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The suitability of South Africa's industrial policy to promote employment in the manufacturing sector

by

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Supervisor
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A research report submitted to the Faculty of Management, University of the Witwatersrand, in 50% requirement of the requirements for the degree of Master of Management (in the field of Development and Economics).

May, 2025

Abstract

Despite targeted support through the industrial policy, South Africa's manufacturing sector has been stagnant, failing to achieve the targeted objective of labour-absorbing growth and job creation. The contribution of the manufacturing sector is on a decline, questioning whether the adopted intervention aligns with the local context. The study aims to establish why the manufacturing sector has struggled to achieve labour-absorbing growth under the current industrial policy. To respond to the research question, the study focuses on the implementation of industrial policy instruments, namely incentives, public procurement, trade policy, and skills development. The research aims to contribute to the existing literature on the implementation of industrial policy in South Africa. To achieve the research objectives, the research adopted a qualitative research strategy and document analysis as the primary data collection tool. To assess the impact of the intervention on the performance of the sector, the research collected quantitative data through analysis of the sector's contribution to the GDP and overall employment. The study finds that despite the industrial policy and New Growth Path policy emphasising the role of labour-intensive industries to promote growth and create employment, the implementation of the policy is biased towards capital-intensive industries. The research also finds that implementation of industrial policy interventions is a challenge due to the capacity of implementing agencies and that skills upgrading is not emphasised in the industrial policy.

Declaration

I, Mabatho Ngoepe, declare that this report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Management (in the field of Development and Economics) in the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.

Mabatho Daisy Ngoepe
23 May 2025

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Contents

Abstract 1
Declaration 2
Acknowledgement 3
Contents 4
List of abbreviations 6
List of figures 7
List of Tables 8
Chapter 1 - Introduction 9
1.1. Introduction and background 9
1.2. Problem statement 11
1.3. Purpose statement 12
1.4. Research question 12
1.5. Study outline 12
1.6. Conclusion 14
Chapter 2 - Literature review 15
2.1. Industrial policy and its expected impact 15
2.1.1. Industrial policy instruments 18
2.1.2. Industrialisation paths 21
2.2. Evolution of South Africa's industrial policy 22
2.2.1. Historical perspective of South Africa's industrial policy 22
2.2.2. Adoption of the National Industrial Policy Framework 25
2.2.3. Industrial Policy Action Plans 25
2.2.3.1. Sector Incentives 26
2.2.4. Current industrial policy 27
2.2.4.1. Sectoral masterplans 28
2.3. Policy instruments to facilitate industrialisation 28
2.3.1. The role of trade policy 29
2.3.2. Developing industries through localisation 31
2.4. Industrial Policy and Labour 33
2.4.1. South Africa's labour market 34
2.4.1. Labour policy and employment outcomes 36
2.4.2. The state of skills development 37
2.5. South Africa's premature deindustrialisation 38
2.6. Theoretical framework for the research 40
2.7. Conclusion 41
Chapter 3 - Research Strategy, Design, Procedures and Methods 42
3.1. Research Strategy 42
3.1.1. Ontology 42
3.1.2. Epistemology 43

3.2. Research Design **43**
3.3. Research Procedure and Methods **44**
3.3.1. Data collection instruments **44**
3.3.2. Target population and samplings **45**
3.3.3. Data and information processing and analysis **46**
3.4. Research Strengths (Reliability and Validity Measures) **46**
3.5. Research Limitations **47**
3.6. Ethics **47**
3.7. Conclusion **47**
Chapter 4 - Results and Analysis **49**
4.1. Introduction **49**
4.2. Presentation of finding and emerging themes **49**
4.2.1. Sector identification **51**
4.2.2. Balancing support between labour vs capital-intensive sectors **54**
4.2.3. Patterns of sectoral support **58**
4.2.3.1 Enhancing sector's competitiveness **58**
4.2.3.2 Promoting manufacturing sector through localisation **63**
4.2.3.3 Export promotion support **69**
4.2.4. Skills development efforts in the manufacturing sector **72**
4.3 Conclusion **76**
Chapter 5: Summary of findings and Conclusion **77**
5.1. Introduction **77**
5.2. Summary of finding **77**
5.2.1 Impact of interventions on promoting growth and job creation **77**
5.2.2 Constraints of job creation in the manufacturing sector **77**
5.3 Conclusion **81**
References **83**

List of abbreviations

APSS	Agro-Processing Support Scheme
BPS	Business Processing Sector
CTFL	Clothing, Textile, Footwear and Leather
CTCP	Clothing and Textile Competitiveness Programme
CTCIP	Clothing and Textiles Competitiveness Improvement Programme
DHET	Department of Higher Education and Training
DTI	Department of Trade and Industry
DTIC	Department of Trade, Industry and Competition
EDD	Economic Development Department
FPM	Fibre Processing and Manufacturing
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEIS	General Export Incentive Scheme
FDI	Foreign Direct Investment
IDC	Industrial Development Corporation
INES	Integrated National Export Strategy
IPAP	Industrial Policy Action Plan
LCR	Local Content Requirements
MCEP	Manufacturing Competitiveness Enhancement Programme
MIDP	Motor Industry Development Programme
MIP	Manufacturing Investment Programme
NDP	National Development Plan
NGP	New Growth Path
NIPF	National Industrial Policy Framework
NSDS	National Skills Development Strategy
NSF	National Skills Fund
PIP	Production Incentive Programme
PPPFA	Preferential Procurement Policy Framework Act
SARS	South African Revenue Service
SETA	Sector Education and Training Authority
StatsSA	Statistics South Africa
TPSF	Trade Policy and Strategy Framework

List of figures

Figure 1: Industry contribution to GDP between 2009 and 2022
Figure 2: Performance of the manufacturing sector between 2009 and 2022
Figure 3: Textile & textile articles imports between 2009 and 2021

List of Tables

Table 1: Project approvals for strategic sectors supported by the DTI

Table 2: IDC funding approvals between 2016 and 2020

Table 3: MCEP loan approvals 2016 to 2019

Table 4: Agro-Processing Support Scheme incentive approvals, 2017/18-2019/20

Table 5: Sectors designated for local production with minimum local content thresholds by industry for local production

Table 6: Export Marketing and Investment Assistance Scheme

Table 7: Top manufacturing exports between 2009 and 2021

Chapter 1 - Introduction

1.1. Introduction and background

One of South Africa's industrial policy key objectives is to promote a more labour-absorbing industrialisation path with emphasis on tradable labour-absorbing goods and services and economic linkages to catalyse employment creation (DTI, 2007a). The promotion of labour-absorbing industrialisation path would be achieved by focusing on non-tradable goods and services primarily in the manufacturing and services sector. Due to its links with other sectors, a growing manufacturing sector is seen as an important driver for sustainable job creation and economic growth (Moyo and Jeke, 2019). The industrial policy is essentially regarded as a vehicle to transform and also address socio-economic challenges of unemployment and poverty in South Africa.

In an attempt to address the challenges of low growth and high unemployment, the government developed a more coherent industrial policy to direct growth and investment in the manufacturing sector thus promoting employment. In 2007, South Africa adopted the National Industrial Policy Framework (NIPF) which had the objective of accelerating economic growth, reducing unemployment and poverty, and intensifying industrialisation towards a knowledge-based economy beyond 2014 (Department of Trade and Industry, 2007a). The policy emphasised support for non-traditional tradable goods and services sectors due to the sector's relative intensity in low-skilled labour and potential for value addition in the manufacturing sector and services that can be exported (DTI, 2007a). The policy recognised the manufacturing sector as the key sector to address unemployment as it has the highest indirect employment multiplier (Bhorat, Lilienstein, Oosthuizen, & Thornton, 2020).

Spurred by the NIPF, the government adopted a series of Industrial Policy Action Plans which set out key actions and interventions in targeted sectors to promote growth and diversification in the manufacturing sector. Despite sector support through industrial policy tools, the manufacturing sector saw a decline in the contribution to GDP. In 2021, the manufacturing sector contributed 12 per cent to the gross domestic, a 2 percent decrease from 2010, where the sector contributed 14 per cent to the GDP (World Bank). Despite targeted

support through industrial policy, the intervention failed to promote the growth of the manufacturing sector and to create employment.

This is in the context of South Africa continuing to battle with high unemployment, inequality, and poverty. In comparing the unemployment rate between 2007 and 2022, it is found that the official unemployment rate grew by 10.6 percent from 22.3 to 32.9 percent (StatsSA, 2008; 2022). It was further reported that the youth account for 45.3 per cent of those unemployed (StatsSA, 2022). With the growing population and a stagnant economy, the government needs to look at policy interventions that will stimulate economic growth and job creation.

To contextualise the challenges, South Africa's manufacturing sector is also regarded as being capital-intensive. Capital-intensive industries have attracted more investment in comparison to labour-intensive industries (Bhorat, Cassim and Hirsch, 2014). In addition to the current incentive structure, South Africa's labour legislation is regarded as raising the cost of labour, further resulting in the capital intensification in production. Compounding the skewed incentive structure and high labour costs is the economic climate. South Africa's current economic growth patterns limit the economy's ability to absorb a substantive labour force and is insufficient to absorb new entrants in the labour market (Bhorat et al, 2014).

With the prevailing above-mentioned concerns, the capital-intensive nature of the sector and the level of labour costs raise the question of the suitability of the current industrial policy to address the challenge of unemployment. Furthermore, South Africa's skills base is not transforming at the same pace as the economy and resulting in the economy experiencing a shortage of skills in a country with a large unemployed labour force. South Africa's labour force has traditionally been characterised by a low skills base, and a persisting skills mismatch dilemma (Department of Higher Education and Training, 2019). To compound these challenges, South Africa is further described as a de-industrialising economy - with the rise of the service sector (Tregenna, 2016). This becomes a challenge in an economy where a large proportion of the labour force is low-skilled. The performance of the sector, coupled with these issues, triggers questions on the suitability of the current industrial policy for the South African context.

This raises the question of whether South Africa's industrial policy is a relevant tool or whether the industrial policy is designed in a manner that can engineer and promote growth. This is in the context of South Africa's industrial policy, coupled with its trade policy, being the key driver in employment creation. As such, the research examines why South Africa's current industrial policy interventions have struggled to grow and create sustainable jobs between 2009 and 2022. The research will specifically explore why there has been a decline in the manufacturing sector despite targeted support and why labour-intensive sectors failed to grow. The paper aims to contribute to the debate on the effectiveness of promoting industrial development through the manufacturing sector.

1.2. Problem statement

South Africa adopted the National Industrial Policy Framework to guide the transformation of the economy and promote employment creation through the manufacturing sector. One of the objectives of the National Industrial Policy Framework was to provide support for non-traditional tradable goods and services sectors due to their relative intensity in absorbing low-skilled labour and the potential they have for value addition in the manufacturing sector (Department of Trade and Industry, 2007). The thinking that the current industrial policy is premised on posits that the successful implementation of industrial policy targeting the manufacturing sector would result in the absorption of low-skill labour into employment thus, in part and considerably so, addressing the persisting unemployment crisis confronting South Africa. The contribution of the manufacturing sector to total employment declined from 15.8 in 2009 to 11.7 percent in 2022 (StatsSA, 2022). This decline occurred despite targeted support to the sector through sectoral support programs and the sector's incentive program to promote investment and competitiveness, South Africa's manufacturing sector has failed to grow at levels that promote significant job creation.

The failure of the sector to grow at the desired pace and also generate the necessary employment, despite the suite of incentives channelled towards it, triggers questions on the suitability of the current industrial policy for the South African context. The issue that this study seeks to grapple with is to establish whether or not South Africa's industrial policy is designed to be responsive to the prevailing economic structure in the country – particularly in relation to the manufacturing sector.

1.3. Purpose statement

This study seeks to establish why the manufacturing sector has struggled to achieve labour absorbing growth under the current industrial policy. The South African Government has developed and implemented industrial policy interventions to support the growth and transformation of the manufacturing sector to stimulate job creation, however the sector has struggled to grow. The proposed study seeks to explore why South Africa's industrial policy interventions have failed to engineer significant growth in the manufacturing sector and thus failing to contribute to job creation. This will be done by exploring the premise of the industrial policy and the suite of incentives made available in the sector and establishing why the support has not yielded to growth and transformation of the sector. The research understands industrial policy as an intervention tool to promote transformation in the targeted sector to encourage value addition and stimulate growth in labour-absorbing sectors.

1.4. Research question

The research question for the study is as follows:

Why has the current industrial policy failed to promote employment creation in the manufacturing sector?

The study has the following sub-questions:

a. Since the development of a coherent industrial policy post-1994, what impact has industrial policy interventions had on promoting growth and job creation in South Africa's manufacturing sector?

b. What have been the constraints to the manufacturing sector achieving its earmarked role of job creation in South Africa's industrial policy?

1.5. Study outline

The study is structured into five chapters. Each of the chapters are outlined below:

Chapter 1

This chapter presents the introduction and background on South Africa's industrial policy efforts to promote labour-absorbing growth and job creation. The chapter also presents the objective and problem statement the study seeks to address.

Chapter 2

This chapter reviews literature on the implementation of the industrial policy in South Africa. The chapter also looks at the evolution of South Africa's industrial policy. This is done to reflect on the influence of historical policy options on the current industrial policy. Furthermore, the chapter assesses how industrial policy instruments, including incentives, localisation and trade policy were used to facilitate development of the manufacturing sector. Last, the chapter discusses the theoretical framework adopted for this study.

Chapter 3

This presents the research strategy adopted in this study. The chapter further details the research methods, data collection methods and data analysis procedures adopted in the research.

Chapter 4

The chapter presents the findings on the implementation of industrial policy since the adoption of the National Industrial Policy Framework in 2007. It also reflects on the identified industries in the manufacturing sector earmarked for industrial development and to support the labour-absorbing sectors to promote employment creation in the manufacturing sector. The chapter further presents the support provided to the manufacturing sector to enhance the competitiveness of the sector, the use of localisation to support development of local industries and to counter the impact of import competition on key industries growth and contribution to employment. In line with the NIPF and New Growth Path's goal of pursuing labour-absorbing growth, the chapter also presents skills development initiatives implemented through the guidance of Industrial Policy Action Plans and sectoral strategies.

Chapter 5

The chapter presents a summary of findings and discusses the implication of industrial policy interventions in relation to creating employment in the manufacturing sector. The chapter

further presents a conclusion of the impact of the industrial policy interventions on the manufacturing sector.

1.6. Conclusion

The chapter presented an introduction and background to the research study. The background given in this chapter sets the context of this study. From the preliminary literature review, there are indications that the manufacturing sector has failed to serve its earmarked purpose. This will be thrashed out extensively in the later chapters of the study. The chapter also presented the purpose and research questions guiding the study. Building on this chapter, the following chapter, the literature review chapter, will provide a critical assessment of South Africa's industrial policy – including the role of the manufacturing sector in the context of South Africa's industrial policy, policy instruments to advance the objectives of the industrial policy, the labour market dynamics, the necessary skills development to supplement industrial policy and South Africa's premature deindustrialisation.

Chapter 2 - Literature review

2.1. Introduction

This chapter presents a literature review of the anchor concepts of the study. The chapter examines existing literature on the various aspects of this research study to provide context for the research and to understand historical and current implementation of industrial policy in South Africa. Given the purpose, the chapter distils the concept of industrial policy and discusses South Africa's industrialisation path by looking particularly at the different phases indicating key shifts in industrial policy, from the pre-democratic dispensation period leading up to the adoption of a current industrial policy in post-apartheid South Africa. As such, the chapter reviews literature on industrial policy and seeks to understand the role of industrial policy in promoting industrial development and job creation.

The developments in industrial policy are assessed from the introduction of the National Industrial Policy Framework (NIPF) – which was essentially the first concrete step taken towards the development of a coherent industrial policy in post-apartheid South Africa. The NIPF was anchored in the need to promote a labour-absorbing industrialisation path with a particular emphasis on tradable labour-absorbing goods and services and economic linkages that catalyse employment creation (DTIC, 2007). The introduction of the NIPF and the subsequent shifts have always been an attempt to reorient productive capacities of the economy and in order to promote and facilitate job creation.

The chapter further reviews the evolution of South Africa's industrial policy to gain a better understanding of the earmarked role of the manufacturing industry in South Africa's industrial policy. This is done through the discussion of the support provided to the manufacturing industry through various industrial policy instruments to achieve the visions of the policy.

2.2. Industrial policy and its expected impact

In order to comprehend the notion of an industrial policy, it is important to first clarify the concept of public policy. To guide the government on key actions, public policy is developed. Public policy is referred to as actions, plans, laws of behaviour of government (Bevir, 2009).

