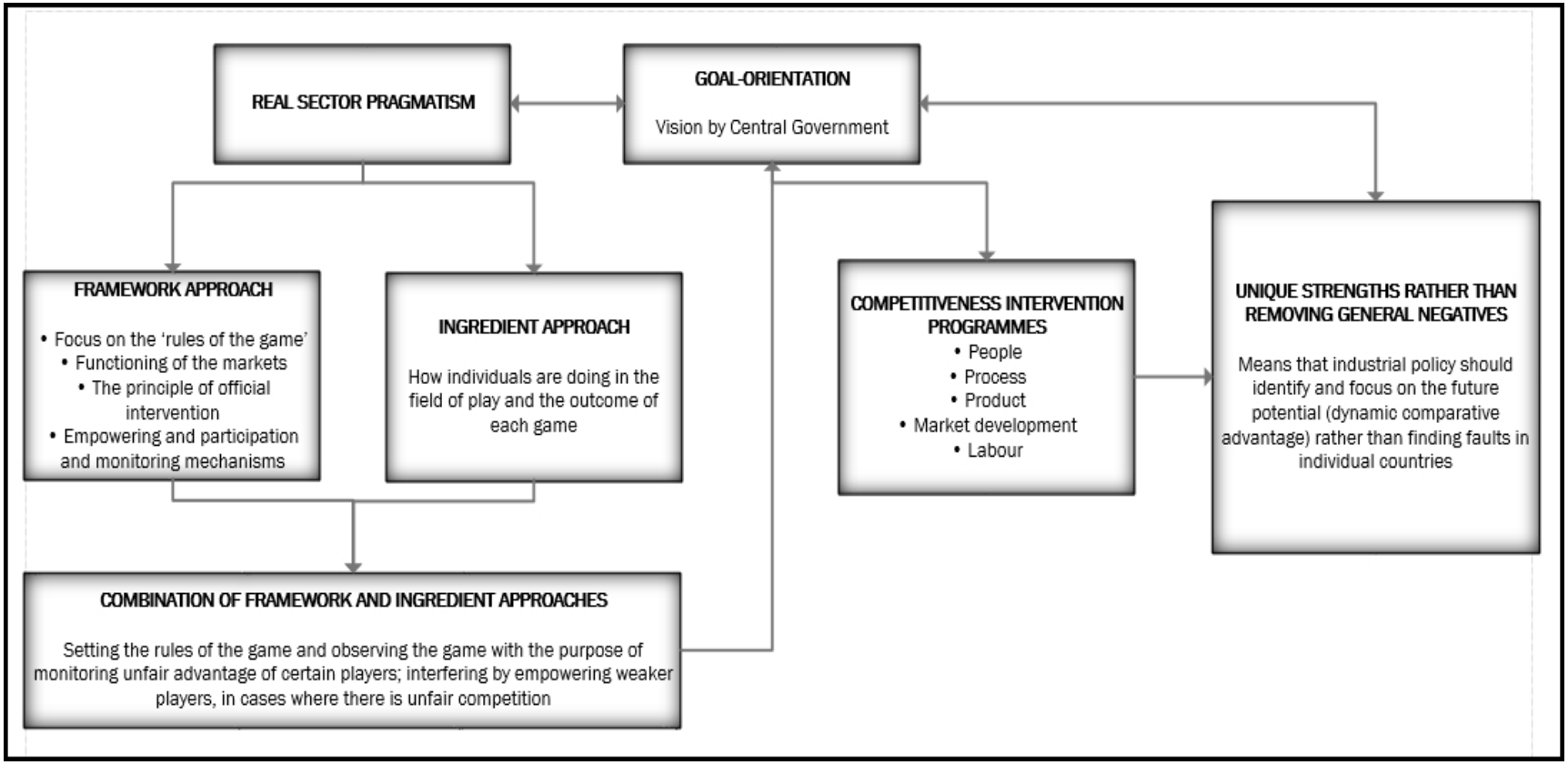
The failures of the import-substitution industrialisation approach to industrial policy in developing countries are well documented in literature (Schmitz, 1984, 2004; Alavi, 1996; Krueger, 1997; Pahariya, 2008). While export-led growth contributes to industrialisation, competitiveness of firms would be promoted by encouraging manufactured exports which would allow domestic producers to move up the technology and skills ladder. There is a positive correlation between diversification and industry performance. Diversification is often preceded by innovation, normally as a result of information, knowledge and technology from entrepreneurs. Entrepreneurship and entrepreneurship development are crucial to the industrialisation of economies and development.

Technological innovations make entrepreneurship development an ongoing process. Technological innovation and entrepreneurship are normally not available in developing countries. Stakeholders in the clothing and textile industry agree that while South African firms were acquiring machinery with particular technologies, these machines were not the latest available in the market. Developing countries such as South Africa and the majority of countries on the African continent tend to operate at a level of technology far below that of industrial economies.

Industrialisation successes in LDCs depend essentially on how they are able to manage the process of mastering, adapting and improving upon existing

technologies. Technological change is also often produced as a by-product of production, i.e. learning by doing. Unfortunately, entrepreneurs and private markets have inadequate incentives for investing in the production and acquisition of technology, largely because it is difficult to appropriate returns on the investment in knowledge.

Figure 11: Developmental State and Competitiveness



Source: Own, 2017

Outgoing knowledge spillovers dissuade firms from investing in R&D whereas incoming knowledge spillovers encourage firms to reduce their own production of knowledge by free-riding other firms. This is one of the practical cases of market failure. The importance of technology in the manufacturing process provides the rationale for government intervention in the market to support manufacturing growth. Therefore, public R&D subsidies should be used to "correct" underinvesting in business R&D that results from market failures such as incomplete appropriability of the returns to knowledge generated through R&D investment or various capital market imperfections leading to financial constraints.

6.3.1.3 Encouraging Exports of Manufactures

Industrial policy should focus on manufacturing because of the reasons that emerge from manufacturing as the engine of growth. Firstly, all development successes are associated with manufacturing growth. Secondly, manufacturing is a site of major technological innovation. Thirdly, manufacturing enjoys stronger dynamic economies of scale, and fourthly, manufacturing improves profitability throughout the economy.

Firms that are producing for the export market will in the long term accumulate knowledge and skills that will make them globally competitive. The process of becoming globally competitive will be achieved because of the following reasons: Firstly, export markets are likely to be competitive, and even if they are not, it is not a problem because the profits of the firms are made at the expense of foreign consumers. Another advantage of exporting comes from firms being exposed to foreign competition, technology and marketing which help them acquire productivity gains that they would not otherwise be able to acquire from a domestic market.

Secondly, firms learn a great deal in international markets, benefitting from spillovers related to both marketing and production expertise. They move away from the constraints on sales imposed by the absolute size and dynamism of the domestic market.

Thirdly, exporting firms discover new markets and develop new supplier relationships and obtain access to foreign designs or technologies that allow them to upgrade their production to international standards through contacts with foreign buyers in the clothing and textile sectors.

Lastly, success in exporting provides policy makers with an objective way to award credit and foreign exchange. Firms can also establish brand reputations by improving the quality of exports.

6.3.1.4 Promoting Education

The level of unemployment in South Africa is very high and in part this is a result of a lack of skills. One way of transferring and adapting technology is through education, skills development, and learning. Developing countries that narrowed the technological gap with developed countries accelerated economic development (Fagerberg, 1988; Stiglitz et al., 2013; Stiglitz, 2015; Dietsche, 2017; Ketels, 2017). The challenges in the clothing and textile industry, as explained by stakeholders, are exacerbated by firstly, the skilled masses in the industry who are ageing and who will need to be replaced soon, and secondly, the wages and salaries in the industry that are relatively high compared to competitors.

The research in this study argues that wages and salaries in the industry cannot be reduced to encourage competitiveness of the industry because of the previous apartheid policies of industrial decentralisations as well as the high levels of inequality, unemployment and poverty of the black majority in the country. Instead, efforts should be made to increase the productivity of workers through training and skills development so that improved productivity can begin to match salaries and wages in the industry.

The challenge of market failure is also present in the provision of training and skills development in the clothing and textile industry. Employers' incentives to provide training and skills development for their employees is inadequate because once workers are skilled, they may move to another firm. This market failure also justifies government intervention because of the importance of education, skills and

learning in transferring and adapting technology that can promote manufacturing growth.

Classical, Neo-classical, and Regional competitiveness models could be combined with Developmental State and a 'Coordination System' to support government intervention in promoting education, technology and profits from exports. This combination is illustrated in Figure 12 below.

6.4 RECOMMENDATIONS

This study makes the following recommendations with regard to The State of Clusters; Encouraging Technology; Exports of Manufactures; and Promoting Education:

6.4.1 The State of Clusters

The South African government would need to capacitate officials by training them in nurturing and assisting in developing firms in different sectors. The aim is to ensure that blockages in terms of information sharing and discussions on the best practice in sectors are identified. The country needs cohorts of bureaucrats that can undertake industrial research aimed at improving the competitiveness of the local clothing and textile industry. The study recommends that the challenges of industrial structural deficiencies due to lack of coordination be addressed as a matter of urgency.

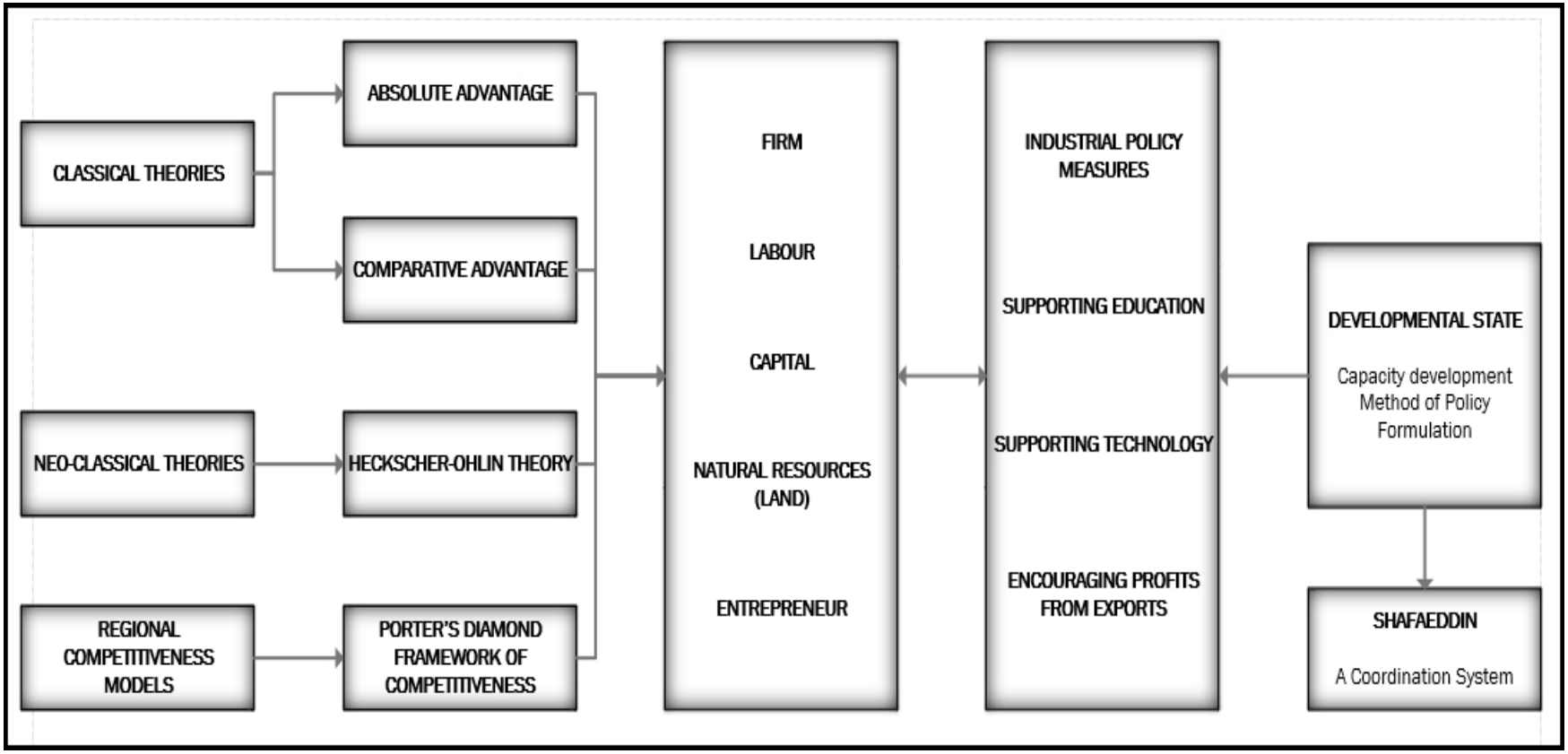
Each cluster should be provided with an expert from government whose tasks should include day-to-day interaction with different cluster member firms for updates on challenges and successes. This means that each expert should Adopt-A-Cluster. Such an expert will be the coordinator and link between cluster member firms and the government and within the cluster member firms. In order to encourage firms to become members of clusters, registering authorities could make cluster membership one of the requirements before registration. Discussions at

clusters should include learning regarding the thematic recommendations of encouraging exports, encouraging technology, and providing education.

This study recommends the Adopt-a-Cluster model to address the challenges of structural deficiencies in South Africa due to lack of coordination of firms in economic clusters. Each government expert in the sector should ‘adopt a cluster’ which would require that they perform some of the cluster activities and maintain continuous engagement with cluster members, offer training and/or workshops, organise meetings of clusters, choose cluster leaders based on performance, and provide updated and reliable expertise on each sector (such as new technologies available, productivity improvement, export promotion and skills development, amongst others). It is important that in leading the cluster the official also promotes democratic principles of problem-solving and information-sharing.

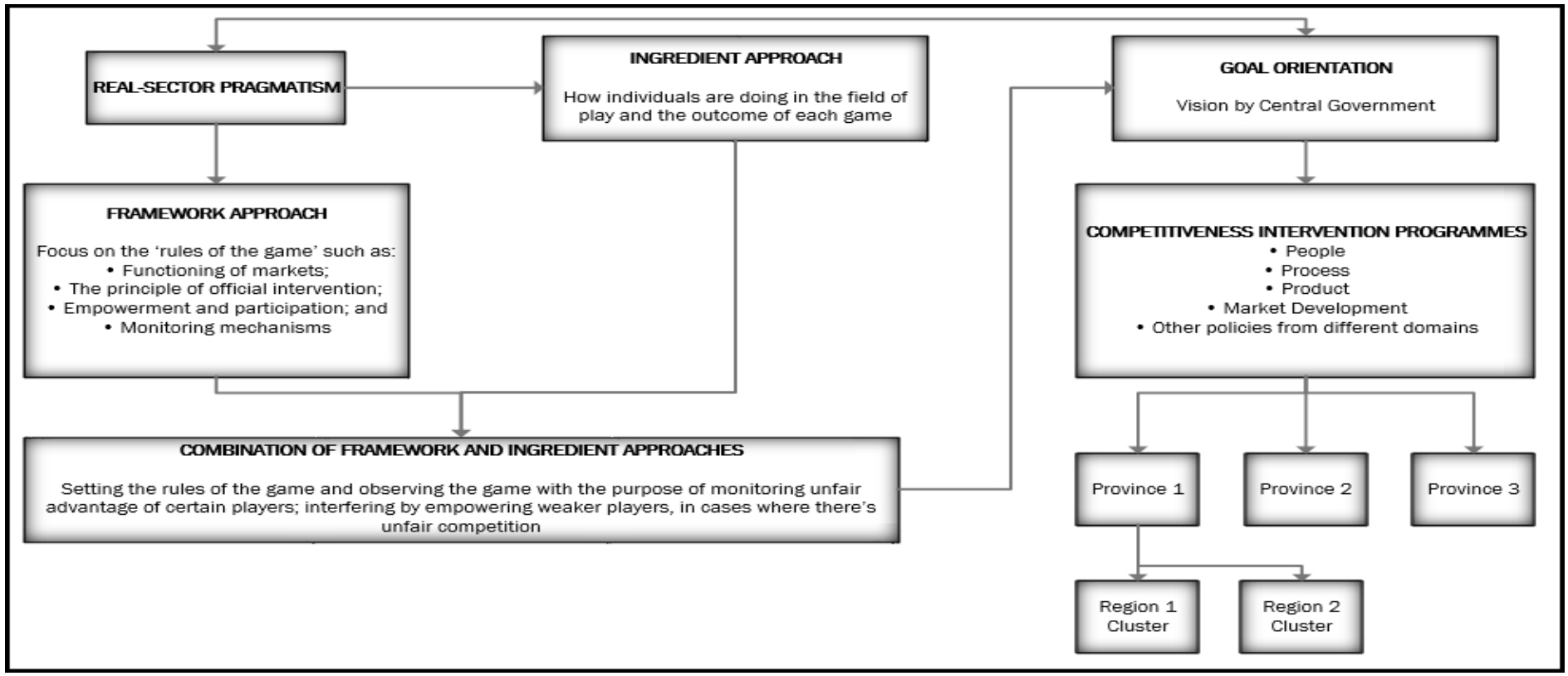
In other words, a bureaucrat should ‘co-own’ a firm such that the success or failure of the firm becomes a success or failure of the bureaucrat as well. Figure 13 below illustrates the operational reflection and how the adopt-a-cluster model/approach could work at the practical level.

Figure 12: Theoretical Reflection towards Competitiveness



Source: Own, 2017

Figure 13: Adopt-A-Cluster Approach / Model



Source: Own, 2017

The Operation of the Adopt-a-Cluster Model and the nature of government intervention in the economy is summarised in Figure 14 below which illustrates how the adopt-a-cluster model/approach could work in the real world. It is an illustration of the Adopt-a-Cluster Model.

At points A and B are the types and theories which advocate for competitiveness elements such as labour, capital, land and entrepreneurship. Industrial policy should make the clothing and textile industry globally competitive by reducing the price of products which are determined by factors of production. Therefore, the price of factors must be kept to a minimum if prices of products are to be low and competitive. To assist this process, government should intervene in the form of a Developmental State of Capacity Development Method of Policy Formulation, and A Coordinating System.

Point E is where government intervention is taking place with government officials assisting firms at cluster level and providing incentives at national level. It is at Point E where government officials assist cluster firm members with export promotion activities, subsidies on education at Further Education and Training Colleges (FETs), assist firms to identify the latest technologies, and financially support the firms to acquire these technologies. In the cluster meetings and workshops, government experts should do research and provide expert knowledge on industrial policy measures that include encouraging technology, encouraging export of manufactures and promoting education as discussed below.

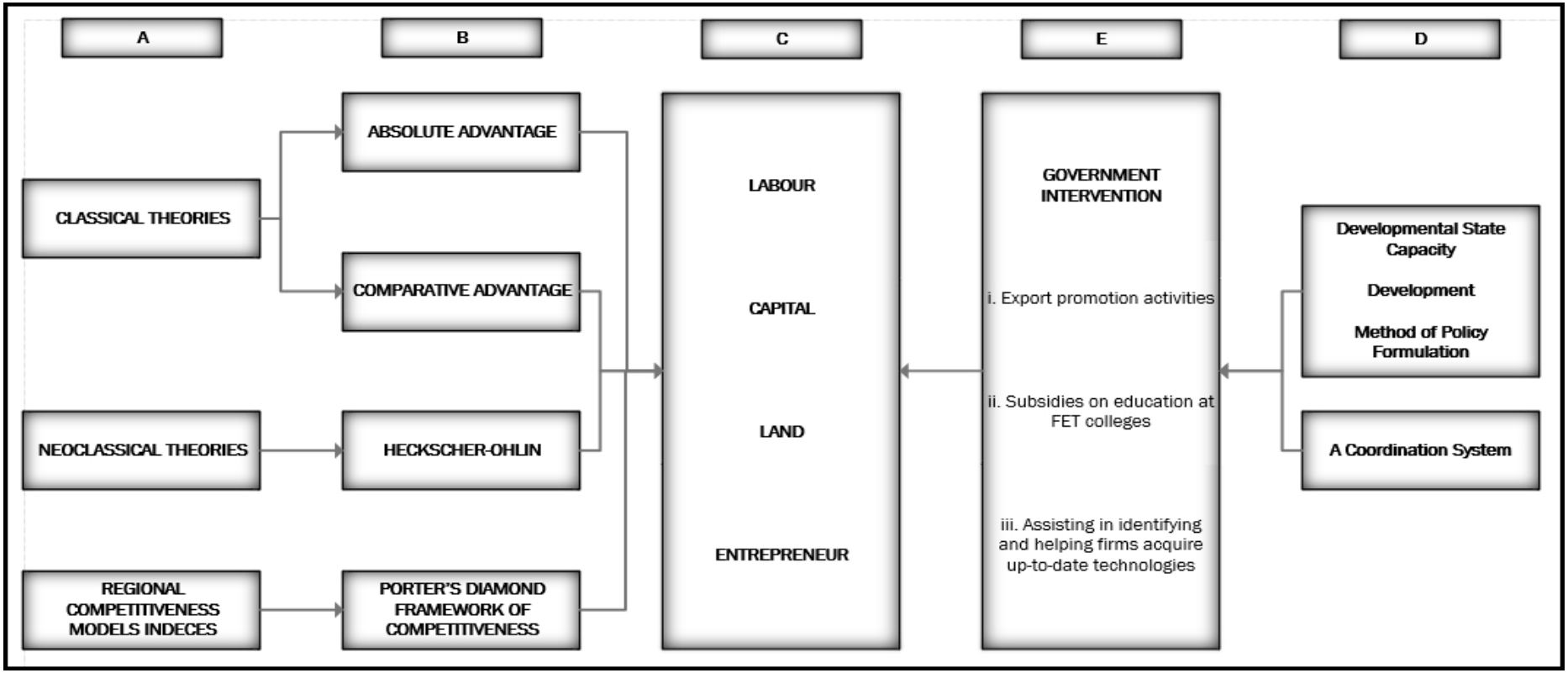
6.4.2 Encouraging Technology

South African clothing and textile firms are buying machines with advanced technology but the technologies they obtain are not the latest in the market. Technology is promoted by providing fiscal incentives to encourage investment by both domestic firms and foreign direct investment; deregulation to improve the ease of doing business and encouraging new investments; and increasing finance credits through specialised financial institutions (McCarthy, 2014). It is also important that a country adopts a receptive attitude to foreign direct investment and resists

xenophobic aversion to foreign investments (Stiglitz, 1996). This attitude should be complemented by sound macroeconomic management, a stable political environment, and a well-managed labour-market with an educated labour force.

Private individuals and entrepreneurs' incentives to invest in R&D is inadequate because outgoing knowledge spillovers encourage firms to reduce their own production of knowledge by free-riding other firms. This study recommends government intervention to publicly compensate for inadequate incentives of private entrepreneurs in providing technology by assisting firms to acquire the latest technology available in the clothing and textile industry. Information should be readily available on the latest technologies available in the industry. Efforts should be made to ensure the transfer and adaptation of technology, to encourage the use and to train workers in the use of new technology.

Figure 14: Operations of the Adopt-A-Cluster Model



Source: Own, 2010

6.4.3 Encouraging Exports of Manufactures

Benefits from 'openness to trade' and increasing exports provide prospects too attractive to be ignored. This study recommends government intervention in the clothing and textile industry through industrial policy measures that will encourage firms in the industry to produce for the export market. Although the firms are still being supported to recapture the lost market in the long term, firms must be encouraged to become globally competitive and produce for the export market. Incentives can be provided based on the quantity of units exported or value of products exported.

Some of the measures to encourage exports include provision for access to duty free raw materials and capital goods for exports; shipment credits to exporters; supporting both manufacturing and services exports; exporting promotion activities; reduction of various trade costs, improving cooperation among economic actors; improving the export market activity by ensuring that capital and intermediate inputs used in export production could be imported without tariffs and outside quotas applied to imports for other purposes; ensuring that regardless of their source, tradable inputs are exempt from indirect taxes (Westphal, 1990); and promoting harmonisation between short-term and long-term growth policies. Belloc and Di Maio (2011) provide overarching principles in export promotion policies and advise that there should be clearly defined priorities, goals, and objectives. In particular, they suggest:

- enhancing the domestic enabling environment for potential exporters in terms of infrastructure, regulation, access to finance, insurance, and fiscal policies;
- fostering strategic cooperation between private and public actors and among domestic producers, exporters and policy makers;
- improving the productivity and technological content of domestic goods and providing incentives to nurturing innovation;
- facilitating access to credit;

- serving to build the country's image in foreign markets (through marketing, information provision and advocacy);
- offering targeted and tailored assistance and relying on continuous evaluation;
- providing support through monetary and fiscal policies designed to improve the enabling environment; and
- stimulating institutional development, while also considering institutional complementarities.