Birkland (2020) defines policy as a statement by the government of what it intends to do about a public problem. Peters (2021) further defines public policy as a set of activities that the government engages in for the purpose of changing the economy and society. It is an intervention by the government to achieve public goals through a series of related activities implemented over time (Ayide, 2023). These definitions highlight that public policy is government driven and aims to address a societal problem.

For the purpose of the study, the focus will be on economic policies. The objectives of economic policy include, among others, the fair distribution of income, alleviating poverty and improving standards of living (Bénassy-Quéré, Cœuré, Jacquet, and Pisani-Ferry, 2010). Economic policies can be defined as macroeconomic instruments - including monetary and fiscal policy and macroeconomic instruments include regulations, subsidies (Bénassy-Quéré et al, 2010).

In terms of South Africa, the government's economic policy goal can be construed as the need to accelerate inclusive growth, job creation and addressing poverty and inequality (Ferreira and Rossouw, 2016). To transform the structure of the economy, the government can develop policies such as industrial policy. Industrial policy is a tool that can be used to promote structural transformation.

While the concept of industrial policy is quite common, it is not yet easily discernible. The concept is mostly defined from the perspective of what the policy seeks to achieve. Rodrik (2008) defines industrial policy as policies that stimulate specific economic activities and promote structural change. Industrial policy is further described as an intervention that seeks to improve the competitiveness and structure of industrial activity (Day and Merkert, 2021). Naudé (2010) defines industrial policy as a process where governments aim to deliberately affect the structural characteristics of their economy.

Additionally, Weiss (2013) defines industrial policy as a policy intervention designed to influence the allocation of resources in favour of identified industry. Ulua and Uju (2021) define industrial policy as a government strategy used to guide investment and promote productivity in targeted sectors. In a similar vein, Page and Tarp (2017) define industrial policy as a government intervention used to speed up the process of structural transformation of the economy and to facilitate the transition of labour from lower- higher-productivity sectors. This view is aligned with that of Black, Craig and Dunne (2016) as they posit that

among the key aims of industrial policy is to promote economic growth and job creation through providing targeted support to certain sectors to alter the industrial path of the economy. Based on the above industrial policy definitions we can deduce that that industrial policy aims to change the structure of the economy. The definitions further reflect on the how which includes improving the competitiveness of the targeted sector through allocation of resources to guide investment and productivity.

Structural transformation is described as the main objective of industrial policy. Structural transformation is a notion that denotes the reallocation of labour across and other resources across from low-productivity to high-productivity economic activities (Rekha and Suresh, 2022; UNCTAD, 2016). It is a process when a country moves from low-productivity to high-productivity (UNCTAD, 2016; Lin, 2017). It is anticipated that with the move towards high-productivity there would be an increase in value-added activity and technological change to boost economic growth (UNCTAD, 2016). Change in the structure of the economic activity whereby the share of the manufacturing sector in total economic activity increased, resulting in increased income (Moyo, 2018).

Structural transformation can be achieved through changing the industrial structure, promoting productivity-based development and diversifying towards higher value-added exports (National Treasury, 2019). Transformation of the economy is seen as essential to achieve economic growth and promote diversification of the economy. The manufacturing sector is seen as such a sector to move to high productivity and diversification.

In terms of competitiveness, UNIDO (2013) defines industrial competitiveness as a country's ability to increase its presence in international and domestic markets. Industrial competitiveness is also about a country's ability to establish a good business environment, which allows domestic industry to gain competitive advantage (Dou, Wu, Sun and Wang, 2021). Industrial competitiveness is determined by a country's industry's performance in the international market (Zhang and London, 2013). Moreover, developing industrial competitiveness entails developing industrial sectors and activities with higher value-added and technological content (UNIDO, 2020).

In addition to restructuring the economy, enhancing industrial competitiveness and reorienting productive capacities within it, industrial policy endeavours to promote job creation. This point is elucidated by Black, Craig and Dunne (2016) by pointing out that

among the key aims of industrial policy is to promote economic growth and job creation through providing targeted support to certain sectors to alter the industrial path of the economy. As such, industrial policy as an intervention used to structure, guide investment and promote productivity in targeted sectors to promote economic growth and job creation.

2.2.1. Industrial policy instruments

To promote development of sectors, governments use policy instruments. In evaluating features of successful industrial policy, scholars identify key instruments that promote industrialisation. These instruments can take the form of industrial financing, incentives, export promotion, trade measures such as tariffs, foreign direct investment (FDI), investment in human capital and technology, public procurement and tariffs (Ferraz et al, 2014) (Naude 2010) (Lall, 2000) (Ferraz, Kupfer, David & Marques, 2014). These instruments fall under the domains of industrial policy identified by Naude (2010). The industrial policy domains identified by Naude (2010) include economic signals and incentives, which include tax breaks, scientific and technological capabilities which take the form of Research & Development subsidies and funding of university research, Learning and improving technological capabilities which include education and training policies, labour training subsidies and skills formation. They also include selective industry support through the use of import tariffs, establishing Special Economic Zones (SEZs) and direct government procurement (Naude, 2010). These policy instruments aim to promote investment and productivity of sectors (Ferraz et al, 2014). The following section will reflect on key instruments identified to have contributed to successful industrialisation.

a. Incentives

Aza and Dono (2014) state that industrial policy is reliant on the use of fiscal and monetary incentives to promote and direct investment in the development and creation of strategic sectors. To encourage investment in identified sub-sectors, governments can implement incentives. Such incentives can be financial which include grants and loans at beneficial rates, fiscal incentives such as reduced tax rates or other subsidised services (Wentworth, 2012).

b. Export promotion

Export oriented industrial development is identified as a major contributor to the successful industrialisation in East Asia (Lall, 2000). Stiglitz (2017) further states that East Asia's industrial policy was led by the export of manufactured products. Export promotion entailed government action through the use of export incentives and targets. Export success in newly industrialised countries entailed government intervention through incentives to promote exports (Mukherjee, 2012). As part of their export promotion strategy, South Korea adopted export targets at industry, product and firm level (Lall, 2000). These targets were used to encourage firms to improve their export performance.

c. Investment in human capital and technology

Lall in Moyo (2014) states that structural transformation is a process that requires investment in plant and technology and the acquisition of the required skills. The UNCTAD in Moyo, 2016 further emphasises that improving labour productivity through skills development is one of the key interventions to promote the manufacturing sector. Haraguchi, Martorano & Sanfilippo (2017) state that countries that experienced rapid industrialisation invested in human capital to meet the demand from expanding industries and upgrading labour force skills. Additionally, Martorano, Sanfilippo and Haraguchi (2017) investment into trained labour force is essential to ensure sustainability of the industrialisation process. Skills development is seen as essential to support the transformation of the economy.

One of the key features of Korea's economic development is the sophistication of the skills system in line with the economic cycles (Moyo, 2018). Skills development initiatives included the introduction of technical and vocational training institutions to produce high skillset trainees and technicians (Moyo, 2018). The transition to heavy and chemical industries in Korea was accompanied by a vocational training system in line with the shift in the targeted industries (Cheon, 2014). Interventions to promote upgrading the labour force included the use of training incentives As the country shifted from export-oriented light industries to heavy and chemical industries, government accelerated efforts to develop

d. Public procurement

To enhance the competitiveness and growth of the sector, governments can use public procurement and local content requirements to support key industries in the manufacturing sector to recapture the domestic market. Public procurement can be used to achieve societal goals such as redressing the effects of institutional discrimination and inequality

(McCrudden, 2004), reducing long-term unemployment, encouraging innovation, and creating markets for local businesses (Grandia and Meehan, 2017). Public procurement is also a demand side tool which can generate demand for strategic sectors (UNIDO, 2018) and create stable demand for businesses (Frenken, 2017 in Day and Merkert, 2023). It is also used to further public policies in fields such as industrial policy, support for small business and local development (Grandia and Meehan, 2017). Raiteria (2018) in Day and Merkert, 2023 states that public procurement can promote development of competitive industries and encourage innovation. The common definition of public procurement in relation to industrialisation is that it is a tool to promote innovation and development of industries, by generating local demand for strategic sectors. Public procurement is also used to address socio-economic goals such as unemployment. The use of public procurement as a vehicle to promote that local manufacturing sector is that government expenditure has a significant percent of GDP, which can be directed to local suppliers.

Dawar and Oh (2017) state that public procurement can be used to address multiple areas, namely to encourage participation of small and medium enterprises, promote innovation, green public procurement and export promotion by assisting firms expand their markets to foreign public procurement markets. The use of public procurement is widespread and can be seen in various economies. Countries such as the United States, Japan and Brazil have adopted public procurement as a tool to encourage innovation and promote the local manufacturing sector. Through the Buy American Act, the U.S. federal government sought to protect the manufacturing industry by channeling its purchases towards U.S. suppliers (Dixon, Rimmer and Waschik, 2018). The act makes provision for products purchased directly by government agencies and indirectly which encompasses purchases made by firms who will sell products to government agencies (Dixon et al, 2018). Prioritisation of domestic industries is also seen in the procurement of high-tech products (Wang, Liu & Ju, 2018).

A similar approach was used in Japan where public procurement was used as a tool to promote industrial growth. Japan used mechanisms such as public procurement to stimulate local firms (Sorte Junior, 2016). Japan utilized the local procurement ratio restrictions and preferential treatment for high-tech products to promote the development of high-tech industries (Wang, Liu & Ju, 2018). Similarly, Brazil has public procurement policies to promote local industrial procurement. Brazilian law makes provision for preferential treatment for small enterprises organized under Brazilian laws and having their head-office

and management in Brazil (Dawar et al, 2017). Additionally, the law allows for preference to be given to goods and services produced in the country or supplied by Brazilian companies against preferred margins (Dawar et al, 2017). Similar to other industrialised countries, South Africa utilized public procurement to support development of the local industries, particularly those affected by high imports. This will be discussed in the upcoming section.

2.2.2. Industrialisation paths

Beyond the above-stated aim of industrial policy and policy instruments, industrial policy also defines a country's industrialisation path. Literature on industrialisation indicates that industrialisation can follow two paths: the capital-intensive or the labour-intensive industrialisation path. South Korea's industrialisation path is described to have started with a focus on export-oriented light industries, leading to a shift towards heavy and chemical industries to technically advanced and knowledge-based industries (Moyo, 2018).

The capital-intensive industrialisation path is focused on promotion of heavy and chemical industries, and high technology sectors (Sugihara, 2019). These capital-intensive modes of production are the ones that are reliant on centrally powered machinery and semi-skilled labour (Clayton, 2006). On the other hand, the labour-intensive industrialisation path is characterised by countries taking advantage of cheap and competitive labour (Sugihara, 2019). Labour-intensive industrialisation tends to focus on sectors such as textile and apparel, footwear, leather goods, agro-processing (Higuchi and Shimada, 2019; Tesfaw, 2021). Key to successful labour-intensive industrialisation path is quality labour resources cultivated in traditional sectors (Austin, 2010).

The labour-intensive industrialisation path is best exemplified by the path followed by East Asian countries to achieve robust growth. This was done by focusing on labour-intensive sectors of the manufacturing industry (Athukorala and Sen, 2015), by taking advantage of the availability of abundant and cheap labour. Japan industrialisation path is an example of a labour-intensive path that fully absorbed and utilised labour (Sugihara, 2019). The observed industrialisation path followed by East Asia is one that started with labour-intensive industrialisation, later shifting towards capital-intensive and high tech industries. It is further noted that the labour-intensive path was guided by abundant cheap labour. Additionally, the

transition to capital and high tech industries were supported by investment into human capital.

With the understanding of industrial policy, key industrial policy instruments and paths towards industrial development, the following section will discuss South Africa's industrialisation path. The section will reflect on the historical development of South Africa's industrial policy to understand the current state of the manufacturing sector.

2.3. Evolution of South Africa's industrial policy

This section looks at the historical development of South Africa's industrial policy. The study reflects on South Africa's industrialisation path from the adoption of the Tariff Act of 1925 to subsequent policy actions to support development of the industrial sector. The study will further reflect on policies adopted by post-apartheid South Africa and instruments used to support development of the manufacturing sector which was earmarked as the sector to promote labour-absorbing and diversification of the economy.

2.3.1. Historical perspective of South Africa's industrial policy

This section begins by reflecting on South Africa's industrial policy interventions from the Union of South Africa to the current policy framework. The objective of this approach is to understand the country's industrialisation path, development of the manufacturing sector and efforts towards contributing to labour-absorbing growth from a historical perspective.

The literature identifies South Africa's industrialisation path to have started with the introduction of a protective tariff policy the Tariff Act of 1925 which aimed to encourage import substituting industrialisation (McCarthy, 1999, Schneider 2000). The adoption of import substitution policy aimed to promote the domestic manufacturing sector and investment in targeted sectors (Schneider, 2000). South Africa's industrialisation during this period was driven by import substitution and dominated by the mineral energy complex (Black, Craig and Dune, 2016). This influenced the type of industries that developed and gained competitiveness.

Between the period of 1925 and 1984, the government shifted its focus towards strategic heavy industry including metal products, machinery, and chemicals. As a result, the share of light manufacturing value-added industries such food and beverage, textiles, clothing and

wood and furniture declined from 63.2 percent to 36.8 percent, while the heavy industry experienced growth (McCarthy, 1988). The heavy industries are those that are intensive in terms of human and physical capital (McCarthy, 1988). Zalk (2014, 330) further states that industrialisation during this period was reliant on the processing of natural resources without policy coherence for developing the labour-intensive and value-adding manufacturing sector. The focus on heavy industries led to South Africa's manufacturing sector being capital-intensive thus leaving behind labour-intensive manufacturing.

The development of the manufacturing sector was largely reliant on the importation of capital equipment and processed immediate goods. The import substitution strategy is seen as inherently promoting capital intensity, which was influenced by countries' demand for imported capital-intensive goods and intermediate products (Lowenberg, 1997). Based on the imbalance in the development of heavy and light manufacturing sectors, any adoption of new industrial policy to promote labour-absorbing growth would require a review of the state of light manufacturing and establish how to bridge the development gap between light and heavy industries.

In addition to the impact of import substitution strategy on the development of the manufacturing sector, the capital-intensive nature of the sector is also attributed to rising labour costs. McCarthy (2003, 177) states that changes in prices of labour and capital, and labour legislation influenced the employment growth patterns therefore, favouring capital-intensive production. Lowenberg (1997) extends this view and states that the shift toward capital-intensive industrialisation was due to 'scarce' labour in urban areas, the demand for imported capital-intensive and incentives of cheap capital offered to decentralizing industries.

Lowenberg (1997) further states that the migrant labour system increased the cost of training and turnover of black workers which resulted in reduction in the supply of labour to the industrial sector and encouraged capital substitution in the manufacturing sector. Based on the above observations, the rise in capital intensiveness of the sector is a result of restricted supply and training of 'black labour' and labour legislation.

The adoption and implementation of the decentralized industrial policy further contributed to the rise of capacity intensity through incentives providing cheap capital, which encouraged capital-intensive technologies and reduced the demand for the unskilled black labour

(Lowenberg, 1997). When considering labour-absorbing growth and pursuing a labour-intensive industrialisation path, it will be essential for policymakers to also consider the state and competitiveness of the labour market.

Over time, industrialisation strategies transitioned from import substitution industrialisation to export-oriented industrialisation (Athukorala and Sen, 2015). The strategy entails expansion of the manufacturing sector with a large portion of the sector's output targeted for exports to developed countries (Deardorff and Park, 2010). Export-oriented industrial strategy is seen as a path that would increase income and create employment opportunities in labour abundant countries (Khondoker and Kalirajan, 2012). Export-oriented industrialisation is focused on promoting manufactured goods for export.

The success of export-oriented industrialisation is attributed to government intervention which entailed the use of incentives such as export subsidies and deductions on research and development and training to promote exports (Mukherjee, 2012; Chang and Kiryl, 2018). Literature attributes East Asia's successful industrialisation to export-oriented industrialisation. Deardorff and Park (2010) attribute the speedily industrialisation of countries such as Hong Kong, Korea and Taiwan to the expansion of exports largely due to producing labour-intensive manufactured goods.

In South Africa, efforts towards export promotion under apartheid were seen with the adoption of the tax allowance in 1972. The allowance was allocated for export marketing expenses to incentivise firms to export (Rangasamy and Harmse, 2005). South Africa further initiated the transition to export promotion through the adoption of the General Export Incentive Scheme. The objective of GEIS was to promote value added exports through introduction of export subsidies (Rangasamy, 2009). Though the scheme aimed to increase export of manufactured products, capital products continued to receive biased support (Black, 2016). The continued dominance of the capital-intensive products highlights that for the government to facilitate diversification of products beyond traditional products, the sector requires targeted and tailored support to develop the labour-intensive industries and labour-intensive product lines.

As the country's reintegrated into the world economy, trade policy was liberalised in line with the General Agreement on Tariffs and Trade (GATT) (Rangasamy and Harmse, 2005). The process of trade liberalisation entailed rationalization and phased reduction of tariff (Lewis,

2001). Tariff liberalisation was premised on the assumption that it would increase the domestic manufacturing sector's competitiveness (Rangasamy et al, 2005).

The liberalisation of the economy was further intensified with the 1995 Uruguay Round which included a five-year tariff reduction and rationalization program (Thurlow, 2007). The program saw the reduction in the number of tariff lines and the phasing out of export incentives (Thurlow, 2007). Trade liberalisation, however, exposed South Africa's domestic manufacturing sector to competition from low wage and advanced countries (Lewis, 2001). The tariff cuts reduced the scope for South Africa to adopt tariffs to support industrial policy objectives (DTI, 2010a).

To promote the development of the manufacturing sector, the government adopted the Integrated Manufacturing Strategy in 2002. The strategy sought to integrate and advance the manufacturing sector to generate higher levels of economic growth and promote employment creation (DTI, 2003). The strategy further aimed to integrate interventions to promote the sector's competitiveness, looking at market access, value addition, equity, and economic participation (DTI, 2002). The strategy targeted clothing and textiles, agro-processing, metals and minerals, tourism, automotive and transport, crafts, chemical and biotechnology and ICT (DTI, 2002). The strategy highlights efforts to support the development of the manufacturing sector.

2.3.2. Adoption of the National Industrial Policy Framework

In 2007, South Africa adopted the National Industrial Policy Framework (NIPF) to promote the transition of the South African economy and address socio-economic challenges such as unemployment and poverty. The objective of the NIPF was to provide direction to South Africa's industrial development (DTI 2007). To address constraints and identify opportunities, the framework adopted strategic programmes which entailed sector strategies, defining industrial financing, providing guidelines on the trade policy, establishing a link between skills and education policy to industrial policy and industrial upgrading. The NIPF is implemented incrementally through the adoption of the Industrial Policy Action Plan (IPAP) which presented sectoral interventions and key constraints on the implementation of industrial policy (DTI 2007). The IPAP presented the government with the opportunity to review the implementation of the industrial policy and to reflect on changes in the domestic and global economy.

2.3.3. Industrial Policy Action Plans

To implement the NIPF, the government implemented ten iterations of the Industrial Policy Action Plan. In addition to the NIPF, the IPAP built on policies such as AsgiSA and the New Growth Path (NGP) (DTI, 2012). The action plans focused on the manufacturing and other value-added sectors that have a combination of high employment and growth multipliers (DTI, 2012). To promote investment in the sector, the DTI developed programmes such as:

- the Motor Industry Development Program (MIDP) to promote the development and growth of the automotive sector,
- the Clothing and Textile Competitiveness Programme (CTCP) which aims to stabilize and improve competitiveness of the sector, and
- the Manufacturing Competitiveness Enhancement Programme (MCEP) which provides tax incentives to upgrade the competitiveness of labour-intensive and value adding sub-sectors (DTI, 2012).

The plans identified key sectors identified key sub sectors to be supported, interventions support the growth of the sector. These sub sectors were disaggregated into new focus areas which included green and energy, metal fabrications and agro-processing sectors and sub-sectors targeted for scale-up and expansion namely clothing, textiles, footwear, and leather, automotive and plastics, pharmaceuticals, and chemicals (DTI, 2012).

Though the NIPF envisions South Africa's industrialisation trajectory that facilitates labour-absorbing growth and the diversification of exports, South Africa’s industrialisation path is still considered as capital intensive. Black (2012) states that the growth of capital-intensive sectors is due to the substantial support to capital-intensive sectors. Black (2012) further argues that the current industrial policy does not favour labour-absorbing growth and that there is a high degree of path dependency on the government’s support to capital-intensive sectors.

2.3.3.1. Sector Incentives

The manufacturing sector was identified as a key sector to promote growth and employment due to the sector’s capacity to promote employment in other sectors. One of the key industrial policy instruments used to influence investment in the manufacturing sector is sectoral

incentives. Assessing this support will demonstrate the government's investment and prioritization of promoting the development of the sector.

South Africa developed a cluster of incentives to facilitate investment and development of the manufacturing sector. These incentives programmes are organised into five clusters including industrial innovation cluster which includes programs such as the Support Programme for Industrial Innovation, manufacturing investment cluster which include the Automotives Investment Scheme (AIS) and the Manufacturing Competitiveness Enhancement Programme (MCEP), export promotion cluster, service investment cluster and infrastructure support cluster (DTI, 2021a). Incentive schemes can be used to target specific industries as with the Automotive Investment Scheme which aims to grow the automotive industry, and while some target the overall sector such as the Manufacturing Competitiveness Enhancement Programme which targets the development and growth of the manufacturing sector.

In addition to incentives disbursed through grants or loans, the manufacturing sector has access to tax allowance incentives. The 12I Tax Allowance Incentive, which falls under the manufacturing investment cluster aims to encourage investment into greenfield and brownfield projects by making investment and training allowances deductible to the firm's taxable income (DTI, 2019). Through the incentive programs, the DTI has made a significant investment into the development and growth of the manufacturing sector. Though the government adopted various incentives to promote the growth of the sector, literature indicates that these incentives are seen to be historically biased towards capital-intensive industries and mineral energy complex industries previously supported under apartheid (Bell, Goga, Mondliwa and Roberts, 2018; Black, 2010).

To promote the development of labour-intensive sectors and promote employment, the industrial policy should support small firms, invest in skills development to improve competitive capabilities and encourage investment in labour-demanding sectors (Black, 2012). This is critical in a sector that has growth disparities between capital intensive and labour-intensive sectors. Despite the NIPF and subsequent IPAPs identifying labour-intensive sectors as important to achieve labour-absorbing growth, the implementation of the incentives program follows the historical industrialisation path.

2.3.4. Current industrial policy

In 2019, South Africa transitioned from Industrial Policy Action Plans to adopt the Re-Imagined Industrial Strategy. The strategy seeks to encourage the upgrading of value-added and labour-absorbing production and diversification of the economy, by moving from reliance on commodities (Department of Trade, Industry and Competition, 2021). The strategy focuses on strategic value chains, promoting localisations and master plans, job creation and more broad-based ownership of businesses (DTIC, 2023).

The underlying pillars of the strategy are to combine growth with transformation, boost local production, grow exports, and expand African trade, increase levels of investment, establish a reliable and low-cost energy system and growth in employment (DTIC, 2023). The strategy re-emphasised the importance of promoting value-addition and labour absorbing growth to diversify the economy and promote job creation. The strategy further emphasises the role of the manufacturing sector to promote job creation. Through the sectoral 'master plans' to support targeted sectors in addressing competitiveness challenges and identifying opportunities to promote the development of subsectors (DTIC, 2021). The adoption of the strategy highlights the importance of promoting industrial development and restructuring the economy to promote inclusive growth.

2.3.4.1. Sectoral masterplans

The adoption of the reimagined industrial strategy reinforced the need to upgrade value-added manufacturing, diversify the economy and promote labour-absorbing production. The strategy adopted a new approach to industry level planning through industry masterplan. The adoption of masterplans facilitated a collaboration between government, private sector and labour to ensure collective action in the development and implementation of industry plans (DTI, 2019). The master plans focused on the development of industrial capabilities and supporting a decent work agenda, growing the domestic market, enhancing competitiveness, and accessing new markets (DTIC, 2022). The objective of the plans is to achieve domestic and international market growth, localising the value chain, enhancing competitiveness, and promoting skills and technology advancement (DTIC, 2022).

2.4. Policy instruments to facilitate industrialisation

To facilitate industrialisation, the South African government implemented industrial policy instruments to facilitate growth and development of the manufacturing sector. The following sub-section review instruments namely trade policy and localisation policy to support the local manufacturing sector.

2.4.1. The role of trade policy

Improving trade performance is identified as one of the key components for accelerating industrialization and enabling manufacturing to become the engine of economic growth and social development (UNIDO, 2020). To facilitate international trade, countries make use of trade policy to manage exports and imports.

Trade policy is defined to be divided into tariffs and non-tariff measures (Hoekman and Nicita, 2011). Trade policy is described as a mechanism to which countries define the terms and conditions for its integration into the global economy (DTI, 2010a). One of the key components guiding the trade policy is tariffs, which can be used to protect 'uncompetitive' industries (Claro, 2006). Instruments of trade policy include import tariffs and surcharges, export taxes and subsidies and quotas and licences (Balassa, 2016). The trade policy influences patterns of trade.

South Africa's trade and industrial policies under apartheid were focused on promoting import substitution industrialisation (Edwards, Cassim & Van Seventer, 2009). From the 1970s, the trade policy aimed to promote production for export through the adoption of export incentives (Rangasamy and Harmse, 2005). The incentives included the tax allowance adopted in 1972 for export marketing expenses (Rangasamy et al, 2005).

In the 1990s, trade policy shifted to introduce export subsidies for manufactured goods under the GEIS (Edwards et al, 2009). The subsidy sought to increase export of manufactured products – even though capital products continued to receive biased support (Black, 2016). At the dawn of democracy, South Africa's trade policy reformed as the country integrated into the global economy. Trade policy reform entailed rapid trade liberalisation under the General Agreement on Tariffs and Trade and adopting WTO commitments (Rangasamy and Harmse, 2005).

Trade liberalisation entailed reduction in the use of tariffs to support industries. For South Africa, liberalization entailed reducing industrial tariffs by one third between 1995 and 2000, rationalising tariff lines and phasing out export subsidies scheme, the GEIS (Yanai, 2013). The average production in the manufacturing sectors, measured using scheduled rates declined from 20 percent to under 10 percent in 1994 and 2000 respectively (Edwards and Lawrence, 2008). The reduction of tariffs results in increased competition from imports.

In addition to putting measures to guide trade, the trade policy also details efforts to expand to regional and international markets. In line with emphasis on export-oriented growth, the NIPF highlights exports as an avenue to address employment creation. The New Growth Path (Economic Development Department, 2010) acknowledges that South Africa has a narrow domestic market to achieve the required growth and therefore views the expanding of markets for South African goods and services through stronger focus on exports. The export market therefore provides South Africa products additional demand, thus contributing to increased production and job creation to meet market needs. The NIPF further identifies trade policy as an instrument of industrial policy, and it will be informed by sector strategies (DTI, 2007a).

The Department of Trade and Industry developed a South African Trade Policy and Strategy Framework which outlined how trade policy can contribute to meeting objectives of upgrading and diversifying exports (2010b). The policy framework highlights that South Africa's trade policies will be informed by industrial upgrading and objectives (DTI, 2010a). In accordance with the NIPF's guidance on the tariff policy, the trade policy framework states that tariffs should be directed by the needs and imperatives of the sector strategies and, by evidence within the limits of international trade obligation (DTI, 2010a).

The trade policy views tariffs as a key instrument of industrialisation due to its implication on capital accumulation, technology change (DTI, 2021). The trade policy further highlights the importance of expanding to additional markets for locally produced products. One of the identified export opportunities is the expansion to Africa, which both offers additional markets for South Africa products under the Africa Continental Free Trade Agreement, but also can advance a wider developmental agenda (DTI, 2010a).

The development of the manufacturing sector is dependent on a market for products, and to grow the sector the government should create an enabling market and facilitate market access. The policy defines the terms for integration into the global economy through bilateral and multilateral engagements to promote trade and investment (DTI, 2010b). These bilateral and multilateral engagements will facilitate entry of South Africa products to markets like the EU, China, or Brazil. The trade policy and strategy are further informed by prevailing industrial policy and tariff setting is informed by sectoral strategies (DTI, 2012).

In addition to utilising the trade policy as an instrument for industrialisation, South Africa used public procurement to support the growth of the local manufacturing sector. The following section discusses efforts to develop the competitiveness of the manufacturing sector through promotion of localisation.

2.4.2. Developing industries through localisation

Though exports provide an opportunity to expand the manufacturing sector, the local market also provides an opportunity for industries to build their capacity and to develop local industries that are reliant on imports. To promote the development of local industries, countries can engage in localisation, which can also be used to reverse a country's deindustrialisation (merSETA, 2018). Localisation policy is guided by the desire to develop the competitiveness of the local industry.

In an effort to support the local manufacturing sector, the South African government also adopted public procurement as a tool to encourage demand for local products and support the local industry. Public Procurement has been used to stimulate demand for local industries affected by high imports such as the clothing and textile and steel sector. Public procurement is regulated by the Preferential Procurement Policy Framework Act, 5 of 2000. The act stipulates that state organs must award preferential procurement points system to "persons or categories of persons historically disadvantaged and in line with the implementation programmes of Reconstruction and Development program" (National Treasury, 2000). The Act aims to give priority to empowering historically disadvantaged people through giving them preferential treatment in procurement (Dawar & Oh, 2017).

To support the implementation of the act, the Preferential Procurement Regulation, 2001 further states that "any organ of state may, in the adjudication of tenders, give particular consideration to procuring locally manufactured products" (National Treasury, 2001). To further promote localisation strategy to develop local industries, government, business, labour and community signed the Local Procurement Accord under New Growth Path to support promotion of local procurement (Economic Development Department, 2011). The implementation of the New Growth Path Accord on leveraging public procurement saw the adoption of the amended regulation, Preferential Procurement Policy Framework Act: Regulations 2011 to designate certain sectors for local production and content when procured by state owned industries (National Treasury, 2011).

Under the regulation, the Department of Trade and Industry in consultation with the National Treasury can design sectors for local production in line with the industrial policy. Designated sectors are industries or sectors that are designated by the Department of Trade and Industry in accordance with the national development and industrial policies for local production, where locally manufactured goods must meet the minimum threshold for local production and content (National Treasury, 2011).

Local content requirement requires a certain percentage of immediate goods be procured from local manufacturers or producers. The objective of this requirement may be to develop competitiveness of local industries or to increase employment (Kuntze and Moerenhout, 2013). Through the local content programme of the DTI, the Act aims to generate employment opportunities and boost local manufacturing capacity (Fourie and Malan, 2020). Through the Preferential Procurement Policy Act Framework government stipulates preference to purchase locally manufactured goods (merSETA, 2018) thus encouraging development of local industries. The regulations of the Preferential Procurement Policy Framework Act went through an amendment process to designate certain sectors and products procured by the government for local production.

In addition to the use of the PPPFA to promote localisation through government procurement, the Department of Small Business Development developed the localisation policy framework to develop localisation interventions. The policy framework aims to support small, micro and medium enterprises (SMMEs) by building their manufacturing capacity, provide support towards export market penetration, provide a coordinated import replacement plan and

establish a funding framework (Department of Small Business Development, 2019). The targeted industries include agro-processing, steel manufacturing, components manufacturing for the automotive sector, clothing, leather and textile and petroleum and chemical products industries (Department of Small Business Development, 2019). The selection of targeted industries is in coordination with those targeted in the industrial policy. Localisation efforts demonstrate the government's commitment towards building local manufacturing capacity.

While localisation policy can support local industries, Negara (2016) states that consideration should be made on the nature of the industry and how it operates globally when determining sectors targeted under the policy. It is further stated that based on experiences from East Asia, localisation policies work best when they are used as temporary measures to help nurture firms for export competitiveness (UNECA, 2015). Despite the potential impact of public procurement as a tool to develop local industries, Sorte Junior (2016) states that the mechanism can have negative impacts such as corruption, price fixing and unfair competition. Opponents of localisation indicate that focus on local content requirements can lead to unintended consequences such as reduced competition and increased input costs (UNECA, 2015).

2.5. Industrial Policy and Labour

The successful development of labour-intensive industrialisation in East Asian countries is due to the comparative advantage in labour abundance and cheap labour (Sugihara, 2019). Human capital endowment is identified as one of the contributing factors to a sustained process of rapid industrialisation (Haraguchi, Martorano and Sanfilippo, 2019). Haraguchi et al (2019) further state that having lower labour costs in instances of an abundant labour force gives countries the comparative advantage in developing low-value-added products to initiate the process of industrialization. Lower labour cost in China gave the country a competitive edge in low-value added specialisation at the start of the industrialisation process (Haraguchi et al, 2019). South Africa is also characterised as a labour abundant country, however, due to the history of labour segregation, industrial development patterns and high labour costs, the country has not capitalized on its abundance of labour.