6.4.4 Promoting Education

This study recommends government assistance in providing training and skills development for workers in the clothing and textile industry. It has been argued in this study that one way through which learning could be shared throughout the industry is the use of clusters. The type of education offered should be a two-pronged approach that includes both formal and informal training and skills development.

The formal part could be operationalised through the Further Education and Training Vocational Colleges for students to pursue careers in the industry, such as machine operation, fashion design, marketing, technology studies, and general management, amongst others. The informal part is designed for in-service training through clusters. Therefore, the re-establishment of functioning and well-coordinated clusters will be critical to attaining this objective.

6.4.5 Recommended for Further Research

This study intended to investigate whether the clothing and textile industry in South Africa was globally competitive, examine and explain why industrial policy measures have not generated expected results, and reflect on possible recommendations for industrial policy measures that will make the clothing and textile industry globally competitive. In this study, global competitiveness was defined as productive workers, competitive prices, profitable firms, latest

technology machines, and reinvestment of profits for the expansion of the industry. From the interviews undertaken with firms, information was made available regarding labour and physical capital.

Although at management level the education level is high, there is a challenge at the lower level and the industry is also dealing with an ageing labour force that needs to be replaced. Physical capital is improving in terms of new technologies, but more still needs to be done. However, more information is needed on capital and profit issues in the industries. According to the information from the firms, profits are being made in the industry. It is surprising that owners do not reinvest the profits into the industry, if indeed profits are made.

Employees' representatives suggested that the industry is not a high profit industry as more profits are taken by designers. If profits are not made, there would appear to be little incentive on the part of owners to borrow in order to acquire the latest technology available and compete with imports from countries such as China and India. This area of investigation is proposed as a key question for further research.

REFERENCES

Addleson, M. S., Pretorius, F., & Tomlinson, R. (1984). The impact of Industrial Decentralisation Policy: The Businessman's view. Paper delivered at the Conference of The Development Society of Southern Africa.

Addleson, M. S., Pretorius, F., & Tomlinson, R. (1985). The impact of Industrial Decentralisation Policy: The Businessman's view. *South African Geographical Journal, 67*(2), 179-200.

Adelzadeh, A. & Padayachee, V. (1994). The RDP White Paper: Reconstruction of a Development Vision? *Transformation* 25

African Growth and Opportunity Act (2000).

African National Congress (1996). Growth for Employment and Redistribution. Cape Town.

African National Congress (1994). The Reconstruction and Development Programme. A Policy Framework. Cape Town.

African National Congress (2004). Accelerated and Shared Growth-South Africa (ASGISA). Cape Town.

African National Congress (2006). Joint Initiative on Priority Skills Acquisition (JIPSA). Cape Town.

Aiginger, K. (2007). Industrial policy: A dying breed or a re-emerging phoenix. *Journal of Industry Competition and Trade, 7*, 297-323.

Aiginger, K. (2012). Reconciling the short and the long run: governance reforms to solve, the crisis and beyond, *EC., Brussels, European Policy Brief (1*). Vienna: Austrian Institute of Economic Research (WIFO).

Aiginger, K. (2015). Industrial policy for a sustainable growth path. In D. Bailey, K. Cowling, & P. Tomlinson (eds.), *New perspectives on industrial policy for a modern Britain* (Chapter 19). Oxford: Oxford University Press.

Aiginger, K., & Vogel, J. (2015). Competitiveness: from a misleading concept to a strategy supporting Beyond GDP goals. *Competitiveness Review, 25*(5), 497-523.

Aiginger, K. & Sieber, S. (2005). Towards a renewed industrial policy in Europe, Background Report of the Competitiveness of European Manufacturing, WIFO

Aiginger, K. & Sieber, S. (2006). The Matrix Approach to Industrial Policy. *International Review of Applied Economics, 20*(5), 573-601.

Alavi, R. (1996*). Industrialisation in Malaysia: Import substitution and infant industry performance*. London: Routledge.

Altenburg, T., Kleinz, M., & Lütkenhorst, W. (2016). Directing Structural Change: from Tools to Policy. Discussion Paper 24/2016. German Development Institute.

Altman, M. (1989). *Limits to the growth of small firms in South Africa: concentration in the clothing and textiles industry.* Unpublished M.Phil. thesis, University of Cambridge.

Altman, M. (1996). Labour regulation and enterprise strategies in the South African clothing industry. *Regional Studies, 30,* 387-399.

Alves, P., & Kaplan, D. (2004). South Africa's Declining Export Shares. *The Developing Country Challenge Trade and Industry Monitor, 30*, 2-6.

Amsden, A. (1985). The State of Taiwan's Economic Development. In P. Evans, Rueschemeyer, D., & Skocpol, T (eds.), *Bringing the State Back In.* Cambridge: Cambridge University Press

Amsden, A. H. (1991). Diffusion of Development: The Late-industrialising Model and Greater East Asia. *American Economic Review, 81*(2), 282-286.

Amsden, A. (2001). *The rise of the rest: Challenges to the West from late industrializing economies.* Oxford: Oxford University Press.

Arkava, M. L. & Lane, T. A. (1983). *Beginning social work research*. Boston: Allyn and Bacon.

Arndt, H. W. (1985). The Origins of Structuralism. *World Development, 13*(2), 151-59.

Arrow, K. J. & Debreu, G. (1954). Existence of an Equilibrium for a Competitive Economy. *Econometrica, 22*(3), 265-290.

Ashman, S., Fine, B. & Newman, S. (2012). Systems of AccumulationSystems of Accumulation and the Evolving MEC. In B. Fine, J. Saraswati, & D. Tavasci (eds.) (2012) *Beyond the Development State: Industrial Policy into the 21st Century*. London: Plato.

Ashman, S. & Newman, S. (2013). Industrial Policy and South Africa's economic trajectory: from apartheid to present day. A paper presented at UNU-Wider Conference on Learning to Compete: Industrial Development and Policy in Africa, Helsinki.

Babbie, E., & Mouton, J. (2001). *The practice of social research*. Cape Town: Oxford University Press.

Badenhorst, C. (2007). *Research writing: Breaking the barriers*. Pretoria: Van Schaik.

Bailey, C. A. (1996). *A guide to field resea*rch. Thousand Oaks, CA: Pine Forge.

Bailey, D., K. Cowling, & P. Tomlinson (Eds.). (2015). *New perspectives on industrial policy for a modern Britain.* Oxford: Oxford University Press.

Balassa, B. (1982). Incentive measures: Concepts and estimation. In B. Balassa and Associates (eds.), *Development strategies in semi-industrialised countries*. Baltimore, MD: Johns Hopkins University Press.

Balassa, B. (1985). Trade and Trade Relations between Developed and Developing Countries in the Decade Ahead. In *Change and Challenge in World Economy* (pp. 448-468). London: Palgrave/ Macmillan.

Barnes, J., Kaplinsky, R., & Morris, M. (2003). *Industrial policy in developing economies: Developing dynamic comparative advantage in the South African automobile sector.* Forum on Development Policy Research Unit, TIPS.

Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.

Begley, C. M. (1996). Triangulation of communication skills in qualitative research instrument. *Journal of Advanced Nursing, 24*(4), 88-693.

Bell, R. T. (1973). *Industrial decentralization in South Africa.* Cape Town: Haum.

Belloc, M., & Di Maio, M. (2011). Survey of the literature on successful strategies and practices for export promotion by developing countries. IGC Working Paper No. 11/01248

Berikou, N. (2007). A Comparative Analysis of World Competitiveness Records and a Cost Projection resulting from the Lack of Competitiveness in the Greek Economy. Paper prepared for the 3rd Hellenic Observatory PhD Symposium on Contemporary Greece: Structures, Context and Challenges.

Bezuidenhout, A. (2001). Industrial policy: An Overview of South African Debates. In J. K. Coetzee, J. Graaf, F. Hendricks, & G. Wood (Eds.), *Development: Theory, Policy, and Practice* (pp. 381-392). Cape Town: Oxford University Press.

Bianchi, P. & Labory, S. (2011*). Industrial policy after the crisis*. United Kingdom/United States of America: Edward Elgar.

Blumenfeld, J. (1996). *From Icon to Scapegoat? The Experience of South Africa's Reconstruction and Development Programme*. Uxbridge: Brunel University.

Board for The Decentralization of Industry. (1984). Report on the activities of the board for the period 1 April 1982 to 31 March 1983. Department of Industries and Commerce, Pretoria.

Board for The Decentralization of Industry. (1983). Report on the activities of the board for the period 1 April 1983 to 31 March 1984. Department of Industries and Commerce, Pretoria.

Bond, P. (2000). *Elite transition: From apartheid to neoliberalism in South Africa.* London: Pluto Press.

Bora, B., Lloyd, P. J. & Pangestu, M. (2000). Industrial policy and the WTO. *Policy Issues in International Trade and Commodities Study Series, UNCTAD.* New York: United Nations Publications.

Bordens, K. S., & Abbott, B. B. (2008). *Research design and methods: A process approach.* New York: McGraw-Hill.

Bracking, S. (1999). Structural Adjustment: Why It Wasn't Necessary & Why It Did Work. *Review of African Political Economy, 26, (*80), 207-226).

Breitenbach, M. C. (2007). Textile Industry Structure and Government Conduct: Assessing the impact of the Duty Credit Certificate Scheme on Industry. *Journal of Development Perspectives*, 3(1), 30-51.

Butler, A. (2010). Consolidation first: institutional reform priorities in the creation of a developmental state in South Africa. In O. Edigheji (Ed.). *Constructing a democratic developmental state in South Africa* (pp. 183 – 201). Cape Town: Human Sciences Research Council Press.

Carcary, M. (2009). The Research Audit Trial – Enhancing Trustworthiness in Qualitative Inquiry. *Journal of Business Research Methods, 7*(1), 11-24.

Caselli, F., & Coleman, W. J. (2001). Cross-Country technology diffusion: The case of computers. *The American Economic Review, 9*(2), 328-335.

Cassim, R., Onyango, D., & Van Seventer, D. E. (2002). *The state of trade policy in South Africa*. Johannesburg: TIPS

Cassingena Harper, J. (2013). Impact of technology foresight. Nesta Working Paper 13/16. Manchester: Manchester Institute of Innovation Research. Retrieved from http://www.innovation-policy.org.uk/

Chan, J. W. K., & Burns, N. D. (2002). Benchmarking manufacturing planning and control (MPC) systems: an empirical study of Hong Kong supply chains. *Benchmarking: An International Journal, 9*(3), 256-277.

Chang, H-J. (1994). State, Institutions, and Structural Change. *Structural Change and Economic Dynamics, 5(2),* 293-313.

Chang, H.J. (1996). *The political economy of industrial policy*. New York: St Martin's Press.

Chang, H.J. (1998). Evaluating the Current Industrial Policy in South Africa. *Transformation, 36*.

Chang, H.J. (2002*). Kicking away the ladder: Development strategy in historical perspective.* London: Anthem Press.

Chang, H.J. (2009a). Industrial Policy: Can We Go Beyond an Unproductive Confrontation*?* Annual World Bank *Conference on Development Economics* (pp. 1-41). Seoul, South Korea.

Chang, H.J. (2009b). Economic History of the Developed World: Lessons for Africa. *Eminent Speakers Programme.* African Development Bank.

Chang, H-J. (2010). How to 'do' a developmental state: political, organizational, and human resource requirements for the developmental state. In O. Edigheji (Ed.). *Constructing a democratic developmental state in South Africa* (pp. 82– 96). Cape Town: Human Sciences Research Council Press.

Chang, H-J. (2011). Industrial policy: Can we go beyond an unproductive confrontation? In J. Y. Lin, & B. Pleskovic (Eds.). *Lessons from East Asia and the global financial crisis* (pp. 83-109). Annual World Bank Conference on Development Economics – Global 2010.

Chlebiková, D., & Mráziková, J. (2009). Clusters – A new form of regions development in Slovakia. *Theoretical and Empirical Researchers in Urban Management* No. 2(11) May.

Cho, D-S., & Moon, H-C. (2013). *From Adam Smith to Michael Porter: Evolution of competitiveness theory*. Singapore: World Scientific.