In addition to the abundance of labour, rapid industrialisation in South Korea and China is attributed to investment and upgrading the labour force’s skills in line with progression of the

value chain (Haraguchi et al, 2019). Human capital development is linked to economic growth through its impact on production (Moyo, 2018). Skills development is also seen as a way for countries to achieve growth and move from middle-income to high-income countries.

Chang (1998) describes a successful industrial policy as one which entails effective coordination between industrial policy, education, training, and labour policies. In reviewing the role of labour in East Asia's labour-intensive industrialisation, Sugihara (2007) further highlights that improvement in the quality of labour is important for continuous redefining and enlarging the scope of labour-intensive industries. The centrality of education and skills formation is one of the key features for the industrialisation success in East Asia (Naude, 2010). In addition to labour abundance, to countries to accelerate the industrialisation process, upgrading of skills is seen as essential. To effectively support labour-intensive industrialisation, the quality of labour is highlighted as essential to ensure that as the industrial structure changes, labour is developing at the same rate.

The following subsections will discuss the development of South Africa's labour market, the role of labour policy and the impact on the country's industrialisation path.

2.5.1. South Africa's labour market

South Africa's labour employment was dominated by semi-skilled occupations, making up 46 percent of the workforce in 2023, while skilled and low-skilled made-up 24.4 percent and 28.8 percent respectively (StatsSA, 2023). Low-skilled labour declined from 32 to 28.8 percent (StatsSA 2014; 2023), reflecting a shift in the labour dynamics. South Africa's manufacturing sector is described as skills intensive production (Fedderke and Mariotti, 2002). In 2017, the share of low-skill employment in the manufacturing sector was 16.4 percent, compared to 61.9 and 21.8 percent in semi-skilled and skilled employment (DTI, 2017).

Employment patterns in the manufacturing sector reflect a shift towards a semi-skilled and skilled labour force. South Africa's manufacturing sector is experiencing a shedding of semi and low-skilled jobs and an increasing demand towards skills intensification (Bhorat and Rooney, 2017). While there is a shift towards skills intensification, the labour market is experiencing a shortage of the required skills. The shortage of skills is identified as one of the contributors to the stagnation of the manufacturing sector, which affects the capacity to move up the value chain (Bhorat and Rooney, 2017).

Additionally, the DTI (2002) attributed the decline in the manufacturing sector employment to labour intensive sectors growing less rapidly than capital intensive sectors and the shift in the demand for skilled labour. Despite the direction of the manufacturing sector, South Africa's labour force is described as largely unskilled (Adam and Yu, 2022; Maisiri and Van Dyk, 2021). The state of the labour market is a result of the historical development of the labour and outcomes of the lack of effective skills development interventions.

Post-apartheid South Africa inherited a labour market that was marked by separate education systems for black and white people and an already growing demand for skilled labour in the manufacturing sector. Labour legislation in apartheid South Africa was guided by the separatist ideology which entailed protection of the white minority at the expense of the black majority (Venter, Levy, Conradie and Holtzhausen, 2009). The development of the manufacturing sector during apartheid was focused towards employing poor whites, while Africans were seen as substitutes (Mariotti, 2012).

Black, Craig, and Dunne (2018) further state that South Africa's adopted strategies have not exploited the country's comparative advantage of labour abundance but encouraged the production of capital-intensive sectors. One of the key factors that has been attributed to the decline in the labour-intensive industries is increasing wages and non-wage costs, which lead to the loss of labour competitiveness (Bhorat and Cassim, 2014 and Fedderke and Mariotti, 2002). This has resulted in firms adopting capital-intensive production. Furthermore, the cost of capital was deliberately influenced to reduce the demand for labour through government incentives (DTI, 2002). McGrath and Akoojee (2007) highlight that apartheid South Africa's industrial development path led to polarisation of skills - resulting in a serious underdevelopment of the intermediate skill segment which is essential for successful industrialisation and competitiveness.

The transition to a democracy resulted in reforms in South Africa's labour policy, with the adoption of the Labour Relations Act 66 of 1995, the Basic Conditions of Employment Act 75 of 1997 and Skills Development Act 97 of 1998. The new legislation aimed to restore equality in the labour market (Venter et al, 2009). The purpose of the Labour Relations Act was to provide a framework for the determination of wages, policy and promote orderly collective bargaining and employee participation (Venter, Grosset & Hills, 2003; Nel, Kirsten, Swanepoel, Erasmus, & Poisat).

Additionally, the Basic Conditions of Employment Act gave effect to regulating fair labour practices and regulating variations of basic conditions of employment for workers (Venter et al, 2003). The purpose of the act is to establish and enforce basic conditions of employment (Venter et al, 2009). The Skills Development Act 97 of 1998 aimed to promote development of skills, improve investment in training and development and establish a framework for training funds, SETAs and Skills Authority (Venter et al, 2003). Labour regulation reform sought to redress the past discrimination and ensure basic rights for employees are protected.

While labour policy was an instrument used to redress the discriminatory labour policies and to create base conditions for employment, they are seen as a contributor to the decline in labour intensity in the manufacturing sector.

2.5.2. Labour policy and employment outcomes

Christensen and Wibbels state that labour market regulations are one of the reasons for poor performance of the manufacturing sector in developing countries (Hasan, Mitra and Sundaram, 2013). Labour regulations including restrictions on hiring and firing, minimum wages and rules governing collective bargaining are seen as hindering industrial expansion (Hasan et al, 2013). In addition to high labour cost, literature has attributed the decline in labour-intensive production to South Africa's labour market rigidities. The identified rigidities include the difficulty of hiring and dismissal, the cost of dismissal and retrenchment, which is viewed as a deterrent to new recruitment (IMF, 2007).

Aron, Khan and Kingdon (2008) state that South Africa's labour market governance is too rigid for a country with unemployment conditions and labour segmentation. It is viewed that to address unemployment, the labour market should be flexible. In line with the view that labour regulation contributes to high employment, Hasan et al (2013) also indicate that labour regulations such as minimum wage and hiring and firing regulation are associated with higher capital intensity in production. The presented alternative to rigid labour policy is the promotion of labour market flexibility.

Fedderke and Hill (2011) state that improving the flexibility of the labour market is a key policy priority to decrease the high rate of unemployment. Labour market flexibility is described as the extent to which the labour market is free of protective or regulatory measures (Venter et al, 2009). Labour market flexibility is further defined as the capacity of labour markets to adjust to the market clearing wage suggested by labour productivity (Fedderke and

Mariotti, 2002). Hasan et al (2013) state that less restrictive labour regulations are associated with lower manufacturing capital intensity in industries prone to frequent labour adjustments. It is viewed that with a flexible labour market, the market can be above the abundant labour force. Black (2012) provides an alternative to overhauling policy and proposes the use of training and labour incentives to tilt industrial development towards labour-absorbing industries. This alternative maintains labour policy while supporting firms through incentives to absorb the required labour to participate in labour-intensive industries.

While there is a call for flexible labour legislation, there needs to be a consideration on what labour legislation aims to achieve and for government, business and labour to collaborate in creating an environment conducive for labour intensive industries. Countries that adopted a labour-intensive path promoted skills development through government leading skills development initiatives and directing investment in line with the economy's requirements. In addition to the labour market being seen as rigid, another inhibiting factor towards pursuing labour-intensive industrialisation is the misalignment between skills demand and supply. The following section will discuss the state of skills in South Africa and efforts to promote skills development.

2.5.3. The state of skills development

The industrialisation path adopted under apartheid is described to have contributed to a polarisation of skills and underdevelopment in intermediate skills (McGrath and Akoojee, 2007). Skills development amongst African labour was severely restricted (DTI, 2002), thus requiring post-apartheid government to emphasise skills development. The Skills Development Act 97 of 1998 was a step towards emphasising the importance of skills development. In 2001, the National Skills Development Strategy was adopted to address structural problems of the inherited labour market. The aim was to transform the market from a low skills one, to one dominated by a skilled labour force (Department of Labour, 2004).

Subsequent skills development strategies include the adjusted National Skills Development Strategy (2005-2010), which was guided by principles of supporting economic growth for employment creation, accelerating Broad Based Black Economic Empowerment and Employment Equity and aligning skills development with national strategies for growth and development (Department of Labour, 2005).

In line with efforts of skills development, development policies such as the New Growth Path, ASGISA and the National Industrial Policy Framework highlighted the role of skills development to achieving growth objectives. The National Growth Path highlighted that the growth path requires review of the training system to address shortfalls in artisanal and technical skills (Department of Economic Development, 2010). The NGP further highlighted importing workplace skills, highlighted the central role of Further education and training (FET) colleges and introducing Information and communication technology (ICT) skills and skills level and training to public services (Dept. Economic Development, 2010). Despite policy interventions in skills development, the manufacturing sector is characterised by low and skilled workers.

According to the DTIC (2011), a key constraint to sustainable industrialisation in South Africa has been the absence of demand-driven, sector-specific skills strategies aligned with investment and employment from key industrial strategies under IPAP. This view aligns with industrialisation literature's emphasis on human capital development. In reflecting on the state of South Africa's manufacturing sector, Bhorat and Rooney (2017) state that South Africa's skills shortage inhibits the manufacturing sector from moving up the value chain and producing more sophisticated manufactured products.

South Africa is compounded by skills shortages that result in a structural mismatch between labour demand and supply (DHET, 2022). The DTI (2018) further states that the manufacturing sector is reliant on skilled labour to operate advanced technology and the mismatch between demand and supply of skills is a key growth constraint. With the skills shortage, Pretorius (2015) states that with the sector's demand for a skilled labour force, education and training should be a priority to ensure the labour force meets the demands of the market. To address the challenges in the labour market requires investment in human capacity to improve the skills base of South Africa as demonstrated by the path followed by industrialised countries such as Korea and Japan.

In addition to reflecting on efforts to promote the growth and competitiveness of the labour-intensive sectors, the study will also look for support towards promoting skills development in the sector. In section four the study will reflect on efforts to promote skills development in the manufacturing sector guided by the industrial policies.

2.6. South Africa's premature deindustrialisation

Though South Africa proceeds to implement industrial policy, the country is seen as currently undergoing premature deindustrialisation. There are three identified types of deindustrialisation, namely deindustrialisation which is seen to be experienced by advanced economies (Rodrik, 2015), premature deindustrialization which is seen when countries deindustrialise before reaching peak point of industrialisation as per international patterns and pre-industrialisation deindustrialisation (Tregenna, 2015).

Pre-industrialisation deindustrialisation is described to take place when the shares of manufacturing to total employment and GDP is still very low (Tregenna, 2016). Deindustrialisation can be identified through the decline of the manufacturing sector output and employment, shown in its strongest form in employment deindustrialisation (Rodrik, 2016). Tregenna (2015) identifies that there are two aspects at which deindustrialisation commences, a, the level of the country's income per capita and how high a share of GDP and manufacturing total income at the onset of deindustrialisation.

Deindustrialisation is a drop in manufacturing employment when countries reach a certain level of per capita income (Palma, 2014; Tregenna and Andreoni, 2020). It is further defined as a sustained decline in the share of manufacturing total employment and contribution to GDP (Tregenna, 2015). Tregenna et al (2020) find the income per capita turning point at which the share of manufacturing in the total employment begins to decline to be $13,038, similar to what is found by Rowthorn at US$12,000 (using data for 1990) (Palma, 2014).

Premature deindustrialization is seen as deindustrialisation that sets in at lower shares manufacturing and lower levels of GDP per capita than would be (Tregenna et al, 2020; Tregenna, 2015). Premature deindustrialization is defined as a stage when a country's manufacturing sector peaks at earlier stages of economic development and the shift towards the services sector (Haraguchi et al, 2019). Tregenna (2015) further describes premature deindustrialisation as when a country manufacturing has not yet reached the share of employment and GDP associated with turning point for industrialisation. South Africa falls in this trajectory of premature deindustrialisation.

Tregenna (2015) indicates that sources of deindustrialisation include increasing import penetration of manufactured goods and outsourcing of jobs from manufacturing to services. Tregenna (2015) further states import penetration of manufactures from relatively low unit

labour cost producers has appeared to be an important contribution to deindustrialisation in middle income countries. Rodrik (2016) also states that trade and globalisation have also contributed to deindustrialisation in developing countries. Employment deindustrialisation experienced by advanced countries is attributed to technological progress. Another identified cause of is change in economic policy (Palma, 2014; Tregenna, 2015). An example of policy-induced premature deindustrialization is seen in Chile after the 1974 coup where conservative economic policies were implemented (Tregenna, 2016)

The decline of manufacturing and the rise of the services sector. The early transition from manufacturing to services due to premature industrialisation can jeopardise the potential of the services sector to act as an alternative engine of growth (Tregenna, 2015). The services sectors are likely to be relatively low-skilled, low-productivity, and non-tradable such as retail and personal services and their ability to expand is constrained by incomes in the rest of the economy (Tregenna, 2015; Rodrik, 2016).

Looking at the share of manufacturing in total employment between the period of 2005 and 2015, Andreoni and Tregenna (2018) find that manufacturing to total employment fell from 13.9 percent to 11.2 percent lower than predicted, demonstrating deindustrialisation. Rekha and Suresh (2022) further find that South Africa meets the condition of premature deindustrialisation in terms of share of manufacturing value-add and share of manufacturing in total income.

Additionally, South Africa's service sector has surpassed the manufacturing sector in terms of contribution to GDP growth and contribution to employment. Between 2007 and 2022 the manufacturing sector's contribution to GDP declined from 14.28 to 11.31 percent, while the services sector grew at the same period (StatsSA, 2022). At the same period service industries such as Personal Services contributed 15 percent, while finance and business services growth grew from 19.6 to 23.9 percent respectively. The performance of the manufacturing sector below services industries such as personal services is consistent with the identified pertains to premature deindustrialisation as discussed above.

The following sector will reflect on the theoretical framework adopted to guide the study.

2.7. Theoretical framework for the research

A theoretical framework is the theory that a researcher uses to guide the research (Imenda, 2014). The study reflects on the outcomes of industrial policy changes in promoting the development of the manufacturing sector. The study adopts the path dependency framework as its theoretical framework. Path dependence theoretical perspective is anchored in current policy choices being constrained by institutional paths set by choices made in the past (Torfing, 2009). Despite efforts to shift the policy trajectory, policy can be constrained to support the status quo (Baumgartner, 2013). This theoretical perspective is relevant and applicable to this study as it will aid this study explaining why the industrial policy is reproducing the same outcomes instead of transforming the manufacturing sector.

As such, this framework is adopted to explore the extent to which South Africa's industrial development patterns have reinforced focus on capital intensive sectors under the current industrial policy. Literature on the topic attributes the manufacturing sector's inability to promote labour-absorbing growth to government interventions reinforcing capital intensive production (Black et al, 2016). The adoption path dependence framework will support the research to explore to what extent the current policy choice is shaped by institutional paths that result from choices made in the past (Torfing, 2009). By adopting path dependence theory, the research will explore whether the history of industrial development in South Africa has an influence on the outcomes of the current industrial policy.

2.8. Conclusion

There is extensive literature examining the role of the industrial policy in addressing South Africa's high unemployment, assessing the capacity of the policy to promote labour-absorbing growth and to transform the manufacturing sector. Literature states that the manufacturing sector has remained capital intensive, and that policy support to the manufacturing sub-sectors has been biased towards capital intensive sectors. To promote labour intensity in the economy, investment in the labour-intensive sector is essential. Additionally, to promote labour intensity, the economy requires the requisite skills to support growth of such sectors. The research will assess impact of policy interventions in the labour-intensive sector by assessing sectoral strategies, skills development and incentives developed. This will be done by reviewing industrial policy interventions through the

industrial policy action plans, sector strategies and the masterplans. The research will focus on supporting labour intensive sectors through incentives programs, sectoral support, and skills development initiatives to facilitate skills promotion.

Chapter 3 - Research Strategy, Design, Procedures and Methods

This chapter presents the research strategy, design and procedures, and methods employed in this research to collect, process, and analyse the data collected. It also described the research instruments used for data collection, the validity and reliability of the instruments, and the methods and procedures for data analysis.