Comin, D., Easterly, W., & Gong, E. (2010). Was the wealth of nations determined in 1000 BC? *American Economic Journal. Macroeconomics, 2*(3), 65-97.

Comin, D., & Hobijn, B. (2004). Cross-country technology adoption: Making the theories face the facts. *Journal of Monetary Economics, 51*(1), 39-83.

Comin, D., & Hobijn, B. (2009). Lobbies and Technology Diffusion. *The Review of Economics and Statistics, 91*(2), 229-244.

Comin, D. A., Dmitriev, M., & Rossi-Hansberg, E. (2012). The Spatial Diffusion of Technology. Technical report, National Bureau of Economic Research.

Corden, W. M. (1974). *Trade policy and economic welfare.* Oxford: Clarendon Press.

Creswell, J. W. (1997*). Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage.

Creswell, J. W. (2007). *Qualitative inquiry and research design: choosing among five approaches* (2nd Ed.). London: Sage.

Creswell, J. W., Klassen, A. C., Plano Clark, V. L., and Smith, K. C., & Working Group Assistance. (2011). Best Practices for Mixed Methods Research in the Health Sciences. H. I Meissier, 27. Washington, D.C: Office of Behavioral and Social Sciences Research (OBSSR), National Institute of Health.

Culpeper, R. (2005). *Approaches to globalisation and inequality within the international system.* Overarching Concerns Programme Paper No. 6. Geneva: UN Research Institute for Social Development.

Czarnitzki, D., & Toole, A. A. (2006). *Business R&D and the interplay of R&D subsidies and market uncertainty*. Discussion Paper No, 06-055. Centre for Europe Economic Research.

Dachin, A. (2006). Industrial Policy Approaches from Theory to Practice in the European Union. *Theoretical and Applied Economics, 10*(10*),* 75-80.

Dahlman, C. (1994). Technology strategy in East Asian developing economies. *Journal of Asian Economics, 5*, 541-572.

Dahlman, C. (2007). Technology, globalisation and international competitiveness: Challenges for developing countries. In J.A. Ocampo (Ed.) *Industrial Development for the 21st Century. Sustainable Development Perspective* (pp. 29-84). New York: United Nations.

Davenport, T. R. H. (1977). *South Africa: A modern history.* Johannesburg: Macmillan.

Dayasindhu, N. (2002). Embeddedness, knowledge transfer, industry clusters and global competitiveness: a case study of the Indian software industry. *Technovation*, 22, 551-560.

Delgado, M., Porter, M. E., & Stern, S. (2010). Clusters and entrepreneurship. *Journal of Economic Geography, 10*(4), 495-518.

Delgado, M., Porter, M. E., & Stern, S. (2014). *Defining clusters of related Industries.* NBER Working Paper Series, Working Paper 20375

Deloitte. (2013a). *Global Manufacturing Competitiveness Index.*

Deloitte. (2013b). *Africa Competitiveness Report*.

Deloitte. (2013c). Enhancing Manufacturing Competitiveness in South Africa Report.

De Munck, V. (2009). *Research design and methods of studying cultures*. South Kentucky: Alta Mira Press.

Denscombe, M. (1998). *The good research guide for small-scale social research projects*. Buckingham: Open University Press.

Denzin, N. K., & Lincoln, Y. L. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin, N. K., & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed.), pp. 1-32. Thousand Oaks CA: Sage.

Devers, K. J., & Frankel, R. M. (2000). Study Design in Qualitative Research - 2: Sampling and Data Collection Strategies. *Education for Health*, Vol. 13(2), 263-27

De Vos, A. S., Strydom, H., Schulze, S., & Patel, L. (2011). The sciences and the professions. In A. S. de Vos, H. Strydom, C.B Fouché, & C.S.L. Delport (Eds.), *Research at Grass Roots: For the Social Sciences and Human Service Professions* (4th Ed.). pp. 3-27. Pretoria: Van Schaik Publishers.

Dewar, D., Todes, A., & Watson, V. (1982). *Theories of urbanization and national settlement strategy in South Africa.* Occasional Paper No 8, Urban Problems Research Unit, University of Cape Town.

Dickerson, Kitty G. (1995). *Textile and apparel in the global economy* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall, Inc.

Dietsche, E. (2017). *New industrial policy and the extractive industries*. WIDER Working Paper 2017/161. United Nations University, UNU-WIDER.

Di Maio, M. (2014). The Italian economy, the economic crisis and industrial policy. In A. S. Teixeira (ed.), *Structural change, competitiveness and Industrial Policy: Painful lessons from the European periphery.* pp. 241-256. New York: Routledge.

Doeringer, P. B., & Terkla, D. G. (1995). Business strategy and cross-industry clusters. *Economic Development Quarterly, 9*(3), 225-238.

Dunn, W. N. (2008). *Public policy analysis – An introduction.* New York: Pearson Prentice-Hall.

Dunne, P. & Edwards, L. (2006). Trade, Technology and Employment: A Case Study of South Africa. Paper prepared for Centre for the Study of African Economics, University of Oxford, Conference on "Reducing Poverty and Inequality: How can Africa be Included?" 19th – 21st March 2006

Du Plooy, G.M. (2009). *Communication research: Techniques, methods and applications* (2nd Ed.). Cape Town: Juta.

Duričin, D., & Vuksanovič, I. (2014). Quest for new development model and economic policy platform for Serbia: The role of industrial policy. *Ekonomika preduzeć, 62* (3-4), 229-249.

Eaton, J., & Kortum, S. (1999). International technology diffusion: Theory and measurement. *International Economic Review, 40*(3), 537-570.

Eaton, J., & Kortum, S. (2001). Technology, Trade, and Growth: A Unified Framework. *European Economic Review, 45*(4), 742-755.

Economic Commission for Africa. (2016). Transformative industrial policy for Africa. Addis Ababa, Ethiopia.

Edigheji, O. (2010). Constructing the 21st century developmental state: potentialities and pitfalls. In O. Edigheji (Ed.), *Constructing a democratic developmental state in South Africa* pp. 1-33. Cape Town: HSRC Press.

Edwards, L. & Golub, S.S. (2002). South Africa's International Cost Competitiveness and Productivity*:* A Sectoral Analysis. South African National Treasury. USAID/Nathan Associates SEGA Project.

Edwards, L. & Morris, M. (2006). *An Evaluation of the Employment Trends in The Clothing and Textiles Industry*. Cape Town: University of Cape Town.

Edwards, L. & Schoer, V. (2002). Measures of Competitiveness: A Dynamic Approach to South Africa's Trade Performance in the 1990s, *The South African Journal of Economics*, September, 1008-1045.

Egan, M. L., & Mody, A. (1992). Buyers-sellers links in export development. *World Development, 20*(3*),* 331-334.

Elson, D. (1994). People, development and international financial institutions: an interpretation of the Bretton Woods system. *Review of African Political Economy, 21*(62), 511-524.

Enright, M. J. (2003). Regional clusters: what we know and what we should know. In J Bröcker, D. Dohse, & R. Soltwedel (Eds.) *Innovation Clusters and Interregional Competition.* pp. 99-129. Springer: Berlin; London

Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: a guide to methods*. London: Sage.

Esteban, J., & J. Stiglitz (Eds.). (2013). *Industrial policy revolution I. The role of government beyond ideology.* Basingstoke: Palgrave Macmillan.

European Commission (2005). Implementing the Community Lisbon programme, a policy framework to strengthen EU manufacturing – towards more integrated approach for industrial policy, COM (2005) 474final, Brussels

Evans, P. B. (2010). Constructing the 21st century developmental state: potentialities and pitfalls. In O. Edigheji (Ed.). *Constructing a democratic developmental state in South Africa.* pp. 37-58. Cape Town: Human Sciences Research Council Press.

Evans, D. & Alizadeh, P. (1984). Trade, Industrialisation, and the Visible Hand. *Journal of Development Studies,* Special Issue. No. 1, October.

Fagerberg, J. (1988). International competitiveness. *The Economic Journal, 98,* 355-374.

Fedderke, J. & Vaze, P. (2001). The nature of South Africa's trade patterns by economic sector, and the extent of trade liberalisation during the course of the 1990s. *The South African Journal of Economics, 69*(3), 436-478.

Feldman, M.P., & Audretsch, D. (1999). Innovation in cities: Science-based diversity, specialization, and localized competition, *European Economic Review*, 43, 409–29.

Felipe, J. (Ed.). (2015). *Development and modern industrial policy in practice. Issues and country experiences.* Cheltenham: Edgar Elgar and Manila: Asian Development Bank.

Feser, E.J., Renski, H., & Goldstein, H. (2008). Clusters and economic development outcomes. *Economic Development Quarterly*, 22*(4),* 324–344.

Firestone, W. A. (1993). Alternative arguments for generalizing from data as applied to qualitative research. *Educational Researcher*, 16-23.

Flatters, F. & Stern, M. (2008). *Trade and Industrial Policy in South Africa*. USAID South Africa. TPDP.

Fraenkel, J. R. & Wallen, N. E. (1990). *How to design and evaluate research in education*. New York: McGraw-Hill.

Frankel, R. M. (1999). *Doing qualitative research.* Thousand Oaks, CA: Sage.

Fundira, T. (2012). A glance at Africa's engagement with the BRICS, *Bridges Africa.*

Gehl Sampath, P. (2014). Industrial development for Africa: Trade, technology, and the role of the state. *African Journal of Science, Technology, Innovation and Development, 6*(5), 439-453.

Gerring, J., & Thacker, S. (2005). Do neoliberal policies deter political corruption? *International Organization, 59*(1), 233-254.doi:10.1017/S0020818305050083

Gerstenfeld, A. & Njoroge, R. (2005). *Africa: The next decade*. The Association of American University Presses.

Giannitsis, T. & Kastelli, I. (2014). Industrial Policy in Times of Crisis: The Case of Greece. In A. S. Teixeira (ed.), *Structural Change, Competitiveness and Industrial Policy.* pp. 221-240. London and New York: Routledge.

Glaeser, E. L., & Kerr, W. R. (2009). Local industrial conditions and entrepreneurship: How much of the spatial distribution can we explain? *Journal of Economics and Management Strategy,* 18 (3), 623–663.

Glaser, B. G., & Holton, J. (1978). Remodeling Grounded Theory. Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, Available at <http://www.qualitative-research.net/index.php/fqs/article/view/607/1315>.Date accessed: 16 Feb. 2018. doi:http://dx.doi.org/10.17169/fqs-5.2.607.

Glaser, B. G. & Strauss, A. L. (1965). Awareness of Dying. *The Grounded Theory Review 2015,* 14*(2).*

Golub, S. (2000). South Africa's International Trade Competitiveness. Paper presented at the Trade and Industrial Policy Strategies Annual Forum, 18-20 September.

Goni, E. & Maloney, W. F. (2014). Why don't poor countries do R&D? Policy Research Working Paper No. WPS 6811. Washington, DC: World Bank Group.

Gonzales-Nunes, X. (2010). *15-Year Review: Trade Policy in South Africa*. Johannesburg: TIPS.

Goode, W. (2005). Negotiating free-trade agreements: A guide. Department of Foreign Affairs and Trade, Australia.

Greeff, M, (2011). Information collection: interviewing. In A. S. de Vos, H. Strydom, C.B Fouché, & C.S.L. Delport (Eds.), *Research at Grass Roots: For the Social Sciences and Human Service Professions* (4th ed.) pp. 341-374. Pretoria: Van Schaik Publishers.

Greenwald, B., & Stiglitz, J. E. (1986). Externalities in Economies with Imperfect Information and Incomplete Markets. *Quarterly Journal of Economics, 101,* 229-264.

Grossman, G., & Rossi-Hansberg, E. (2006). The rise of offshoring: It is not wine for cloth any more. Paper prepared for *The new economic geography: Effects and policy implications,* Jackson Hole, Wyoming, August 24-26.

Guba, Y. & Lincoln, S. (1981). *Effective evaluation: improving the usefulness of evaluation results through responsive and naturalistic approached.* San Francisco: Jossey-Bass Publishers.

Guba, E. G. & Lincoln, Y. S. (1989). *Fourth generation evaluatio*n. Beverly Hills: Sage.

Gumede, V. (2015). *Political Economy of Post-apartheid South Africa.* Oxford: CODESRIA.

Haberler, G. (1950). Some problems in the pure theory of international trade. *Economic Journal, 60*(6), 223-240.