3.1. Research Strategy

Researchers can use various paradigms to conduct their studies. Kivunjan& Kuyini (2017) view the research paradigm as the abstract beliefs and principles that shape the researcher's worldview, and how they interpret that world. Through this lens, the researcher examines the methodological aspect of the research and determines the research methods that will be used in the research (Kivunjan et al, 2017). The research paradigm presents a position about the nature of reality and how we approach to understand reality (Dawadi, Shrestha, & Giri, 2021). The paradigms comprise of four elements, ontology, epistemology, methodology and axiology (Kivunjan et al, 2017). The following section will discuss the ontological and epistemological view of the study which will inform the methodological decision in data collection, analysis and interpretation.

3.1.1. Ontology

Ontology describes the nature of reality (Creswell and Creswell, 2018). Ontology looks at the nature or essence of the social phenomenon being investigated (Kivunjan et al, 2017). To understand the nature of reality, the study considers two major positions, objectivism and constructivism. Objectivism is described as a position that implies that a social phenomenon is beyond our reach or influence (Bryman, 2012). This position assumes that reality cannot be influenced by social actors.

The alternative position is constructivism, which asserts that social phenomena and their meaning are continually being accomplished by social actors and through social interaction are constantly revised. Constructivism further views reality as a product of human interaction

with the real world (Dawadi et al, 2021). Based on the above description position and the research topic, the study adopts the constructivist view of reality. The study views industrial policy as a tool that the government uses to respond to the socio-economic challenges of a country. Based on this view, the research views the social world as continuously constructed and reconstructed. Policies such as the National Industrial Policy Framework or National Development Plan demonstrate the view that society is constantly in reconstruction and needs to respond to the changes.

3.1.2. Epistemology

Epistemology considerations describe what is regarded as knowledge in a discipline (Brynman, 2012). Epistemology is further concerned about the nature and forms of knowledge and how it can be acquired (Reham and Alharthi, 2016). To determine what can be considered as knowledge, the study considers two positions, the positivist and interpretivist view on what is considered as acceptable knowledge. Positivism assumes that reality exists independently of humans (Reham and Alharthi, 2016). As an epistemological position, advocates for the application of natural science methods to study social reality (Bryman, 2012). A positivist worldview is one that is grounded on the scientific method of investigation (Kivunjan et al, 2017). This view advocates that knowledge is gathered objectively from variable factors using quantitative means (Dawadi et al, 2021).

An alternative on what can be considered as knowledge is interpretivism, which seeks to understand the world through human experience (Kivunjan et al, 2017,) and believes in multiple realities (Dawadi et al, 2021). Interpretivism seeks to understand social phenomena and interpret them further through tools such as interviews, focus groups and participant observation (Dawadi et al, 2021). The study adopts the view that knowledge is gained through interpretation of policy documents. The study further adopts the view that the world can be understood through various perspectives and that to understand the impact of the current industrial policy on job creation in the manufacturing sector, can be done through understanding the multiple perspectives.

The study adopted the constructivist and interpretivist paradigm, which informed the methodological decision, data collection and analysis of the research.

3.2. Research Design

Research designs are approaches that provide direction for the procedures in a research study (Creswell & Creswell, 2018). There are three approaches available for a researcher to conduct their study, name quantitative, qualitative and mixed methods. A qualitative research approach is described as an approach for exploring and understanding meaning ascribed to a social or human problem (Creswell and Creswell, 2018). Quantitative research approach tests objective theories by examining the relationship among variables (Creswell and Creswell, 2018). The quantitative research approach provides a detailed understanding of the social phenomenon being investigated (Dawadi et al, 2021). Quantitative approach entails collection of data from a large number of participants to allow for generalisation of finds to the wider population (Dawadi et al, 2021). Mix methods approach is described as a process of integrating both quantitative and qualitative data in a single study (Creswell and Creswell, 2018) (Bryman, 2012).

Based on the adopted ontological view and epistemological view on how knowledge is generated, the research adopted a qualitative research approach. The approach will allow for the study to gather an in-depth understanding of the research topic. The following section will discuss the research procedures and methods adopted in the study, guided and adopted research approach.

3.3. Research Procedure and Methods

In a qualitative research approach, the researcher has access to several data collections, namely, focus groups, interviews, observations to collect data. The following section documents the procedures and methods employed in the research to collect, process, and analyse the findings.

3.3.1. Data collection instruments

Data collection methods are ways in which data is collected to respond to the research question. Data collection methods available to qualitative researchers include document analysis, observations, semi-structured interviews and focus groups. To respond to the research question, the research adopted a document analysis approach to collect data on why the current industrial policy failed to create employment in the manufacturing sector. Document analysis entails the review of written materials (Busetto, Wick and Gumbinger,

2020). According to Bowen (2009), document analysis is a systematic procedure for reviewing or evaluating documents. The document analysis involves the analysis of pre-existing textbooks, journal articles, or official documents from the state (Bryman, 2014) (Morgan, 2021). Additionally, the research has access to observations which can be participatory or non-participatory in nature. In participatory research, the observer is part of the observed setting (Busetto et al, 2020). Finally, there are semi-structured interviews and focus groups. Semi-structured interviews are. And lastly, focus group instrument is a technique of interviewing which involves more than one interviewee (Bryman, 2012). Focus groups explore the participants' expertise and experiences (Busetto et al, 2022).

The selection of document analysis as the single data collection instrument used in the study is informed by the research topic and limited resources available to support the data collection activity. The research focuses on studying South Africa's industrial policy over time and thus the study focuses on assessing the implementation of the policy and reflecting on the outcomes. This process entailed reviewing policy documents, the adopted instruments to support policy objectives and the outcome. Additionally, the selection of document analysis as a single data source was influenced by the acknowledgement of limited resources to support the data collection process. The researcher reflected their proximity and time frame to access key institutions leading implementation of industrial policy to conduct stakeholder interviews. Due to the lack of access to key institutions involved, the researcher opted to proceed on a single data source to proceed with the research.

3.3.2. Target population and samplings

To establish industrial policy interventions towards the development of the manufacturing sector, institutions that are involved in the drafting and implementation of the industrial policy during data collection. The researcher adopted purposive sampling which allows for the selection of documents that are strategically relevant to the research (Wotela, 2017). purposely select documents that guided the implementation of industrial policy and instruments adopted such as incentives to support the implementation of the policy. The research identified the Department of Trade, Industry and Competition and the Industrial Development Corporation, who are leading the drafting of industrial policy and support the implementation of the industrial policy respectively. The research also targeted the Department of Statistics South Africa to gather data on the manufacturing sector production

and employment and contribution to the GDP and the South African Revenue Services to gather data on the country's trade data.

Key qualitative sources include:

- Industrial Policy Action Plans
- National Industrial Policy Framework
- Industrial Development Corporation Integrated Reports
- Re-imagined industrial policy strategy
- Masterplans
- DTI policy statements
- New Growth Path
- DTI Annual Incentive Reports

Key quantitative sources include:

- StatsSA Quarterly Employment Statistics (QES)
- South Africa Revenue Services (SARS) Merchandise Trade Statistics
- StatsSA Manufacturing Production and Sales Reports

The research used statistical data to help understand the implication of the adopted industrial policy action plans on the performance and job creation in the manufacturing sector.

3.3.3. Data and information processing and analysis

Data analysis is described as a process of making sense out of text and data (Creswell and Creswell, 2018). Leavy (2017) defines data processing and analysis as a process that entails general phases of analysis which include data preparation and organisation, immersion, coding, theming and interpretation. Guided by the above-mentioned phases, the first phase was the preparation of qualitative data which entailed scanning of government policies such as policy statements, annual reports and policy action plans. In addition to qualitative data, quantitative data was collected to assess alignment between policy intervention and financial incentives disbursed. Furthermore, the study collected quantitative data associated with the implementation of the policy, performance of the manufacturing sector, namely the sector's contribution to GDP and employment. The data included financial incentives data, trade data, employment data at GDP data. The quantitative data extracted from DTIC's Annual Incentive Report, SARS Merchandise Trade Statistics data, StatsSA Manufacturing Industry: Production data. The collected data was saved on google drive and categorized by the

document type, for example, industrial policy action plans, annual reports, and incentive reports.

The gathered documents were reviewed to identify key data, identify additional areas for research and initiate the process of developing codes. To sort data collected, codes were generated. The coding process entails assigning words or data to segments of data (Levy. 2017). The collected qualitative data was organised into themes. The quantitative data was extracted from the collected reports, and organised onto an Excel spreadsheet in line with the allocated themes. The research also collected time series data available on StatsSA to gather quantitative data on the manufacturing sector's production and sales data, GDP data and employment data. The identified codes allowed for summarizing the collected data and to identify key research themes which are explored in the next chapter.

3.4. Research Strengths (Reliability and Validity Measures)

To ensure the accuracy of the findings in the study, researchers employ certain procedures to confirm the validity of the findings (Creswell and Creswell, 2018). To ensure the validity of the data, the researcher authenticated the accessed documents and checked the credibility and accessed representativeness of the selected documents (Morgan, 2021) (Creswell and Creswell, 2019). Authenticity of a document is described as the extent to which the document is genuine (Morgan, 2021). The research data collected are public records that can be accessed on the organisation sessions. Documents such as the IDC annual reports and the IPAP are stored on the organization's accessed by the public.

To ensure validity of the data gathered, the researcher should ensure the credibility of the document. A credible document is one that is free from error or distortion (Morgan, 2021). The data gathered were final reports from the targeted institutions and did not demonstrate any tempering.

3.5. Research Limitations

One of the identified limitations of using documents as the sole data source can raise questions about the biased selectivity of documents (Bowen, 2009). Conducting research with

documents as the sole source therefore raises questions about biased selectivity (Bowen, 2009). As the identification of documents for analysis is solely reliant on the researcher, the researcher used multiple documents from various sources namely, the DTI, IDC and other publications to achieve a comprehensive understanding on the implementation of industrial policy.

A significant limitation associated with document analysis as a data source is the availability of data sources on certain subjects (Morgan 2021). This constraint hindered access to relevant materials for analysis across key topics. For example, obtaining key documents such as incentives reports was difficult because some reports were not available on public platforms, which in turn limited the timeframe for analyzing patterns of sectoral support.

Noting that reliance on document analysis can limit the researcher in exploring the reasons for the discontinuation of some interventions and eliminate the capturing of the perspectives of other key stakeholders involved in the implementation of industrial policy interventions, the researcher had intended to employ semi-structured interviews to supplement data collection. However, the request to conduct interviews with relevant stakeholders from identified institutions was denied by the concerned institutions and this left document analysis as the only viable option to conduct the study.

As such, the absence of primary data might have an adverse impact on the empirical depth of the findings. This is so because document analysis being employed as the only data collection tool, while it allowed the researcher to respond to the research question, limited the research to the perspective of government and industrial policy implementing agencies. Furthermore the absence of primary data limited the opportunity for the researcher to rigorously triangulate the data. The triangulation of data is described as a way for the researcher to guard against the accusation of the study findings as a single investigator's bias (Bown, 2009).

3.6. Ethics

Ethical considerations in research take into account potential harm to participants, informed consent, privacy and confidentiality and accuracy in the field research setting (Bryman, 2012) (Wagner, Kawulich, Garner, 2012). Informed consent means that participants agree to participate in the study, while privacy and confidentiality involve protecting the identity and

location of the research participant (Wagner et al, 2012). Accuracy means that the researcher must report that is factual (Wagner et al, 2012). Based on the data collection method used in the research, the research did not require ethical consideration. The research received the University's ethical standards approval before research commenced. To ensure an ethical process is followed in data collection, the researcher accessed documents that are available on public platforms such as institutional websites and approved reports.

3.7. Conclusion

The chapter discussed research strategy and methodology adopted in the study. Guided by the constructivist and interpretivist paradigm, the study adopted a qualitative research strategy. The data collection instrument used was document analysis. To identify documents to be analysed, the purposive sampling was adopted to identify documents related to the implementation of industrial policy and the outcomes of the research. Additionally, the chapter discussed the strengths and limitations of the study were identified and presented.

Chapter 4 - Results and Analysis

4.1. Introduction

This chapter presents the findings obtained through the analysis of industrial policy documents including the National Policy Framework and Industrial Policy Action Plans, and documents reporting the implementation of this industry policy by key implementing partners such as the Department of Trade, Industry and Competition, and the Industrial Development Corporation (IDC). The analysis will explain why the current industrial policy failed to promote employment creation in the manufacturing sector. Through the analysis, the research establishes whether policy interventions targeted at the manufacturing sector have had a positive impact on the sector, in terms of the sector's contribution to the GDP and employment.

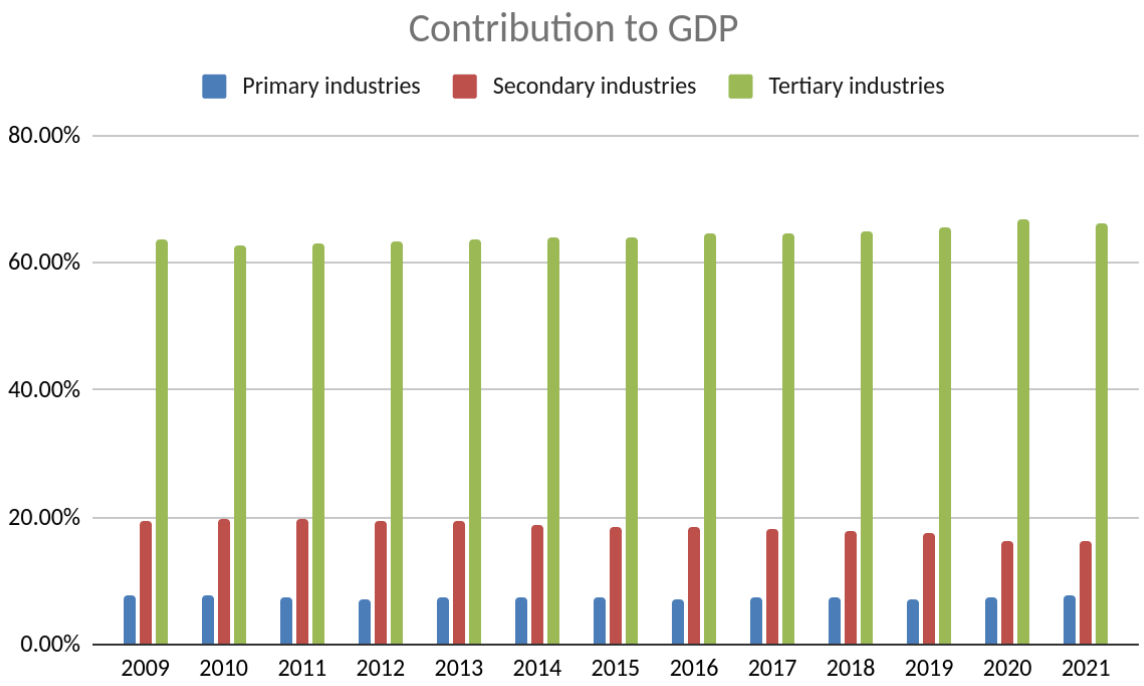
4.2. Presentation of finding and emerging themes

The findings from document analysis were grouped into themes related to interventions adopted in the industrial policy to develop the manufacturing sector. As the research is assessing the impact of industrial policy intervention in promoting growth and job creation in the sector, the research also analysed the statistical performance of the sector to measure the impact of interventions.

One of the key objectives of the NIPF is to promote a more labour-absorbing industrialisation path with emphasis on tradable labour-absorbing goods and services and economic linkages that catalyse employment creation (DTIC, 2007a). The manufacturing sector's overall contribution to gross domestic product (GDP) and total employment recorded a decline over time raising a question of the role of the manufacturing sector to promote growth and employment creation. Through the Industrial Policy Action Plan and sectoral incentives schemes, the manufacturing sector has received significant support to facilitate transformation of the sector. South Africa has seen a growth of the tertiary sector which includes government, finance, personal services, while the secondary sector, including manufacturing, utilities, and construction sector declined over time. Between 2009 and 2021, the tertiary sector's contribution to the GDP grew from 63.6 to 66.3 respectively (StatsSA, 2022). Over the same period, GDP contribution by secondary industries declined from 19.4 to

16.3 percent (StatsSA, 2022). Figure 1 demonstrates the performance of the primary, secondary and tertiary industry between 2009 and 2021.

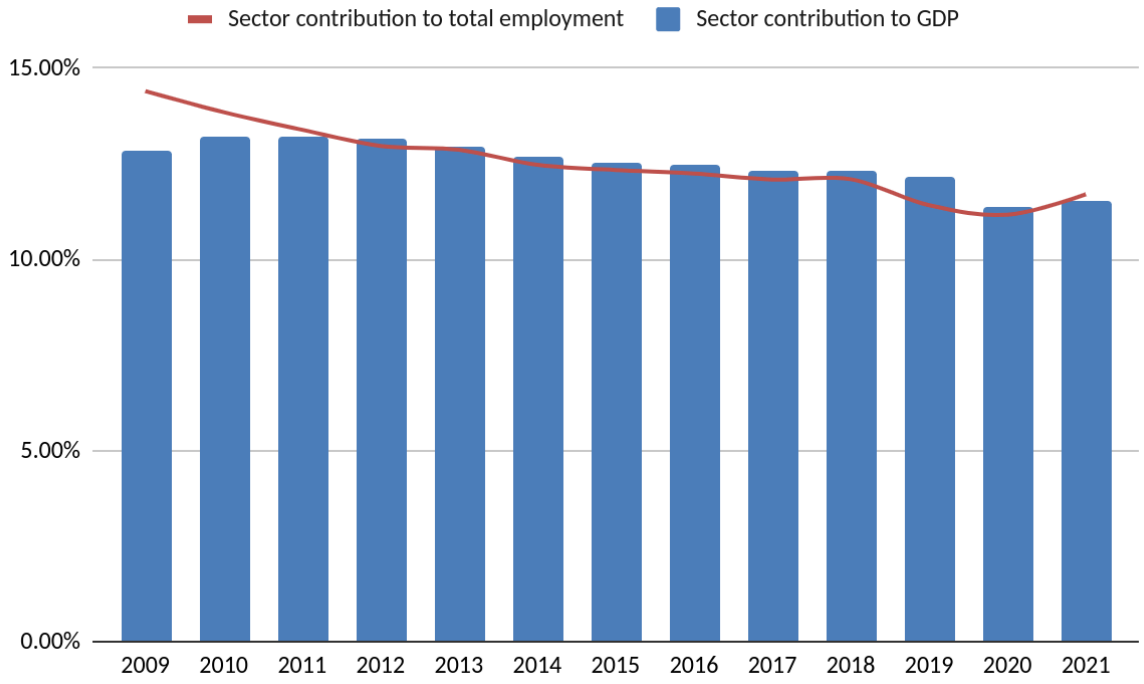
Figure 1: Industry contribution to GDP between 2009 and 2021



Sources: StatsSA, 2022

In trend with the secondary industries decline, the manufacturing sector declined from 12.8 to 11.6 percent between the period of 2009 and 2021 (StatsSA, 2022). The manufacturing sector's contribution to total employment followed a similar trend with the sector contribution GDP. Figure 2 demonstrates the contribution of the manufacturing sector to the GDP and to employment between 2009 and 2021. The observed period coincides with the implementation of the NIPF and iterations of IPAPs which will allow for the study to assess the impact of the ten iterations of the IPAPs and incentives schemes.

Figure 2: Performance of the manufacturing sector between 2009 and 2021



Source: StatsSA GDP (Constant prices) and QES (2021)

Over the period of the implementation of the National Industrial Policy Framework and Industrial Policy Action Plan, the manufacturing sector's contribution to the GDP and employment remained below 15 per cent and declining over time to contribute 11 per cent to the GDP and overall employment. The period between 2011 and 2020 demonstrates a decline in the share of the manufacturing sector's contribution to GDP and manufacturing contribution to total employment. The performance of the sector is consistent with the definition of deindustrialisation where there is a sustained decline in both share of manufacturing in total employment and share of manufacturing to GDP as discussed earlier. The sector's contribution to employment also demonstrated a downward trend with a slight growth between 2020 and 2021 in line with the sector's recovery following COVID. To further understand the impact of industrial policy on the manufacturing sector, the research reflects on the sectoral interventions and implications of the intervention.

4.2.1. Sector identification

Literature on industrial policy documents that certain sectors have the capacity to absorb labour. The NIPF identified five sectoral groupings where potential sectoral diversification, industrial growth and employment creation lies, namely in natural resources-based sectors,

medium technology sectors, advanced manufacturing sectors, labour-intensive sectors and trade services (DTI, 2007a). The natural resources-based sector includes the petro-chemicals, steel, aluminium, paper and pulp industries and they are described to be capital and energy-intensive (DTI, 2010b). In the natural resources-based sector, the government saw a role in addressing pricing problems between these sectors and more labour-intensive downstream sectors and the opportunity of value addition in primary activities such as mining and agriculture (DTI, 2007).

Medium technology sectors including downstream beneficiation is another sector the NIPF saw as an opportunity for diversification. These sectors include machinery and equipment, chemicals and plastics and metal fabrication (DTI, 2007a). They were established apartheid and employ a substantial number of people and are identified to have the potential for downstream beneficiation (DTI, 2007a). These sectors were targeted to stimulate investment and growth in the sector. Between 2007 and 2021, these industries recorded increased production income, with the chemical and plastics sector growing from R236 million to R678 million (Statistics SA, 2017,2021). Additionally, the metals sector also increased production income from R251 million to R429 million (Statistics SA, 2017; 2021).

The NIPF also focused on the development of advanced manufacturing sectors which are described as having high levels of skills and technology requirements (DTIC, 2007a). The development of these industries is targeted towards stimulating innovation and creating skills and technologies that spillover to adjacent industries (DTI, 2010b). These sectors include aerospace, electronics and nuclear energy. To facilitate development of these industries targets support include prioritisation through sector competitiveness and skills support (DTI, 2010b).

Labour intensive industries are described as industries that are relatively large employers of lower skilled labour and provide opportunity for smaller producers (DTI, 2007a). These sectors include clothing and textiles, food and beverages, footwear and certain parts of mining (DTI, 2007a). Similar to the other sectors, the development of the sectors was through sectoral strategies and incentives programmes such as the agro-processing scheme, clothing, footwear, textile and leather production incentive programme. Support for labour intensive sectors will be discussed in the next section. Between 2007 and 2021, the food and beverage sector contribution to manufacturing income production grew from R190 million to R593

million, while furniture sector grew from R53 million to R91 million and the textile, clothing and leather sector growth from R41 Million to R59 million respectively (Statistics SA, 2021). The production income from the sector demonstrates that there has been some growth in the industry over time.

Trade services targets services such as business process outsourcing, ICT services and film (DTI, 2007a). Targeted industries in the services sector are those identified to have characteristics to absorb labour and generate value addition (DTI, 2007a). Through the incentives program support to the services sector include the business process services programme and the Film and Television Production Incentive. The Business Process Services (BPS) incentive programme aimed to support a competitive business services sector industry (DTI, 2017b). Skills development and training support to the BPS includes the Monyetla Work-Readiness Program which focuses on improving service standards and skills requirements (DTI, 2014).

The study will focus on the manufacturing, primarily labour-intensive sector as these sectors were earmarked to promote employment due to their labour intensity. In line with the objectives of the NIPF and IPAP, the manufacturing sector accessed the largest share of grants. Support to the sector aimed to create economic diversification of local products and exports (DTI, 2018).

The NIPF and IPAP organized sectors into categories to determine the intervention for the sector based on the level of development of each sector. The first iteration of the Industrial Policy Action Plan (2007b) documents ‘four lead sectors’ to fast track implementation to include the capital/transport equipment and metals sectors, the automotive and components sectors, the chemical, plastic fabrication and pharmaceuticals sectors and the forestry, pulp and paper and furniture sectors. These lead sectors were identified as central to the implementation of the NIPF (DTI, 2007b).

In the subsequent IPAP iterations (2,3,4), the sectors are identified in three clusters, with cluster 1 entailing already supported industries such clothing, textiles and footwear and automotive products, agro-processing, and sectors with potential for long-term advanced capabilities. Cluster 2 and 3 entailed qualitatively new areas of focus which include industries such as green & energy-saving industries, downstream mineral beneficiation and boat

building and developing long-term advanced capabilities which include aerospace & defence, electro-technical and nuclear (DTI, 2012). The clustering of sectors informed the type of interventions per sector, while addressing constraints facing these sectors and opportunities for growth. While the NIPF and IPAPs emphasize the need for labour-intensive growth, industry support remains disproportionately biased toward advanced industries

The New Growth Path (Economic Development Department, 2010) identifies that the government "can support labour-absorbing activities, especially in the agricultural value chain, light manufacturing and services to generate large scale employment." It is further stated that "governments can encourage investment in targeted sectors by prioritising labour activities for the provision of appropriate cost-effective infrastructure, measures to improve skills and subsidise production and innovation" (EDD, 2010). Reflecting on the different levels of development and the potential of the manufacturing industries, the New Growth Path further highlights that the "state focus on facilitating growth in sectors able to create employment at a large schedule and should not neglect advanced industries crucial for sustained long-term growth" (EDD, 2010).

With the continued support to advance industries and industries that can contribute to employment creation, a balanced support to industries required in the implementation of the industrial policy to ensure that sectors with the capacity for growth labour absorption are not neglected. Based on the disparities in industrial development, an effective industrial policy intervention should focus on supporting previously neglected or emerging industries with potential to transform the economy while facilitating growth of historically supported industries. While the NIPF and IPAPs emphasize the need for labour-intensive growth, support remains disproportionately biased toward advanced industries. Understanding that the manufacturing sub-sectors have different labour absorption capacity, the research reflected on patterns of support towards labour-intensive. To understand the performance of the manufacturing sector, the following section reflects on the support provided to capital against labour-intensive sectors.

4.2.2. Balancing support between labour vs capital-intensive sectors

The industrial policy action plan and master plans highlight the importance of balanced sectoral interventions towards capital-intensive and labour-intensive sectors. One of the short

to medium team steps identified in the New Growth Path was to support labour absorbing activities, particularly light manufacturing and services to generate large scale employment (Economic Development Department, 2010). Identified instruments to promote private sector investment in targeted sectors included provision of appropriate and cost-effective infrastructure, regulatory interventions, improving skills and providing subsidies to production and innovation (EDD, 2010). The Industrial Policy Action Plans align with this vision, with key actions plans in the IPAPs targeting setting up regulatory frameworks for sectors such as the agro-processing sector, skills development initiatives and incentives schemes to promote firms production capacity and encourage innovation. Targeted sectoral interventions will be discussed in the following sub-section.

Successful industrialisation in East Asia is attributed to labour intensive industries. Similarly, South Africa's industrial policy aims to achieve labour intensive growth through labour intensive sectors. The IPAP identifies sectors with 'high employment multiplier and strong backward linkage', namely leather and leather products, foods, textiles, apparel, and wood and wood products, as having the capacity to absorb labour (DTI, 2011 and 2013). These sectors are seen as labour intensive, and can absorb unskilled labour. Beyond identification of sectors with the capacity to absorb labour, the study reflected on support provided to these sectors in comparison to labour intensive sectors.

To examine the support provided to labour intensive sectors in comparison to capital intensive sectors, the study reflected on the funding approvals from the IDC and the DTI incentive schemes. The comparison sought to establish whether there has been a path shift from capital to labour intensive industrialisation. Table 1 reflects on the DTIC's incentive approvals between 2016/17 to 2020/21. The selected period allows for the study to explore whether there has been a shift in the targeted or identified strategic sectors to promote growth in the manufacturing sector since the adoption of the NIPF and subsequent IPAPs.

Table 1: Project approvals for strategic sectors supported by the DTI

Sectors	2016/17	2017/18	2018/19	2019/20	2020/21
Agro-Processing	R2.9bn	R627m	R579m	R434m	R1.9bn
Transport and Equipment (Automotive)	R12.7bn	R2.7bn	R2.5bn	N/A	R785m

Metals (Steel and metal fabrication)	R2.9bn	N/A	N/A	N/A	R1.2bn
Chemical Products, Pharmaceuticals and Plastics	R7.5bn	R1.5bn	R788m	N/A	R353m
Wood, Paper and Furniture	R922.4m	R842m	N/A	N/A	
Textiles	N/A	R144m	R99m	N/A	R6m
Mineral beneficiation	N/A	R166m	R19,6m	R79.5m	R640m

Source: DTIC (2016/17 - 2020/21)

Under the period under review, the agro-processing, transport and equipment, and chemicals sectors have been identified as key industries for investment. Funding approvals in the identified key strategic sectors between the period of 2016/17 and 2020/21 demonstrates that DTI incentive approvals were concentrated in capital intensive sectors, namely transport and equipment industry, chemical and metals sector. The transport and equipment sector remains a key strategic sector and the largest recipient of DTIC funding. The incentives approvals present a continued bias towards the capital-intensive sector.

Similarly, the IDC funding approvals were towards capital incentive industries. Between 2016 and 2020, the IDC funding approval demonstrated that while policy sought to promote labour-intensive sectors, the loan funding approvals in the manufacturing sector are towards capital intensive sectors such as metals and mining and chemicals and pharmaceuticals. The data on IDC funding approvals indicates that the metals and mining and chemicals and pharmaceuticals consistently received the largest approvals value in comparison to labour-intensive sectors as identified in the NIPF and IPAPs.

Table 2: IDC funding approvals between 2016 and 2020

Sectors	2016	2017	2018	2019	2020
Metals and Mineral Beneficiation value chain	R6 bn	R8.5 bn	R8,765 m	R5,117 m	R5,584m
Agro-processing and agriculture value chain	R614 m	R203.4 m	R980 m	R1,047 m	R201m

Chemicals and pharmaceuticals	R4.7 bn	R2.9 bn	R2,187 m	R3,100 m	R4,834m
Clothing, textiles, leather and footwear	R554 m	R433.5 m	R595 m	R977 m	R419m

(*Source: IDC Annual Reports 2015-2020)*

The IDC funding approvals follow the same pattern of approvals of the DTIC incentive funding approvals over the same period. Funding under the industrial policy has been concentrated in capital intensive sectors. The data demonstrates that the value chain with the largest funding approvals is the metals and mineral beneficiation, and the chemicals and pharmaceuticals sector. The mining and beneficiation value chain, comprising mining, basic and fabricated metals, motor vehicles, parts and accessories and machinery and equipment are the largest recipient of the funding.

The value chain is dominated by the mining sector, while the manufacturing industries including base metals, motor vehicles and parts, machinery and equipment make up 55% of the funding to the value chain (IDC, 2020). Employment patterns demonstrate that in 2022 capital-intensive industries contribute 54.9 percent of total manufacturing employment, with the base metals and fabricated metals, chemicals and chemical products and transport equipment industries contributing 22, 14.34 and 9.83 percent respectively (StatsSA, 2022).

Funding support to labour-intensive industries has been directed towards the agro-processing sector and the clothing, textiles, leather and footwear sector. The agro-processing and agriculture value is the largest recipient of funding in terms of labour-intensive sectors. Between 2016 and 2020, the food processing industry was the highlight receipt of funding, attracting 31 percent of funding to the value chain (IDC, 2020). The industry's contribution to total manufacturing employment also saw growth from 17.6 to 22.45 percent in 2009 and 2022 respectively (StatsSA, 2022). In terms of total manufacturing income increased by 6 percent from 17 percent in 2005 to 23 percent in 2021 (Status SA, 2021). The sector has demonstrated growth in both total income and employment contribution.

While the clothing, textiles, leather and footwear sector is seen as a key sector to absorb labour, the sector's contribution to total manufacturing employment is on the decline. In 2022 the CTLF sector contributed 5.8 percent to employment, a decline from 9.2 percent in 2009

(StatsSA, 2022). The significant job losses in the sector has been in the clothing industry, declining from a labour force of 54,401 in 2009 to 27,088 in 2022 (StatsSA, 2022).

The funding approval shows that South Africa's manufacturing factor is a capital-intensive sector despite policy identifying the need for labour-intensive growth to address the high unemployment. Reflecting on the trade-off between supporting capital and labour intensive industries, the IDC states that investment is biased to more capital intensive industries that can unlock downstream economic activity and increase competitiveness (IDC, 2021). It is viewed that investing into upstream industries will result in investment in labour-intensive downstream businesses that create jobs but at lower impact (IDC, 2021). This statement illustrates the challenge of balancing a sector's competitiveness while there is a need to promote job creation.

In the Industrial Policy & Strategy Review, the DTIC reflects on the balancing of capital and labour-intensive industries by stating *'South Africa must still support competitive industries, but industrial policy must also do more to address the deficit in employment and self-employment' (2024)*. The DTIC (2024) further states that there is a need to ensure great prioritisation of labour-intensive industries with subsidies to basic consumer goods and small businesses supplying them and new initiatives to substantially scale up production. With the recognition of the role of labour-intensive sectors in addressing South Africa's unemployment, the findings demonstrate that patterns of sector support have maintained the status quo of capital-intensive industrial path. The next section will explore these patterns of support within the sector.