Hall, B. H., Mairesse, J., & Mohnen, P. (2010). Measuring the returns to R&D. *Handbook of the Economics of Innovation,* 2, 1033-1082.

Hall, P. A., & Soskice, D. (Eds.). (2001). *Varieties of capitalism: The institutional foundations of comparative advantage.* Oxford: Oxford University Press.

Hammersley, M. (1992). *What's wrong with ethnography? Methodological explorations*. New York: Routledge.

Harrison, K., & Dunne, N. (1998). *KwaZulu-Natal's clothing industry: the importance of firm-level and pipeline competitiveness issues*. Research Report No. 14. Centre for Social and Development Studies, University of Natal, Durban.

Hausmann, R., Hwang, J., & Rodrik, D. (2005). What you export matters. *Journal of Economic Growth, 12,* 1-25.

Hausmann, R., & Klinger, B. (2006). *Structural transformation and patterns of comparative advantage in the product space*. CID Working Paper 128. Cambridge, MA: Center for International Development at Harvard University.

Hernandez, Z. (2005). Industrial Policy in East Asia: In Search for Lessons. Background paper prepared for the *World Development Report 2005: A Better Investment Climate for Everyone.*

Hidalgo, C. A., Klinger, B., Barabási, A. L., & Hausmann, R. (2007). The product space conditions the development of nations. *Science, 317*(5837), 482-487.

Hill, T. (2000). *Operations management: Strategic context and managerial analysis.* Basingstoke: Macmillan Press.

Hoekman, B., Matoo, A., & English, P. (1992). *Development, Trade, and the WTO – A Handbook.* Washington DC: World Bank.

Howe, K., & Eisenhart, M. (1990). Standard for Qualitative (and Quantitative) Research: A Prolegomenon. *Educational Researcher, 19(*4),2-9.

Humphrey, J., & Schmitz, H. (1995). *Principles for promoting clusters and networks of SMEs.* Vienna: UNIDO.

Humphrey, J., & Schmitz, H. (1996). The triple c approach to local industrial policy. *World Development, 24,* 407-426.

Imbs, J. & Wacziarg, R. (2003). Stages of Diversification. *American Economic Review, 93* (1), 63-86.

IMD. (1999). World Competitiveness Yearbook, Lausanne, Switzerland. International Institute for Management Development.

IMD. (2013). World Competitiveness Yearbook, Lausanne, Switzerland. International Institute for Management Development.

Johnson, C. (1992). MITI and the Japanese miracle: The growth of industrial policy, 1925 – 1975. Stanford, CA: Stanford University Press.

Jones, C., & Williams, J. (1998). Measuring the social return to R&D. *The Quarterly Journal of Economics, 113*(4), 11-19.

Kaplan, B., & Duchon, D. (1988). Combining qualitative and quantitative approaches in information systems research: A Case Study. *MIS Quarterly, 12*(4), 571-586

Kaplan, D. (2003a). *Manufacturing Performance in South Africa: A Review*. Johannesburg: TIPS/DPRU Forum.

Kaplan, D. (2003b). Measuring our competitiveness - a critical examination of the IMD and WEF competitiveness indicators for South Africa. *Development Southern Africa*, 20(1), 75-88.

Kaplan, D. (2007). Industrial Policy in South Africa: Targets, Constraints and Challenges. United Nations Conference on Trade and Development. Meeting of Experts on FDI, Technology and Competitiveness convened in honour of Sanjaya Lall. Geneva.

Kaplinsky, R. & Morris, M. (2009). The Asian drivers and SSA: MFA quota removal and the portents for African industrialisation. In D. McCormick, J. A. Kuzilwa, & G-E. Tegegne (eds.), *Industrialising Africa in the Era of Globalisation: Challenges to Clothing and Footwear.* Nairobi: University of Nairobi Press.

Kassalis, I. (2011). Industrial clusters: A coefficient factor for integrated development. *Intellectual Economics, 5*(2), 212-223.

Katzenstein, P. (1985). *Small states in world markets - Industrial policy in Europe*. Ithaca and London: Cornell University Press.

Keller, W. (2004). International Technology Diffusion. *Journal of Economic Literature, 42*(3), 752-782.

Ketels, C. (2017). Structural Transformation: A competitiveness-based view. Working Paper Series, No, 258, *Industrialise Africa.* African Development Bank Group.

Koch T. (1993). Toward fourth generation evaluation. Listening to the voices of older patients. A Hermeneutic inquiry. Unpublished PhD thesis, University of Manchester, Manchester.

Koch, T. (1994). Establishing rigour in qualitative research: the decision trail. *Journal of Advanced Nursing, 19*, 976-986.

Kotzenburg, H. P. A. (1973). The policy and program for the decentralization of industry in South Africa. In *Finance and Trade Review.* Pretoria: Volkskas.

Krajewski, L. J., & Ritzman, L. P. (1996). *Operations management: Strategy and analysis (*4th Ed.). Reading, MA: Addison-Wesley.

Krueger, A. O. (1978). *Foreign Trade Regimes and Economic Development: Liberalisation Attempts and Consequences*. New York: National Bureau of Economic Research.

Krueger, A. O. (1997). Trade policy and economic development: How we learn. *The American Review, 87(*1), 1-6.

Krugman, P. (1991). Increasing returns and Economic Geography. *Journal of Political Economy 99*(3), 483–99.

Krugman, P. (1994). Competitiveness: A Dangerous Obsession. *Foreign Affairs, 73*(2), 28 – 44.

Krugman, P. R. (1996). Making Sense of the Competitiveness Debate. *Oxford Review of Economic Policy, 12*(3), 17-25

Krugman, P. R. (1998). *The accidental theorist*. New York: W.W Norton & Company.

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.

Lacey, A., & Luff, D. (2007). *Qualitative Research Analysis.* East Midlands/Yorkshire & the Humber: The NIHR RDS.

Lall, S. (1996). *Learning from the Asian tigers: Studies in technology and industrial policy.* London: Palgrave Macmillan.

Lall, S. (2001). Comparing National Competitive Performance: An Economic Analysis of World Economic Forum's Competitiveness Index. QEH Working Paper No. 61.

Lall, S. (2003). Reinventing Industrial Strategy: The role of Government Policy in Building Industrial Competitiveness. Oxford, UK: Queen Elizabeth House Working Paper Series 111.

Lall, S. (2004). Reinvesting Industrial Strategy: The role of Government Policy in building Industrial Competitiveness. TIPS Working Paper 9-2004.

Lee, K. (2013). *Schumpeterian analysis of economic catch-up. Knowledge, path-creation, and the middle income trap.* Cambridge: Cambridge University Press.

Lee, T-L. (2006). Action strategies for strengthening industrial clusters in Southern Taiwan. *Technology in Society*, 28, 533–552.

Leftwich, A. (1994). Governance, the State and the Politics of Development. *Development and Change, 25*, 363-386.

Leftwich, A. (1995). Bringing politics back in: Towards a model of the developmental state. *The Journal of Developmental Studies, 31*(3), 400-427.

Leila, E., Stale, L., & Zeibote, Z. (2010). Business clusters for improving competitiveness and innovation of enterprises – experience of Latvia. *Journal of Business Management,* (3), 57-71.

Lhuillery, S. (2009). In search of lost disincentive effects from intra-industry spillovers. CEMI-Working Paper-2009-005

Lin, J. Y., & Chang, H-J. (2009). Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy it? A Debate between Justin Lin and Ha-Joon Chang. *Development Policy Review, 27*(5), 483 -502.

Lin, J. Y., & Monga, C. (2010). Growth identification and facilitation: The role of the state in the dynamics of structural change. Policy Research Working Paper 5313.Washington, DC: World Bank.

Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. *Qualitative Inquiry, 1*(3*)*, 275-289.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic enquiry*. Beverly Hills, CA: Sage.

Lincoln, Y. S., & Guba, E. G. (1999). Establishing trustworthiness. In A. Bryman, & R. G. Burgess (Eds.), *Qualitative research, III,* London: Sage.

Lindert, P. H., & Kindleberger, C. P. (1982). *International economics* (Seventh Ed.). Illinois: Richard D. Irwin Inc.

Lombard, J. A. & Van Der Merwe, P. J. (1972). Central problems of the economic development of Bantu homelands. In *Finance and Trade Review, X(1).* Pretoria: Volkskas.

Long, R. G., White, M. C., Friedman, W. H., & Brazeal, D. V. (2000). The Qualitative Versus Quantitative Research Debate: A Question of Metaphorical Assumptions? *International Journal of Value-Based Management, 13*(2), 189-197.

Lowitt, S. (2011). Current issues and debates in industrial policy – some reflections for the Southern African Customs Union (SACU*).* Paper on developing common regional industrial policies, Johannesburg: TIPS.

Loxley, J. & Seddon, D. (1994). Stranglehold on Africa. *Review of African Political Economy, 21*(62), 485 -493.

Luedde-Neurath, R. (1986). *Import controls and export-oriented development; A reassessment of the South Korea case.* Boulder, CO. and London: Westview Press.

Luiz. J. M. (2002). South African state capacity and post-apartheid economic reconstruction. *International Journal of Social Economics, 29*(8*),* 594-614.

Lumby, A. B. (1983). Industrial development prior to the Second World War. In F. L. Coleman (Ed.), *Economic History of South Africa.* Pretoria: Haum.

Lütkenhorst, W., Altenburg, T., Pegels, A., & Vidican, G. (2014). Green Industrial Policy. Managing Transformation under Uncertainty. DIE Discussion Paper. Bonn: Deutsches Institute für Entwicklungspolitik.

Mabugu, R., & Chitiga, M. (2009). Liberalising Trade in South Africa: A survey of computable general equilibrium studies. *South African Journal of Economics, 77*(3), 445-464.

Maree, K., & Pietersen, J. (2007). Quantitative research methods. In K. Maree (ed.), *First steps in research*. Pretoria: Van Schaik.

Maree, K. & Van der Westhuizen, C. (2007). Planning Research Proposal. In K. Maree (ed.), *First steps in research.* pp. 23-45. Pretoria: Van Schaik.

Marshall, A. (1920). *Principles of economics*, London: MacMillan.

Marshall, C., & Rossman, G. B. (1989). *Designing qualitative research*. Newbury Park, CA: Sage.

Marshall, C., & Rossman, G. B. (1999). *Designing qualitative research* (3rd Ed.). Newbury, Park, CA: Sage.

Matoo, A., Roy, D., & Subramanian, A. (2002). The Africa Growth and Opportunity Act and its Rules of Origin. Generosity Undermined. Policy Research Working Paper.

McCarthy, C. (2014). *Industrial policy in Southern African regional integration and development.* Stellenbosch: tralac.

McCrystal, L. P. (1969). *City, Town and country*. Cape Town: Balkema.

Memis, E., & Montes, M. F. (2008). *Who's Afraid of Industrial Policy?* Colombo: UNDP Regional Centre.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.

Mhone, G. C. Z. (2003). Democratisation, Economic Liberalisation and the Quest for Sustainable Development in South Africa. In G.C.Z Mhone and O. Edigheji (Eds). *Governance in the New South Africa: The Challenges of Globalisation*.p.18-68. Cape Town: University of Cape Town Press.

Minabe, N. (1966). The Heckscher–Ohlin theorem, the Leontief paradox, and patterns of economic growth. *American Economic Review, 56,* 1193–211.

Mkandawire, T. (2001). Thinking about developmental states in Africa. *Cambridge Journal of Economics, 25,* 289-313.

Mkandawire, T. (2010). Constructing the 21st century developmental state: potentialities and pitfalls. In O. Edigheji (Ed.), *Constructing a democratic developmental state in South Africa* pp. 59-81. Cape Town: Human Sciences Research Council Press.

Mody, A. (1999). Industrial Policy after the East Asian Crisis: From Outward Orientation to New Internal Capabilities. World Bank Policy Research Working Paper No. 2112. Washington D.C.: World Bank.

Mody, A., & Yilmaz, K. (1997). Is there persistence in the growth of manufactured exports? Evidence from newly industrialising countries. *Journal of Development Economics, 53,* 447-470.

Mohan, R. (1998). Industrial Policy for Restructuring: Best Practice Policy Instruments in a Market Economy. Industrial Restructuring in South Africa - Trade and Industrial Policy Secretariat Annual September Forum. New Delhi: National Council of Applied Economic Research.

Monette, D. R., Sullivan, T. J., & DeJong, C. R. (2005). *Applied social research: a tool for the human services,* (6th ed). Australia: Thomson Brooks/Cole.

Moon, H. C., Rugman, A. M., & Verbeke, A. (1995). The generalized, double diamond approach to international competitiveness. In A. Rugman, V. D. Broek, & A Verbeke (Eds.), *Research in global strategic management: Volume 5: Beyond the diamond* pp. 97-114. Greenwich, CT: JAI Press.

Moore, W. G. (1978). *The Penguin Dictionary of Places*. Suffolk: Chaucer.

Moran, T. (2015). The Role of Industrial Policy as a Development Tool: New Evidence from the Globalization of Trade and Investment. CGD Policy Paper 071. Washington, DC. Centre for Global Development.

Moritz, L. (1994). *Trade and Industrial Policies in the New South Africa*. Nordiska Afrikaninstituut.

Morosini. P. (2004). Industrial clusters, knowledge integration and performance. *World Development, 32*(2), 305-326.

Morris, M., Barnes, J., & Esselaar, J. (2004). An identification of strategic interventions at the Provincial Government level to ensure the growth and development of the Western Cape Clothing and Textiles Industries. Clothing and Textile Paper.

Morris, M., Robbins, G., & Barnes, J. (2006). The role of government in fostering clusters: the South African automotive sector. In V. Padayachee (Ed.) *The development decade? Economic and social change in South Africa, 1994-2004,* pp. 201-226. Pretoria: HSRC Press.

Morse, J.M., Barret, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods, 1,* 13-22.

Mulatu, A. (2015). On the concept of 'competitiveness' and its usefulness for policy. *Structural Change and Economic Dynamics 36,* 50-62

Murakami, Y. (1992). *Anticlassical political-economic analysis: A vision for the next century*. Tokyo: Chuokoron-shinsha.

Nattrass, N. (1994). Economic Restructuring in South Africa: The Debate Continues. *Journal of Southern African Studies, 20*(4), 517-531.

Nattrass, N. (2013*).* South Africa: Post-Apartheid Democracy and Growth. Conference Paper for Democracy Works, 2014. Centre for Development Enterprise.

Naumann, E. (2010). AGOA at 10: Reflections on US-Africa trade with a focus on SACU countries. Stellenbosch: tralac Working Papers.

Neary, J. P. (1999). R&D in Developing Countries: What should Governments Do? Paper presented at the World Bank Conference on Development Economics, Paris, 21-23 June.

Neffke, F., Henning, M., & Boschma, R. (2011). How do regions diversify over time? Industry relatedness and the development of new growth paths in regions," *Economic Geography*, *87*(3), 237-265.

Nell, T. L. (2005). A case study on the development of an organisational development model for a South African financial institution. Unpublished doctoral thesis. Johannesburg: University of Johannesburg.

Neuman, W. L. (2006*). Social research methods: Qualitative and quantitative approaches (*6th Ed.*)*. New York: Pearson International Edition.

Nieuwenhuis, J. (2011). Qualitative research designs and data gathering techniques. In K. Maree (Ed.). *First Steps in research.* Pretoria: Van Schaik.

Noland, M., & Pack, H. (2005). *The East Asian Industrial Policy Experience: Implications for the Middle East.* Institute for International Economics.

Overseas Development Institute (ODI). (2016). *Developing export-based manufacturing in Sub-Saharan Africa.* London: Overseas Development Institute.

Ohno, I. & Ohno, K. (2012). Dynamic Capacity Development: What Africa Can Learn from Industrial Policy Formulation in East Asia. In A. B. Noman, *Good Growth and Governance in Africa, Rethinking Development Strategies* (Chapter 7). Oxford: Oxford University Press.

Olczyk. M. (2016). A systematic retrieval of international competitiveness literature: a bibliometric study. *Eurasian Economic Review, 6,* 429-457.

Oqubay, A. (2015). *Made in Africa. Industrial policy in Ethiopia.* Oxford: Oxford University Press.

Oral, M. & Chabchoub, H. (1996). On the methodology of the World Competitiveness Report. *European Journal of Operational Research, 90,* 514-535.

Organisation for Economic Co-operation and Development (OECD). (2005). *Business Clusters: Promoting Enterprise in Central and Eastern Europe.* Paris: OECD.

Pack, H., & Saggi, K. (2006). *The Case for Industrial Policy: A Critical Survey.* Washington DC: World Bank Policy Research Paper.

Padayachee, V. (2005). The South African Economy, 1994-2004. *Social Research, 72 (3), South Africa: The Second Decade (FALL 2005),* 549-580.

Padayachee, V. (2007). *The development decade? Economic and social change in South Africa, 1994-2004.* Pretoria: HSRC Press.

Pahariya, N. C. (2008). Import substitution and export promotion as development strategies. Brief Paper TDP 7/2008. CUTS International.

Palys, T. (1997). *Research decisions: Quantitative and qualitative perspectives*. Toronto: Harcourt Brace.

Parente, S. L., & Prescott, E. C. (1994). Barriers to technology adoption and development. *Journal of Political Economy, 102*(2), 298-321.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd Ed.). Thousand Oaks, CA: Sage.

Paul, S. (1979). Transnational corporations and developing countries: Some issues in industrial policy. *Economic and Political Weekly, 14*(30/32), 1315-1330. Retrieved from http://www.jstor.org/stable/4367822

Peter, B., & Kenen, P. B. (1965) Nature, Capital, and Trade. *Journal of Political Economy 73*(5) 437-460.

Piore, M. J., & Sabel, C. F. (1984). *The second industrial divide.* New York: Basic Books.

Pisa, N., Rossouw, R., & Viviers, W. (2015). Identifying industrial clusters for regional economic diversification: The case of South Africa's North West Province. *International Business & Economic Research Journal, 14*(3), 501-524.

Pope, C., Ziebland, S., & Mays, N. (2000). Analysing qualitative data. *British Medical Journal, 320,* 114-116.

Porter, M. E. (1990). The Competitive Advantage of Nations. *Harvard Business Review,* 73 – 91.

Porter, M.E. (1998). Clusters and competition: New agendas for companies, governments, and institutions (In M.E. Porter (ed.), *On Competition,* pp. 197–299. Boston, MA: Harvard Business School Press.

Porter, M. E. (2002*). Competitiveness and the role of regions*. Institute for Strategy and Competitiveness. Boston, MA: Harvard Business School.

Porter, M.E. (2003). The Economic Performance of Regions. *Regional Studies,* 37, 549–78.

Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard Business Review,* 23-41.

Porter, E. M., Delgado, M., Ketels, C. & Sterns, S. (2008). Moving to a New Global Competitiveness Index. In W.E. Forum (ed.), *The Global Competitiveness Report (2008-2009*). pp. 43-63. Davos: World Economic Forum.

Power, R. (2008). What Does the Rise of China Do for Industrialisation in Sub-Saharan Africa? *Review of African Political Economy 115,* pp. 7-22. doi: org/10.1080/03056240802011360

Prahalad, C. K., & Hamel, G. 1990. The core competence of the corporation. *Harvard Business Review, 68*(3), 79-91.

Pretorius, P., Addleson, M., & Tomlinson, R. (1984). Streelbeplanning, nywerheidsdesentralisasie en Wes-Transvaal – 'n Sakestandpunt. Paper delivered

at the Manpower and Management Foundation Conference on 'Focus on the Western Transvaal – A Regional Business Outlook'. 24 October

Pretorius, P., Addleson, M., & Tomlinson, R. (1986a). History of industrial decentralization in South Africa (Part I): The regional concentration of industry and the historical basis of the policy. *Development Southern Africa, 3(*1*),* 37-49

Pretorius, P., Addleson, M., & Tomlinson, R. (1986b). History of industrial decentralization in South Africa (Part II): Historical development and impact of the policy. *Development Southern Africa, 3(*2*),* 236-252.

Quibria, M. G. (2002*).* Growth and Poverty: Lessons from the East Asian Miracle Revisited*.* ADBI Research Paper Series No. 33, http://hdl.handle.net/11540/4139

Ramdass, K., & Pretorius, L. (2008). The Clothing Industry for Growth in South Africa. PICMET Proceedings on 27-31 July, Cape Town, South Africa.

Randall, D. M., & Gibson, A. M. (1990). Methodology in business ethics research: A review and critical assessment. *Journal of Business Ethics*, 9, 457-471.

Rangasamy, C., & Harmse, C. (2003). Trade Liberalisation, Competitiveness and the Real Exchange Rate (RER): An Analysis of Development in South Africa during the 1990s. *South African Journal of Economic Management Sciences, 6*(4), 643-665.

Rangasamy, C., & Harmse, C. (2005). South Africa's Trade Liberalisation Policy: An Appraisal of Development during the 1990s. *Journal of Public Administration, 40*(1), 23-51.

Ranis, G. & Fei, J. (1975). A Model of Growth and Employment in the Open Dualistic Economy: The Case of Korea and Taiwan. *Journal of Developmental Studies II (*January*),* 32-74

Ratcliffe, A. (1979). Industrial Development Policy: Changes during the 1970s. *South African Journal of Economics*, 47, 397-421.

Reinert, E. (1995). Competitiveness and its predecessors – a 500-year cross-national perspective. *Structural Change and Economic Dynamics, 6,* 23-42.

Roberts, M., & Tybout, J. (1992). *Sunk costs and the decision to export in Colombia*. Mimeo. Pennsylvania State University and Georgetown University.

Roberts, S. (2006). Industrial development and Industrial Policy in South Africa – a ten-year review. Johannesburg: University of Witwatersrand.

Roberts, S. (2010). Competition policy, competitive rivalry and a developmental state in South Africa. In O. Edigheji (Ed.). *Constructing a democratic developmental state in South Africa* pp. 222 – 237. Cape Town: Human Sciences Research Council Press.

Roberts, S., & Thoburn, J.T. (2004). Globalisation and the South African textiles industry: impacts on firms and workers. *Journal of International Development, 16*. 125-139.

Rodrik, D. (1994). King Kong meets Godzilla: the World Bank and the East Asian Miracle. CEPR Discussion Papers 944, Centre for Economic Policy Research, Discussion Papers.

Rodrik, D. (2004). Industrial Policy for the Twenty-First Century. Cambridge, MA: John F Kennedy School of Government.

Rodrik, D. (2016a). 'The Politics of Anger'. Project Syndicate. The World's Opinion Page. 9 March. Available at: https://www. project-syndicate.org/commentary/the-politics-of-anger-by-dani-rodrik-2018/03/11. (accessed on 11 March 2018).

Rodrik, D. (2016b). 'No Time for Trade Fundamentalism'. Project Syndicate. The World's Opinion Page. 14 October. Available at: https://www.project-syndicate.org/commentary/protectionism-for-global-openness-by-daniRodrik-2018/03/11 (accessed on 11 March 2018).

Rodrik, D. (2017). 'Too Late to Compensate Free Trade's Losers' Project Syndicate. The World's Opinion Page. 11 April. Available at: https://www. project-syndicate.org/commentary/free-trade-losers-compensation-too-late-by-dani-rodrik-2018/03/11 (accessed on 11 March 2018).

Rogerson, C. M., & Kobben, S. M. (1982). The locational impact of the Environmental Planning Act on the clothing and textiles industry of South Africa. *South African Geographer, 10,* 19-32.

Ruan, J. & Zhang. X. (2009). Finance and cluster-based industrial development in China. *Economic Development and Cultural Change*, *58*(1), 143–64.

Rugman, A. M. (1991). Diamond in the Rough. *Business Quarterly, 55*(3), 61-64.

Rugman, A. M., & D'Cruz, J. R. (1993). The double diamond model of international competitiveness: The Canadian experience. *Management International Review, 33,* 17-39.

Rustomjee, Z., & Hanival, S. (2010). *A Review of Industrial Policy, Instruments and Support Programme - 1994-2008: A Contribution to the Presidency's 15-year Review of Government Performance.* Johannesburg: TIPS.

Sakong, I., & Jones, L. (1980). *Government, business and entrepreneurship in economic development: The Korean Case.* Cambridge, MA: Harvard University Press.

Salinger, B. L., Bhorat, H., Flaherty, D. P., & Keswell, M. (1999). Promoting the Competitiveness of Textiles and Clothing Manufacture in South Africa. *African Economic Policy Discussion.*

Salvatore, D. (1995). *International economics* (5th Ed.). New Jersey: Englewood Cliffs.

Sandelowski, M. (1986). The problem of rigour in qualitative research. *Advances in Nursing Science, 8(*3), 125-130.