4.2.3. Patterns of sectoral support

To understand the impact of industrial policy intervention on the manufacturing sector, the study delved into patterns of industrial support to the sector. The following section documents patterns of sectoral support towards labour-intensive sectors. The identified interventions adopted to support and promote the manufacturing sector include sector incentives, localisation, export promotion and skills development. The following section will discuss outcomes of the identified interventions.

4.2.3.1 Enhancing sector's competitiveness

Analysis of IPAPs revealed that one of the key priorities of the industrial policy was to enhance the manufacturing sector's competitiveness. Under the Industrial Development programme, the DTI has the Industrial Competitiveness sub-programmes, which aims to strengthen the ability of the manufacturing and other value-added sectors to create jobs, increase value addition and competitiveness in both the domestic and export markets (DTI, 2010b). To support the sector to enhance its competitiveness, incentive schemes were used to support the manufacturing sector. The following section discusses incentive programmes implemented to enhance competitiveness of the sector, with a particular focus on support to labour-intensive industries. The study reflects on the Manufacturing Competitiveness Enhancement Programme (MCEP), Agro-processing Support Scheme, and the Textiles, Clothing, Leather and Footwear Production Incentive Programs.

i. Manufacturing Competitiveness Enhancement Programme

The DTI adopted the Manufacturing Competitiveness Enhancement Programme (MCEP) in 2012 as a response to the global economic recession. The program aimed to secure higher levels of investment, raise competitiveness and retain employment in the manufacturing sector (DTI, 2021). The incentives program would fund the acquisition of capital equipment and reengineering of business processes to improve their competitiveness. (DTI, 2017). The targeted sectors under the MCEP were those that lacked competitive advantage such as machinery and equipment, clothing, textiles and chemical products. The funding under the program is split in grant and loan component, with the DTI managing the grant component of MCEP and the Industrial Development Corporation (IDC) administering the loan component which is in the form of working capital and plant and equipment loans (DTI, 2017). The grant funding component of the program was however suspended in 2015 due to the program funds being fully committed (DTI, 2017).

The following table reflects on loan funding approvals under the Manufacturing Competitiveness Enhancement Programme to reflect patterns of support under the incentives scheme.

Table 2: MCEP loan approvals 2016 to 2019

Sector	2016/17	2017/18	2018/19
Automotive transport and equipment	R61.2 Million	R3.4 Million	R50 Million
Basic Metals and Mining	R192 Million	R7.2 Million	R31 Million
Chemicals	R272.7 Million	R148.5 Million	R84.7 Million
Clothing and textile	R11 Million	R25 Million	R14.1 Million
Machinery and equipment	R81.5 Million	R156.8 Million	R70.6 Million
Agro-processing and agriculture	N/A	R2.2 Million	R81.5 Million

Sources: DTI 2016, 2017, 2018

Funding approvals between 2016 and 2019 were dominated by capital intensive industries such as the chemical, basic and mining and heavy manufacturing, with the chemicals industry as the largest recipient of loan approvals throughout the three-year period. The funding pattern is consistent with the identified bias towards supporting capital-intensive industries which were established apartheid. It is further noted that this incentive programme is targeted at retaining rather than creating jobs. The DTI noted that the programme was focused on the revitalisation of entities and an expansion is required to include other sectors (South Africa National Assembly, 2015).

ii. Clothing and Textiles Competitiveness Program

At industry level, similar competitiveness programmes were adopted. The Clothing and Textiles Competitiveness Program was adopted in 2010 and aimed at promoting the competitiveness of the sector. This program funding was towards building capacity among clothing and textile manufacturers and to enable them to effectively supply their customers and compete internationally (DTI, 2011). The program included two main programmes, the Production Incentive and the Competitiveness Improvement Programme (DTI, 2012).

The Competitiveness Improvement Program's main objective was to build the capacity of manufacturers to enable them to supply their customers, while the Production Incentive Program sought to change the structure of the clothing, textile, footwear and leather manufacturing industries (CTCP, 2018). By 2018, the DTI reported R5.5 billion in approved activities under the Production Incentive Program, disbursing R4.9 billion to the industry

(DTI, 2018). Additionally, R962 million was approved under the Competitiveness Improvement Program, with R666 million disbursed (DTI, 2018).

In addition to the targeted CTCP, the sector is supported under other incentives as previously seen under the Manufacturing Competitiveness Enhancement Program and the Black Industrialist Scheme. With the support provided to the sector, there has been a significant decline in the sector's contribution to employment as discussed in the previous section. With regards to the sector's production income, the sector recorded a growth from R41,367 million to R59,429 million between 2007 and 2021 (StatsSA, 2021). The sector further saw an increase in the importation of textiles, from to in 2009 and 2021 respectively, contributing to 3.71 percent of total imports (SARS, 2021).

Similarly, exports between 2009 and 2021 grew from R4,845.3 million to R20,835 million, only contributing 1 percent to total exports in 2021 (SARS, 2021). The sector's performance illustrates the impact of cheap imports on the local industries and the requirement of additional industrial policy instruments to encourage key industries in the economy. In subsection D of this chapter the study will discuss efforts to encourage developing industries whose performance is affected by high imports.

iii. **Agro-Processing Support Scheme**

In 2017 the DTI launched the Agro-Processing Support Scheme (APSS) which sought to promote value addition and beneficiation of raw materials. The scheme aims to stimulate investment in the sector towards increasing the capacity, modernising machinery and equipment, improve competitiveness and productivity, promote employment creation and to broaden participation (DTI, 2021). Five key areas were targeted under the scheme namely, the food and beverage value addition and processing, furniture manufacturing, fibre processing, feed production and fertilizer production (DTI, 2017).

The targeted outcome of the scheme was to encourage investment in up and downstream support industries and to enhance transformation and to create employment due to the sector's labour-intensive nature (DTI, 2017). To support development of local farmers, the scheme requires demonstration of at least 50 percent of inputs sourced from local suppliers and at least 30 percent of inputs be sourced from black South African suppliers (DTIC,

2022), in line with broadening participation in the sector. The following table reflects on grant funding approvals under the scheme from inception in 2017/18 to 2019/20.

Table 3 : Agro-Processing Support Scheme incentive approvals, 2017/18-2019/20

Sub-sector	2017/18	2018/19	2019/20
Feed production	R4.3 Million	R21.4 Million	R13.8 Million
Fertilizer production	R2 Million	R790,238	R1.3 Million
Furniture manufacturing	R2.9 Million	R16 Million	R4 Million
Fibre processing	R2 Million	R10.4 Million	R5.9 Million
Food and beverages	R95.5 Million	R171.7 Million	R35 Million

Source: DTIC, 2017, 2018, 2019

The food and beverages industry was the largest recipient of the incentive scheme accessing the approved incentives between 2017/18 and 2019/2022 respectively. Investment in the food and beverages industry is reflective of the industry's contribution to employment and manufacturing income, contributing 22.4 percent to total manufacturing employment and 23 percent to manufacturing income in 2021 (StatsSA 2021; 2022). Due to the sector labour absorption capacity, the DTIC identifies that more still needs to be done in the agro-processing to ensure greater values of value addition and labour intensity were achieved (South Africa National Assembly, 2020).

In addition to improving competitiveness of the sub-sector, the scheme also aimed to broaden participation. Some of the conditions of the scheme the applicants should be B-BBEE compliant, demonstrate that at least 50 percent of inputs are sourced from South African Suppliers and at least 30 percent from Black South African suppliers (DTIC, 2022). One of the challenges the DTI identified in the implementation of the scheme, the applicant's non-adherence to the criteria of sourcing 30 percent of raw materials from domestic black suppliers (DTI, 2019). Due to the non-adherence to the criteria, 65 approved projects valued at R224 million were cancelled (DTI, 2019).

In the furniture sector, the DTI adopted a different approach to enhancing competitiveness in the sector. In the 2016/17 IPAP, the DTI introduced the Furniture Competitiveness Programme. The programme sought to improve competitiveness of the sector through

organisation of manufacturers and linking them to previously trained manufactures currently not in operation (DTI, 2016).

The DTI saw that business in this sector have challenges in accessing due to their size and input cost, through the organising of furniture manufacturers would lead to improved productivity and manufacturing value add (DTI, 2017). Under IPAP 9 (2017) the DTI highlighted the key milestone under this activity was funding for implementation of the pilot project". Such efforts towards improving the competitiveness of the sector are continued in the Masterplan for the South Africa Furniture Industry as the objective is "to improve the competitiveness of the industry and to retain existing capacity'.

The furniture manufacturing sector is also one of the five targeted sectors under the agro-processing scheme. During the period between 2017/18 to 2020/2021 projects to the value of approximately R25.7 million were approved under the scheme (DTI). In 2022, the sector further contributed approximately 5 per cent to the total manufacturing sector employment (StatsSA, 2022). In 2021 the furniture manufacturing sector recorded R91,691 million in production income, an increase from R53,443 million in 2007 (StatsSA, 2021). In addition enhancing competitiveness of the sector, the sector was earmarked for localisation in order to increase the sector's market share.

Promoting the competitiveness of the manufacturing sectors is identified as important under the industrial policy. As described above, incentives have been a key instrument in facilitating enhancement for sector competitiveness. Reflecting on how incentives were committed across sectors allowed for the research to assess whether incentive programmes are aligned with key objectives of the industrial policy and to identify sectors identified as strategic to achieve the required growth. The patterns of funding commitment demonstrates that there is continued bias toward previously developed industries such as the metals, automotive and chemicals sectors. It is further noted that funding in the agro-processing sector has also increased over time.

4.2.3.2 Promoting manufacturing sector through localisation

In addition to the use of industrial financing, countries can make use of the public procurement to create local demand for certain sectors thus enhancing the competitiveness of

the sector. The IPAP identified public procurement as an instrument to promote development of twenty-three sectors, through designating minimum local content requirements to encourage local production (Stern and Ramkolowan, 2021). Localisation is used to build local industries' capacity for domestic and export markets (DTIC, 2021). Promoting localisation of industries aims to reduce the reliance of imports to meet local demand.

i. Preferential Procurement Policy Framework

In South Africa, preferential procurement was used to address institutional discrimination and to encourage procurement of locally manufactured products. The Preferential Procurement Policy Framework Act 5 of 2000 governed public procurement and states that state organs must award preferential procurement points system to *"persons or categories of persons historically disadvantaged and in line with the implementation programmes of Reconstruction and Development program"* (National Treasury, 2000).

To support the implementation of the act, the Preferential Procurement Regulation 2001 was implemented. The regulation detailed the application of the Act, including guidelines of the Preference Point System on awarding tenders and the consideration of procuring locally manufactured products through tenders. The regulation states that a "any organ of state may, in the adjudication of tenders, give particular consideration to procuring locally manufactured products" (National Treasury, 2001). In line with policy direction of government, the Preferential Public Procurement Regulations of the Preferential Procurement Policy Framework Act 5 of 2000 underwent a series of revisions to accommodate efforts to promote localisation of local industries through the setting of local content threshold and introducing designated sectors for local procurement.

The preferential procurement evolved to be used as an instrument to create local demand by earmarking key strategic sectors for preferential procurement from state organs. In the second iteration of IPAP, the DTI (2010) highlighted the role of localisation through promoting government preferential procurement, which sought to increase demand and support the development of local industries. Through localisation, the DTI (2010) aimed to strengthen conditionalities related to supply chain localisation and supplier development. The preferential procurement was adopted in key sectors such as the clothing and textiles industry. To support the policy direction, the preferential procurement policy regulation was amended.

In 2011 the National Treasury issued an updated regulation on the Preferential Procurement focusing on local production and content stating that an organ state must

> *(1) in the case of designated sectors, where in the award of tenders local production and content is of critical importance, advertise such tenders with a specific tendering condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered (National Treasury, 2011, p8)*

In instances where there is no designated sector, the regulation made further considerations that:

> *"an organ of state may include, as a specific tendering condition, that only locally produced services, works or goods or locally manufactured goods with a stipulated minimum threshold for local production and content, will be considered, on condition that such prescript and threshold(s) are in accordance with the specific directives issued for this purpose by the National Treasury in consultation with the Department of Trade and Industry:. (National Treasury, 2011, pp8)*

The use of local content programmes aimed to boost the local manufacturing sector. In 2017, further amendments were made in relation with local production and content in alignment with industrial policy and the role of the Department of Trade and Industry in the designation of sectors. The amendment included that

(a) *designate a sector, sub-sector or industry or product in accordance with national development and industrial policies for local production and content, where only locally produced services or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content, taking into account economic and other relevant factors; and*

(b) *stipulate a minimum threshold for local production and content (DTI, 2017c, pp).*

Through localisation, the DTI (2017) sought to "raise aggregate demand through public procurement localisation and to persuade the private sector to support local". The regulation sought to empower the DTI to designate specific industries for locally manufactured products that need the minimum threshold for local content to be considered (DTI, 2020). The designation of products was targeted towards sectors or products affected by imports. Products can be designated following evidence demonstrating that the product is under

distress by imports which displace local production and jobs (DTI, 2020). Through the public procurement policy, the government sought to create a market for local industries.

ii. Local content requirements and designation of industries

Localisation interventions were emphasised in the IPAP, targeting the clothing and textile sector, agro-processing particularly the canned and processed vegetables, and the furniture sector. The support to the clothing, textiles, footwear and leather sector sought to recapture the domestic market, the sector was designated for 100% local content in state procurement tenders under the revised Preferential Public Procurement Framework Act (PPPFA) (DTI, 2015). This sought to support the sector that has been dominated by high imports. The product designation has evolved to include products such as steel products and components for construction, lead acid batteries and railway (DTI, 2020). A minimum local threshold by industry was developed to guide local content requirements for public procurement. The below table 4 details the percentage local content requirement for designated, with sectors such as textiles, clothing, leather and footwear and steel value-added products which experience import competition allocated a minimum threshold of 100 percent to support the industries.

Table 4: Sectors designated for local production with minimum local content thresholds by industry for local production

Industry	Minimum threshold for local content
Buses (Bus Body)	80%
Textile, Clothing, Leather and Footwear	100%
Canned or Processed Vegetables	80%
Pharmaceutical products	50-70%
Rail Rolling Stock	65%
Furniture Products	85-100%
Solar Water Heater Components	15-90%
Electrical and telecoms cables	90%

Fire Fighting Vehicle	100%
Steel Value-added Products	100%
Plastic Pipes	100%

Source: Department Trade, Industry and Competition

The DTI sought to increase localisation through the designation of products. To designate a product for local production, there should be evidence that the product is under distress caused by imports which displaces local production and jobs (DTI, 2020). Over a period of 8 years, 2012 - 2020, the DTIC designated 27 products for local production under the Preferential Public Procurement Regulation (DTI, 2020). In 2020 the Preferential Procurement Regulations 2017 was found to be inconsistent with the PPPFA 5 of 2002 and therefore found invalid (DTIC, 2022). The implication of the ruling is the local content requirements through the PPPR are invalid, thus impacting the localisation agenda (DTIC, 2022).

iii. Challenges in the implementation of local content requirements

While the government designated specific industries for localisation through public procurement and setting local content threshold, the DTIC experienced challenges in the enforcement of the policy. The challenges can be distinguished at government and firm level. One of the identified challenges in the implementation of LCR includes state organisations's understanding of the local content requirements and industrial policy goals by the evaluation and adjudication committee (Vinti, 2021). The DTI (2016) further highlights compliance of LCR at state level is also a challenge in the full effectiveness of the policy. It is further noted that verification of LCR at tender level is a challenge to ensure compliance to the requirements (DTI, 2018). While the local content policy was adopted in 2011, to boost local industries threatened by imports, the policy was centered on the designation of industries rather than the implementation, enforcement mechanism and adherence across state owned institutions. Throughout implementation of the local content requirement policy, concern was raised on ensuring adherence of the policy at various levels of government and how the DTI will ensure enforcement of the regulation in public procurement (South Africa National Assembly, 2015 and 2020). The DTI (South Africa National Assembly, 2016) further states that there is inadequate compliance in some sectors of government departments such as rail and energy. Without the institutional capacity to enforce the requirements of the policy, the

objective of the intervention will not be realised. It is further noted that at firm level, there is a challenge in the self declaration by bidders on the correct minimum thresholds for local production (Vinti, 2021).

iv. Incentives for localisation

In addition to designating products for local procurement, the DTI also allocated incentives towards sectors designated for localisation. Localisation is further promoted under incentive schemes such as the Black Industrialist Scheme were localisation is a key criterion and agro-processing scheme were sourcing from local farmers is a requirement to access funding (DTI, 2021) The initiative was aimed at facilitating improvements in localisation and import substitution (DTIC,2019). Despite the use of preferential procurement for sectors such as the textile, clothing, leather and footwear and furniture products, the sectors still face competition from imports.