Sandelowski, M. (1995). Qualitative analysis: What it is and how to begin. *Research in Nursing & Health, 18*(4), 371-375.

Schurink, W, Fouché, C.B., & de Vos, A. S. (2011). Qualitative data analysis and interpretation. In: A, de Vos, H. Strydom, C.B Fouché, & C. S. L. Delport (eds.), *Research at Grassroots: For the social sciences and human service professions* (pp. 397-423). Pretoria: Van Schaik Publishers.

Schmitz, H. (1984). Industrialisation strategies in less developed countries: some lessons of historical experience. *The Journal of Development Studies, 21*(1), 1 - 21.

Schmitz, H. (1990). Flexible specialisation in third world industry: prospects and research requirements. Discussion Paper DP/18/1990. Geneva: International Institute of Labour Studies.

Schmitz, H. (1992). On the clustering of small firms. *Bulletin Institute of Development Studies, 23* (3), 64-69.

Schmitz, H. (1997). Collective efficiency and increasing returns. *Cambridge Journal of Economics, 23*(4), 465-483.

Schmitz, H. (1999). Global competition and local cooperation: success and failure in the Sinos Valley. *Brazil. World Development, 27* (9), 1627-1650.

Schmitz, H. (2007) Industrialisation strategies in less developed countries: Some lessons of historical experience, *The Journal of Development Studies, 21*(1), 1-21, DOI: 10.1080/00220388408421928

Schmitz, H., & Nadvi, K. (1994). Industrial clusters in less developed countries: Review of experiences and research agenda. IDS Discussion Paper 339.

Schmitz, H., & Nadvi, K. (1999). Clustering and industrialisation. *World Development*, 27, 1503-1514.

Schneider, B. R. (2013). *Government Collaboration: Micro-Mechanisms and Macro Politics in Latin America*. IDB Working Paper Series IDB WP-418.

Shafaeddin, S. M. (1998). *How did developed countries industrialize? The history of trade and industrial policy. The cases of Great Britain and the USA*. UNCTAD Discussion Paper, 139. Geneva: United Nations Conference on Trade and Development.

Shafaeddin, S. M. (2004). *Who is the master? Who is the servant? Market or Government? An alternative approach: Towards a coordinated system*. UNCTAD Discussion Papers 175, United Nations Conference on Trade and Development.

Shafaeddin, S. M. (2006a). The policy space question: An alternative approach to trade and industrial policies; implications for the world trading system. Paper presented at International Development Economics Associates (IDEAS) and United Nations Development Programme (UNDP) Conference on Post Liberalisation Constraints and Macroeconomic Policies, Muttakadu, Chennai, India, 27-29 January, 2006.

Shafaeddin, M. S. (2006b). *Is the Industrial Policy Relevant in the 21st Century?* Institute of Economic Research, 20 March 2006, University of Neuchatel, Switzerland.

Shafaeddin, M. S. (2006c). *Towards an alternative perspective on trade and industrial policies.* Malaysia: Jutaprint.

Shapiro, H. (2007). *Industrial Policy and Growth.* New York: United Nations Department of Economic and Social Affairs.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22, 63-75.

Slaper, T., & Ortuzar, G. (2015). Industry clusters and economic development. *Indiana Business Review*, 7-9.

Smart, C. (2017). 'Industry by Design?'. Project Syndicate. The World's Opinion Page. 17 March. Available at: https://www.project-syndicate.org/onpoint/industry-by-design-by-christopher-smart- 2018/03/11 (accessed on 11 March 2018).

Smit, A. J. (2010). The Competitive Advantage of Nations: is Porter's Diamond Framework a new theory that explains the international competitiveness of countries. *Southern African Business Review*, 14 (1), 105 – 130.

Smith, C. (1991). *Industrial Policy in Developing Countries: Reconsidering the Real Sources of Export-Led Growth.* Washington DC: Economic Policy Institute.

Sodërsten, B. (1980). *International Economics* (2nd Ed.). New York: Macmillan.

Solomon, V. E. (1983). Transport. In F. L. Coleman, (ed.), *Economic History of South Africa*. Pretoria: Haum.

Sonobe, T., & Otsuka, K. (2006). Cluster-based industrial development: An East Asian model. London: Palgrave Macmillan.

Stake, R. E. (1994). Case studies. In N. L. Denzin (ed.), Handbook of Qualitative Research (pp. 236-247). Thousand Oaks CA: Sage.

Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. *Management Decision*, 39(7), 551 – 555

Stewart, F. (1991). Are adjustment policies in Africa consistent with long run development needs. *Development Policy Review*, 413 - 436.

Stiglitz, J. (1989). Markets, Market Failures, and Development. *The American Economic Review*, 79(2), 197-203.

Stiglitz, J. (1996). Some Lessons from The East Asian Miracle. *The World Bank Research Observer*, 11(2), 151-177.

Stiglitz, J., Lin, J. Y., & Monga, C. (2013). *The Rejuvenation of Industrial Policy*. Policy Research Working Paper 6628, World Bank.

Stiglitz, J. (2015). *Industrial Policy, Learning, and Development*. WIDER Working Paper 2015/149. Helsinki: UNU-WIDER.

Strauss, A. L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd Ed.). Thousand Oaks, CA: Sage.

Streeten, P. (1981). Development ideas in historical perspective. *Development Perspectives*, 100-132.

Strydom, H. (2011). Sampling in the quantitative paradigm. In A. S. de Vos, H. Strydom, C.B. Fouché, & C.S.L. Delport (Eds.), *Research at Grass Roots: For the Social Sciences and Human Service Professions* (4th ed.) pp. 222-235. Pretoria: Van Schaik Publishers.

Strydom, H., & Delport, C. S. L. (2011). Writing the research report. In A. S. de Vos, H. Strydom, C.B Fouché, & C. S. L Delport (Eds.), *Research at Grassroots: For the Social Sciences and Human Service Professions*, pp.277-294. Pretoria: Van Schaik Publishers.

Sundaram, J. K., Schwank, O., & von Arnim, R. (2011). Globalisation and development in sub-Saharan Africa. DESA Working Paper No. 102, Economic & Social Affairs.

Surplus Peoples Project Reports (Vol. 1). (1983*). Forced removals in South Africa: General overview*. Surplus Peoples Project, Cape Town.

Sveikauskas, L. (2007). *R&D and productivity growth: A review of the literature.* Bureau of Labor Statistics Working Paper, 408.

Szirmai, A. (2009). *Is Manufacturing Still the Main Engine of Growth in Developing Countries*. United Nations University. UNU WIDER.

the dti,2007. National Industrial Policy Framework. Pretoria: The Department of Trade and Industry.

the dti. (2010). 2010/11 – 2012/13 Industrial Policy Action Plan, Pretoria: The Department of Trade and Industry.

the dti. (2010). South African Trade Policy and Strategy Framework. Pretoria: The Department of Trade and Industry.

the dti. (2011). 2011/112 – 2013/14 Industrial Policy Action Plan, Pretoria: The Department of Trade and Industry.

the dti. (2013). Production Incentive Programme FY2013/2014 – Clusters in the Clothing, Footwear, Leather and Leather Goods Industries for the 2013/14 financial year: Revision 0. Pretoria: The Department of Trade and Industry.

the dti. (2001). Comprehensive Guide to the Duty Credit Certificate Scheme. Government Gazette, 23 March 2001. No. 22145.

Thorne, S. (1997). The art (and science) of critiquing qualitative research. In J. Morse (Ed.), *Completing a qualitative project: Details and dialogue*, pp. 117–132. Thousand Oaks, CA: Sage

Tobin, G. A. & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of Advanced Nursing*, 48(4), 388-396.

Tomlinson, R. (1983). Industrial decentralization and the relief of poverty in the homelands. *South African Journal of Economics*, 51, 544-563.

Torre, A. (2008). On the role played by temporary geographical proximity in knowledge transmission. *Regional Studies*, 6, 869–889.

Trade & Industrial Policy Strategies. (2016). Analysis of Existing Industrial Policies and the State of Implementation in South Africa. Prepared by TIPS for the Friedrich Ebert Stiftung

Travkina, I., & Tvaronavičien, M. (2010). An Investigation into Relative Competitiveness of International Trade: The Case of Lithuania. 6th International Scientific Conference.

Ulengin, F., Ulengin, B., & Onsel, S. (2002). A power-based measurement approach to specify macroeconomic competitiveness of countries. *Socio-Economic Planning Sciences*, 36, 203-226.

ul-Haque, I. (2007). Rethinking Industrial Policy. United Nations Conference on Trade and Development. United Nations Industrial Development Organisation. (2015). Industrial Development Report 2016. The role of Technology and Innovation in Inclusive and Sustainable Industrial Development. Vienna.

United States International Trade Commission. (2009). Sub-Saharan Africa: Effects of Infrastructure, Conditions on Export Competitiveness. Third Annual Report. Investigation No. 332-447. USITC Publication 4071

Valodia, I., & Velia, M. (2004). Macro-Micro Linkages in Trade: How are Firms Adjusting to Trade Liberalisation, and does Trade Liberalisation lead to improved Productivity in South African Manufacturing Firms? African Development and Poverty Reduction: The Macro-Micro Linkage, 13 – 15 October.

Van der Westhuizen, C. (2006). *Trade and poverty: A case study of the SA clothing industry.* Trade and Poverty Project, Southern African Labour and Development Research Unit, University of Cape Town.

Van Dijk, M. (2002). South African Manufacturing Performance in International Perspective, 1970 - 1999. 2002 TIPS Annual Forum. Muldersdrift: TIPS.

Vanek, J. (1959). The Natural Resources Content of Foreign Trade, 1870-1955, and the Relative Abundance of Natural Resources in the United States. *The Review of Economics and Statistics,* 41(2), 146-153.

Van Zyl, G., & Matswalela, K. (2016). A comparative analysis of the level of competition of the South African clothing and textile industry. *Journal of Economic and Financial Sciences*, 9 (2), 370-391.

Viederyte, R., & Didziokas, R. (2014). Cluster models, factors and characteristics for the competitive advantage of Lithuanian maritime sector. *Economics and Management*, 19(2), 162-171.

Vietor, R. H. K. (2007). *How Countries Compete: Strategy, Structure, and Government in the Global Economy*. Cambridge, MA: Harvard Business Press.

Vlok, E. (2006). The Textile and Clothing Industry in South Africa. In H. Jauch, &R. Traub-Merz (Eds.), *The Future of the Textile and Clothing Industry in Sub-Saharan Africa*. pp. 227-246. Bonn: Friedrich Ebert Stiftung.

Vuković, D. Jovanović, A, & Đukić, M. (2012). Defining competitiveness through the theories of New Economic Geography. *J. Geogr. Inst. Cvijic, 62*(3), 49-64.

Walsham, G. (1993). *Interpreting information systems in organisations.* Chichester: Wiley.

Walsham, G. (2006). Doing Interpretive Research. European Journal of Information Systems, (15), 320-330.

Ward, M. (1980). Homeland development? Planning in the Ciskei. *IDS Bulletin*, 11(4), 15-18

Ward, P. T., & Durray, R. (2000). Manufacturing strategy in context: environment, competitive strategy and manufacturing strategy. *Journal of Operations Management*, 18(2), 123-138.

Webb, A. C. M. (1983). Mining in South Africa. In Coleman, F. L. (ed.), *Economic History of South Africa*. Pretoria: Haum.

Weber, R. (2004). The Rhetoric of Positivism Versus Interpretivism: A Personal View: Editor's Comments. *MIS Quarterly*, *28*(1), iii – xii,

Weeks, J. (2000). Stuck in Low GEAR? Macroeconomic Policy in South Africa, 1996-1998. *Centre for Development Policy & Research*, 1-22.

WEF. (1999). *The Global Competitiveness Report*. Davos: World Economic Forum.

WEF. (2013). *The Global Competitiveness Report.* Davos: World Economic Forum.

Weiss, J. (2002). Industrialisation and Globalisation - theory and evidence from developing countries. In J. Weiss (Ed.), *Industrialisation and Globalisation – theory and evidence from developing countries* (pp. 1-43). London and New York: Routledge.

Weiss, J. (2005). *Export Growth and Industrial Policy: Lessons from the East Asian Miracle experience*. ADB Institute Discussion Paper. ADB.

Wellings, P., & Black, A. (1986a). Industrial Decentralization under Apartheid: The relocation of Industry to the South African Periphery. *World Development*, 14(1) 1-38.

Wellings, P., & Black, A. (1986b). Industrial Decentralisation in South Africa: Tool of Apartheid or Spontaneous Restructuring. *GeoJournal*, 12(2), 137-149.

Welman, J. C., & Kruger, S. J. (1999). Research methodology for the business and administrative sciences. Johannesburg, South Africa: International Thomson.

Westphal, L. E. (1990). Industrial Policy in an Export-Propelled Economy: Lessons from South Korea's Experience. *Journal of Economic Perspectives, 4* (3), 41-59

Westphal, L. E. (2000). Industrialisation Meets Globalization: Uncertain Reflections on East Asian Experience. UNU/INTECH Discussion Papers Whitemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in qualitative research. *Qualitative Health Research, 11*, 117-132.

Whitfield, L., Therkildsen, O., Buur, L., & Kjaer, A. M. (2015). *The politics of African industrial policy – A comparative perspective*. New York: Cambridge University Press.

Wickens, P. L. (1983a). Land and Labour. In Coleman, F. L. (ed.), *Economic History of South Africa*. Pretoria: Haum.

Wickens, P. L. (1983b). Agriculture. In Coleman, F. L. (ed.), *Economic History of South Africa*. Pretoria: Haum.

Wiersma, W. (1995). *Research methods in Education: An introduction* (6th Ed.). Edition. Boston: Allyn and Bacon.

Williamson, J. (1990). What Washington Means by Policy Reform. In J. Williamson (ed.), *Latin American Adjustment: How Much Has Happened?* (Chapter 2). Peterson Institute for International Economics.

World Bank. (1993). *The East Asian Miracle*. Washington, D.C: World Bank.

World Bank. (2013). *African Competitiveness Report*. Washington DC: World Bank.

Yanagihara, T. (1992). Development and Dynamic Efficiency: 'Framework Approach' versus 'Ingredient Approach'. In I. Ohno, & K. Ohno (Eds.). (1998). *Japanese Views on Economic Development – Diverse Paths to the Market*. London: Routledge.

Yin, R. K. (1994). Discovering the Future of the Case Study. Method in Evaluating Research. *American Journal of Evaluation, 15*(3), 283-290.

Zalk, N. (2014). *What is the role of manufacturing in boosting economic growth and employment in South Africa?* Working Papers, REDI3X3.

Zanakis, S. H. & Becerre-Fernandez, I. (2005). Competitiveness of nations: A knowledge discovery examination. *European Journal of Operational Research*, 166, 185-211.

APPENDICES

APPENDIX ONE: PERMISSION SEEKING LETTER AND RESPONSE

The Graduate School of Public and Development Management

2 St Davids Place, Parktown, Johannesburg
P.O. Box 601, Wits, 2050, South Africa, Telephone +27 (0)11 717 3500

Research Office:
Phindile Mohanoe
Tel: 011 717 3133
Email: phindile.mohanoe@wits.ac.za

PhD Convener:
Dr Horacio Zandamela
Tel: 011 717 3692
Email: horacio.zandamela@wits.ac.za

Research Director:
Prof Anne MacLennan
Tel: 011 717 3519
Email: anne.maclennan@wits.ac.za

Tuesday, 30 April, 2013

To whom it may concern

This confirms that Ben Thayi Molekwa, student number 0515975Y is registered for the PhD at the Graduate School of Public and Development Management.

The title of the Research Proposal is: **"INDUSTRIAL POLICY MEASURES TO MAKE THE CLOTHING AND TEXTILES INDUSTRY IN SOUTH AFRICA GLOBALLY COMPETITIVE".**

It is recommended that he be given assistance in terms of information for research purposes towards his PhD Degree. He will interview provincial and national policy makers, factory owners, owners' representatives, employees, trade unions, and community representatives in the three provinces of Gauteng, North West, and KwaZulu-Natal. The information will be used for research purposes only.

Yours sincerely

Dr Horacio Zandamela
SUPERVISOR
The Graduate School of Public and Development Management

the dti
Department:
Trade and Industry
REPUBLIC OF SOUTH AFRICA

Enquiries: Mr. Ben Molekwa
Tel: 012 394 3111
Email: BMolekwa@thedti.gov.za

Dear Firm Owner
(Clothing/Textiles Firm)

APPROVAL TO CONDUCT RESEARCH ON THE COMPETITIVENESS OF THE CLOTHING AND TEXTILES INDUSTRY IN SOUTH AFRICA

Mr. Ben Thayi Molekwa, who is employed by the Department of Trade and Industry, is also studying with the University of Witwatersrand. As part of his studies, he will be conducting interviews at the Clothing and Textiles industry firms in Hammanskraal, Rosslyn, Johannesburg and Durban. The people who will be interviewed are the owners of the firms, two employees per firm, and one union official. The focus of the research is on improving the competitiveness of the clothing and textiles industry with particular reference to price, profitability, productivity, diversification and technology.

Although the research report is for academic purposes at the University of Witwatersrand, the information will contribute to efforts being made to make the sectors globally competitive, and hopefully reduce the number of firms that may close down. You are kindly requested to support Mr. Molekwa to conduct the interviews and provide him with whatever information he may require for this research which will be treated confidentially.

Regards

AP Tembo
Chief Director: Textiles, Clothing, Leather & Footwear
05 August 2013

APPENDIX TWO: CONSENT LETTER TO PARTICIPANTS

Dear Participant

My name is Ben Thayi Molekwa. I am a student at University of the Witwatersrand (Wits), Student Number: 0515975Y, at the Graduate School of Public and Development Management in the Faculty of Economic and Management Sciences under the supervision of Dr. Horacio Zandamela. You are invited to participate in a research project entitled: "Industrial Policy Measures to make the Clothing and Textiles Industry in South Africa Globally Competitive". The purpose of the study is to investigate the challenges of constructing and implementing industrial policy measures that could make South Africa's clothing and textiles industry globally competitive and to construct alternative measures. The study has been approved by the University of the Witwatersrand Ethics Committee. The questionnaire was developed to ask you a few questions regarding the competitiveness of your firm. It is our hope that this information can contribute to efforts being made to make your firm and others like it in the country, globally competitive; and reduce the number of firms closing down. There are no identified risks from participating in this research.

The interview is confidential. Participation in this research is completely voluntary and a choice not to participate will have no adverse effect. The interview will take approximately 45 minutes to complete and you may decline to answer questions and also free to withdraw from the study at any time without penalty or loss of benefit. You will receive no compensation for participating in the research study. Responses to the questionnaire will only be reported in aggregated form to protect the identity of respondents. In addition, the answers that you provide will be separated from your name to meet anonymity requirements. The Research Report/Thesis will be submitted to the University for a PhD degree under the Faculty of Economic and Management Sciences at the Graduate School of Public & Development Management of the University of the Witwatersrand. Further information regarding the research can be obtained from the principal researcher

Mr. Ben Molekwa (bmolekwa@thedti.gov.za) or my Research Supervisor, Dr. Horacio Zandamela (horacio.zandamela@wits.ac.za or Tel: (011) 717 3692). Thank you for your consideration. Your help is greatly appreciated.

{Your signature below indicates that you have read the above information, are at least 18 years of age and agree to participate in the study}

_____

Print Name

_____ _____

Signature Date

APPENDIX THREE: ETHICS CLEARANCE CERTIFICATE

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON MEDICAL)
H120810 Molekwa

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER H120810**
PROJECT TITLE	Industrial Policy and the Clothing and Textile Industry in South Africa
INVESTIGATOR(S)	Mr. B T Molekwa
SCHOOL/DEPARTMENT	Economic and Management Sciences
DATE CONSIDERED	17 August 2012
DECISION OF THE COMMITTEE	Approved Unconditionally
EXPIRY DATE	31 August 2014

DATE 03 October

CHAIRPERSON
(Professor T Milani)

cc: Dr. H Zandamela

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature

15 / 10 / 2012
Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

APPENDIX FOUR: PARTICIPANT INFORMATION AND STRUCTURAL INTERVIEW GUIDE

PARTICIPANT INFORMATION SHEET

A.1 Name of Employee/Participant

A.2 Gender

F	M

A.3 Age group (years)

Group	Group	Group	Group	Group	Group	Group
15 - 25	26 - 35	36 - 50	51 - 55	56 - 60	61 - 65	66+

A.4 Race

Coloured	African	White	Indian

A.5 Occupational Category

Occupational Breakdown in the CTFL Sector

NO	OCCUPATIONAL CATEGORY	OCCUPATIONS	TICK X
1	Senior officials, managers and owner managers	Training Manager; Factory Manager; Production Manager; Quality Assurance Manager; Health, Safety and Environmental Manager; Logistics Manager; Supply Chain Manager; Operations Manager; Business Manager	
2	Professionals	Curriculum Developers; Skills Development Facilitator; Textile, Clothing, Footwear and Leather Technologists; Product Developer; Clothing, Textile, Footwear and Leather Designer; Industrial Designer; Product Development;	

		Researcher and Scientist; IT Specialist; Industrial Relations Officer; Human Resource Officer; Merchandiser; Costing Clerk	
3	Technicians	Work Study Officer; CAD Marker Making; CAD Pattern Maker; CAD/CAM Technician; CAD Grader Supervisor; Textile Printer; Textile Dryer; Textile Finisher; Laboratory Assistant; Health, Safety and Environment Officer; Quality Controller; Mechanical, Electronic, Mechatronic Technician	
4	Clerical & admin workers		
5	Service workers, marketing & shop staff		
6	Artisans or skilled trade workers	Machine Mechanics; Technical Trainer; Training Officer	
7	Plant & machine operators & assemblers	Sample Machinist; Leather Cutter	
8	Labourers		
9	Apprentices & Section		

A.6 Critical Skills

Technical Training Managers	Production Managers	Performance Improvement Technologists	Work Study Officers	Technologists	Machine Mechanics	CAD and CAM Specialists

A.7 Years of Experience

1 – 5 years	6 – 10 years	11 – 15 years	16 – 20 years	21 – 30 years	31+

1. CURRENT PRICE OF A PRODUCT

1.1 What is the labour cost per unit of output produced?

1.2 What is the interest cost per unit?

1.3 What is the rent cost per unit?

1.4 What is the profit margin per unit?

1.5 Any additional information on the price of each unit of output produced?

---

2. PRODUCTIVITY OF EMPLOYEES/WORKERS

2.1 What does the firm produce?

2.2 What activities are required to produce a finished unit of output?

2.3 How long does it take employees to complete each activity?

2.4 How many employees are involved in each of these activities?

……

……

……

2.5 How long does it take to complete a finished product?

2.6 Do employees have the required qualification?

2.7 Any additional information on the competence of employees?

---

3. MODELS OF MACHINES

3.1 What are the specifications of the machines used in the firm?

3.2 When were the machines acquired by the firm?

3.3 How long does it take for the machine to complete the task/activity?

3.4 Are machine operators trained to operate the machines?

3.5 Any additional information on the quality/technology of the machines?

---

4. PROFITABILITY OF THE FIRMS

4.1 What was the total cost of sales for the previous year in the firm?

4.2 What was the total sales revenue in the previous year?

4.3 What was the amount of profit made?

4.4 What was the percentage of profit to total revenue?

4.5 What was the percentage of profit in the two previous years?

4.6 Any additional information on the profitability/losses of the firm?

---

5. PROPOSED INDUSTRIAL POLICY MEASURES

5.1 What can be done to reduce the price of output produced by the firm?

5.2 What can be done to increase the productivity of employees of the firm?

5.3 Which can be done to increase the profitability of the firm?

5.4 Are the firms using machines that employ the latest technology available?

……

……

……

5.5 What can the government do to assist the firms to?

5.5.1 Reduce the price of output produced?

5.5.2 Increase the productivity of employees in the firm?

5.5.3 Increase the profitability of firms?

5.5.4 Introduce latest technology available in the industry?

APPENDIX FIVE: DOCUMENTS ANALYSED

- National Industrial Policy Framework (NIPF) – **the dti** – January 2007
- Industrial Policy Action Plan (IPAP) – **the dti** – August 2007/8
- Industrial Policy Action Plan (IPAP) – **the dti** – 2010/11 – 2012/13
- Production Incentive Programme FY2013/2014 – Version 3 – April 2013
- Competitiveness Improvement Programme for Clusters in the Clothing, Footwear, Leather and Leather Goods Industries for the 2013/14 financial year.