To address high imports and to support interventions in the IPAP, the IDC is also supporting localisation and beneficiation activities across sectors such as automotive, food products and steel to support the manufacturing sector to meet local demand (IDC, 2023). In three IPAP iterations, the DTI (2011, 2012 and 2013) earmarked the development of a soya bean strategy and action plan which was largely imported. To address the over reliance of imports, the soya bean policy action was supplemented through IDC funding through the approval of "soya processing plant which intended to facilitate the competitive import replacement of soya oil cake" (IDC*,* 2012*).*

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v. Impact on preferential procurement and LCR on import patterns

While preferential procurement policy and LCR sought to reduce the reliance of imports to meet domestic market demand, sectors like the textile sector continue to face competition from imports. Despite sectoral support through incentives and LCR, South Africa continues to be a net importer of textile products. Figure 3 demonstrates import of textile and textile over time.

Figure 3: Textile & textile articles imports between 2009 and 2021



Source: SARS

Between 2009 and 2021, the import of textiles & textile articles grew from R16,831.5 million to R51,127.4 million (SARS, 2021). In the same period, 2008 and 2021, textile, clothing, leather and footwear saw an increase in income production from R37,451 million to R59,429 million (SARS, 2021). The growth of textile imports despite investment into the sector demonstrate capacity and competitiveness challenges the sector factors to meet demand. This demonstrates supply side challenges. Furthermore, South Africa's imports remain capital intensive. Machinery and mechanical appliances, chemical and allied industries and vehicles and motor vehicle parts made up 49.5 percent of imports in 2021 (SARS, 2021).

While the industrial policy highlighted the importance of supporting industries under threat from imports, the DTI relied solely on the PPPFA and LCR as the only instruments to

encourage demand for local products. The DTIC highlighted supporting local manufacturing requires moving beyond preferential procurement regulation, to include other instruments such as tariffs, to counter the dominance of imported products (South Africa National Assembly, 2020). The development of a localisation policy is seen from 2019, where localisation is identified as an instrument for reconstruction and recovery of the economy (DTIC, 2020). In line with promoting localisation, the sectoral masterplans emphasised the importance of increasing local production (DTIC, 2022). The promotion of localisation at sectoral level encourages local firms to contribute to the development of local industries, shifting reliance on public procurement to create a market for local industries.

In addition to capturing the domestic market, the industry policy is important to supporting expansion to export markets. The industrial policy highlights the importance of export promotion and creating opportunities for local industries to export thus increasing their product demand and job creation. The following section will discuss efforts to support the expansion to international markets.

4.2.3.3 Export promotion support

Literature attributes East Asia's successful industry to exports. The argument for export-led growth is that external markets help capture the economic benefits of openness for developing countries (Pally, 2012). The NIPF identified improving non-traditional and value-added products exports as one of the important objectives for the industrial policy (DTI, 2007a). The objective was to diversify South Africa's export basket to expand beyond commodities and capital-intensive sectors. Expanding into the international market enables the manufacturing sector to gain additional demand for products, thus creating additional jobs and income. Exports provide additional markets for products in addition to the domestic market.

The DTI (2014) views the manufacturing sector as central to the export strategy focusing on value-added labour-intensive tradable products that generate revenue, which positively impacts the balance of payments and the non-exporting sub-sectors. Through the Trade and Investment South Africa division of the DTI developed and adopted the Integrated National Export Strategy (INES). The INES documents export development and promotion interventions at micro and macro levels (DTI, 2015). The INES mission is to diversify South

Africa's export based into value-added and manufactured goods and services, development of new markets, engaging top 50 manufacturing exports, and growing the exporter base (DTI, 2015).

One of the DTI's roles in supporting export promotion is engaging governments to create a market for South Africa. One of the support measures that manufacturers have is the Export Marketing and Investment Assistance scheme. The incentives include the Export Marketing and Investment Assistance scheme which provides exporters grants in order to grow export markets (DTIC, 2021). The scheme supports exporters with market research, market compliance, exhibition participation, and activities to attract foreign direct investment (FDI) (DTI, 2021b). The following table 5 illustrates sectors that have access schemes.

Table 5: Export Marketing and Investment Assistance Scheme

	2015/16	2016/17	2017/18	2018/19	2019/20
Agro-Processing	R10.9 Million	R11.7 Million	R9.9m	R3.7 Million	R4.5 Million
Electro-industries	R5.7 Million	R3.7 Million	R2.7m	R1.3 Million	R1.1 Million
Chemicals	R5.2 Million	R3.5 Million	R2.7m	2.1 Million	R2.2 Million
Textile	R5.2 Million	R3.1 Million	R4.7m	R2.8 Million	R4.3 Million
Metals	R3.9 Million	R2.5 Million	R1.5m	R310,027	R9.5 Million
Aerospace	R1.1 Million	R842,055	R732,374	R303,065	R268,333
Automotive	R986,559	R200,000	R179,655	n/a	R150,000

S*ource: DTI, 2020*

Over the period of 2015/16 to 2019/20, approvals under the Export Marketing and Investment Assistance scheme were dominated by the agro-processing sector, which has been the largest recipient under the scheme, accessing a total of R40.7 million over five years. Electro-industries accessed R14.5 million while the chemicals and textile sectors accessed R15.7 million in incentives each. The highlighted sectors demonstrated increased exports of the same period, with machinery and mechanical appliances and electrical equipment increasing their exports from R100,331.2 million to R123,024.5 million between 2015 and 2021 (SARS 2015 and 2021). Similarly, textiles and textile articles and products of the chemical or allied industries also demonstrated growth over the same period.

Noting the intervention in the sector to promote exports, the composition of South Africa's export basket has however remained unchanged. The leading products exported out of South Africa are precious stones and mineral products making up 45 and 52 percent of total exports in 2009 and 2021 respectively (SARS, 2010; 2021). Though the mining sector is the lead contributor to the export basket, the sector's contribution to total employment is low in comparison to the manufacturing sector. In 2021, the manufacturing sector contributed 39.4 percent of total exports, a decline from 46.8 percent contribution in 2009 (SARS, 2010; 2021). The below table compares South Africa's top ten exports in 2009 and 2021.

Table 6: Top manufacturing exports between 2009 and 2021

% contribution to export			
Product	2009		2021
1. Base metals	14%	1. Base metals	9%
2. Vehicles & associated transport equipment	9%	2. Vehicles and associated transport	9%
3. Machinery & mechanical products	9%	3. Machinery and mechanical products	7%
4. Chemical or allied industries	6%	4. Chemical or allied industries	6%
5. Prepared food stuffs, beverages and tobacco	4%	5. Prepared food stuffs, beverages, and tobacco	3%

Source: SARS, 2010; 2021

South Africa's export balance has increased from R513,864.1 million to R1,820,394.6 million in 2009 and 2021 respectively, demonstrating export growth (SARS, 2010; 2021). As the country's export basket remained unchanged with the reliance on commodities for export income, manufacturing exports are also unchanged. Base metals sector and vehicles & transport industries continue to dominate manufacturing exports, contributing nine percent to total exports in 2021. The top five manufacturing exports as illustrated on table 6 reflect patterns of manufacturing sector financial support as demonstrated earlier in the study.

Sugihara (2007) and Avenyo, Bell, Nyamwena and Robb (2021) state that a country's industrialisation path and capacity can be identified by a country's export patterns over time. Using the above yardstick in determining South Africa's capability and industrialization path,

it can be seen that South Africa's economy is capital-intensive. South Africa's export patterns demonstrate concentration of primary commodities, while manufacturing exports demonstrate dominance of capital-intensive industries.

In 2021, South Africa's export basket 52 percent of exports was made up of precious and semi-precious stones and mineral products while manufacturing products contributed 39 percent. Within the manufacturing sector export capital-intensive industries such as vehicles and transport equipment, machinery and mechanical products make up 32 percent of the total exports (SARS, 2021). The contribution of labour-intensive industries to exports remains poor, with the identified high employment multipliers, namely food and beverage, textiles and wood and wood products contributing 6.3 percent to total exports in 2021, a percentage decrease from 7.4 percent contribution in 2009 (SARS, 2010; 2021). Export performance is a reflection of industrial support and the competitiveness of sectors to compete in the global market.

South Africa's manufacturing exports are capital-intensive therefore, thus highlighting that though the industrial policy aims to achieve labour-absorbing growth, the structure of the economy is unchanged and the economy remains capital intensive. The export basket is reflective of sectoral interventions and investment into the sector as demonstrated in earlier sub-sections on sectoral support. Labour intensive sectors such as food and beverages, wood and wood products, and textile sector only contributed 6 percent of exports (SARS, 2021).

4.2.4. Skills development efforts in the manufacturing sector

As highlighted in chapter 2 - literature review, skills development is essential for industrialisation. Literature on industrialisation highlights that labour-intensive industrialisation is reliant on the promotion of skills development to support the evolution of the manufacturing sector. The following section reflects on skills development interventions identified in the New Growth Path and the industrial policy to promote skills development in the manufacturing sector. In chapter 2, the study established one of the challenges the manufacturing sector faces is the labour supply does not reflect labour demands of the sector. The below reflects on skills development initiatives identified and the outcome from the intervention.

i. Promotion of skills development under IPAPs

The IPAPs highlighted the promotion of skills development as important to ensure the labour meet the requirements of the manufacturing sectors. The first iteration of IPAP (2007b), emphasised that there is a need for greater integration between the industrial and skills policy and in the implementation of sector strategies (DTI, 2007b). This means that sectoral strategies should integrate skills development based on the needs of the sector. The Industrial Policy Action Plans further documents action plans towards supporting skills development in the manufacturing sector.

The IPAP, New Growth Path and the National Development Plan identified that there is an inadequate supply of artisans to support the manufacturing sector. To address this gap a customized artisan program, the National Artisan Development Program, was developed to promote training of artisans to support priority IPAP sectors (DTI, 2013). Through the intervention, the DTI targeted centralising and streamlining planning and quality assessment of artisanal qualifications (DTI, 2012). The action plan is in line with the New Growth Paths identified need to review the training system to address the shortage of artisanal and technical skills (Economic Development Department, 2010).

The prioritisation of developing artisans program is in line with the New Growth Path, Nationals Skills Development Strategy and National Development Plan which emphasises the need to address the shortage of technical skills that are essential for the development and growth of the economy. Artisanry is identified as one of the immediate skills required to support the national and sector development and growth (DHET, 2014). The National Skill Development Strategy III further identifies artisan training and development as a criteria area to address challenges of economic growth and provide an avenue to address youth unemployment challenge (DTI, 2016). They are identified as core to the technical workforce to ensure innovation and efficiency of production processes (DTI, 2016). The National Development Plan targeted producing 30,000 artisans per year by 2030 (National Planning Commission, 2012). The dedicated NADP for IPAP aimed to centralise and streamline the planning and quality assurance of artisanal qualifications to IPAP priority sectors.

In line with the IPAP identified skills development priorities, the National Skills Fund approved and disbursed funding towards skills development. To support skills development projects identified in the IPAP, R521 million was committed to the National Skills Fund (NSF, 2013). The committed funding between 2012/13 - 2015 was towards achieving skills

development objectives as identified in the Industrial Policy Action Plan (NSF, 2015). The fund supported initiatives such as the DTI Tool Initiative Programme, which targeted artisan development in tool, die and moulding making within the manufacturing sector (NSF. 2015).

The National Tooling Initiative comprised programmes aimed at rehabilitating the Tool, Die and Mould making industry and strengthening human capacity and competitiveness of the tooling industry (DTI, 2014). The National Tooling Initiative is a competitiveness enhancing programme at company level, targeting the Metals Fabrication and Rail Transport Equipment (DTI, 2018). Additionally, in line with the New Growth, NDP and IPAP, R200 million was committed to artisan development (NSF, 2016). The fund also supported skills development projects including the DTI Monyetla Work Readiness Program which targeted training of call center agents, targeting the Business Processing Sector (NSF, 2015). Under the NSF R131 Million was committed to the Monyetla Work Readiness Program (NSF, 2016).

The IPAP further reported skills development initiatives with the private sector such as the Mercedes Benz SA Learning Academy which is a joint investment with the government targeting three key areas of training namely shop floor skills training, apprenticeships and advanced technology training (DTI, 2017).

ii. Promoting skills through incentives

In addition to developing skills development programmes, the DTI developed an incentives program to promote skills development in the manufacturing sector. One of the commitments under the New Growth Path: National Skills Accord is to improve funding of training and use funds available for training and incentives on companies to train (Economic Development Department, 2011). The DTI adopted that 12l Tax Allowance Incentive with the aim of broadening the skills profiles of the manufacturing sector, improving productivity and accelerating economic growth (DTI, 2016). The incentive program targeted new industrial projects and upgrading of existing projects (DTI, 2016). The incentive provided a tax break for greenfield with qualifying assets of R50 million and brownfield projects with a minimum investment of R30 Million, by making training and investment tax allowance deductible from taxable income (DTI, 2016).

Sectors that accessed the incentive scheme were the agro-processing, chemicals, metals, transport, wood products and furniture and non-metallic and transport sector sectors (DTI,

2018; 2019). Access to the tax allowance has been associated with investments in the brown and greenfield projects. The training allowance has been targeted towards support function and operational areas such as financial management, to support strengthening of business operation (DTI, 2020). While the scheme encourages businesses to adopt internal skills training, the allowance is accessible to large businesses due to the required investment threshold under the incentive scheme.

Reflecting on the manufacturing sector growth, the DTIC (2018) indicates that the shortage of technical skills is one of the key problems undermining the competitiveness of the South African manufacturing sector. The sector is also characterised with a significant percentage of low-skilled workforce (MerSETA, 2018). The changes in the job requirements are threatening semi-skilled and unskilled jobs due to the replacement of manual tasks with automation (Maisiri and Van Dyk, 2021). The integration of industrial and skills policy was not emphasised in the IPAPs. The level of skills development has implications for the performance of the manufacturing sector.

In the 10th iteration of the IPAP (2018), the DTI reflected that the skills shortage in the manufacturing sub-sector contributed to the decline in competitiveness of the sector. Additionally, the DTI (2010) identified low levels of investment in upgrading skills in the clothing and textile as an impediment of the sector. DTI (2019) identifies one of the key challenges to industrial policy is to incentivise investment skills that would have medium to long-term benefits for the economy. While some efforts have been made in encouraging skills development at firm level and engaging higher education training institutions, more investment is required to develop the labour force in line with the requirements for the economy. Lall (2013) states that strong local capabilities determine competitiveness and ability to face global competition including entry level sophisticated sectors such as clothing, footwear and food processing. While there are targeted incentives to support firms to increase their production capacity to compete in the international market, a similar coordinated investment in skills development is required to ensure the labour force is evolving at the pace of international markets.

4.3 Conclusion

The purpose of the chapter was to present the findings of the implementation of the industrial policy actions through key action plans, patterns of industrial financing, the use of

preferential procurement to promote local industries and skills development initiatives implemented in line with the IPAPs. It was noted from the findings that contrary to economic policy direction to adopt labour-intensive industrial path, policy instruments emphasised the dominance of capital-intensive industries. The focus of IPAP has been previously supporting industries such as base metals, chemicals and vehicles industries. It was further noted industrial policy intervention did not emphasise skills development to address industrial needs, as demonstrated by the patterns of skills development initiatives implemented. The following chapter will discuss the study findings and provide general conclusions for the study.

Chapter 5: Summary of findings and Conclusion

5.1. Introduction

The following chapter presents a summary of findings on the implementation of the industrial policy. To summarize the findings, the study will be guided by the research questions. The research will also present conclusions on the implementation of industrial policy in South Africa.

5.2. Summary of findings

The study sought to understand why the manufacturing sector has struggled to achieve the required growth to promote employment in the manufacturing sector despite targeted interventions through the industrial policy and supporting economic policies. The study analysed the support to the manufacturing sector focusing on the use of industrial policy instruments such as incentives, localisation through public procurement and efforts towards skills development to promote growth of the manufacturing sector through the industrial policy.

5.2.1 Impact of interventions on promoting growth and job creation

The first research question examined the impact of industrial policy interventions on growth and job creation within the manufacturing sector. It was anticipated that these objectives could be achieved by changing the structure of the industrial base and diversifying toward higher value-added exports. However, the industrial structure has remained largely unchanged. The manufacturing sector has experienced consistent growth consistent with policy interventions. This growth is recorded in the sector's production income, recording a significant increase from R513,864.1 million to R2,013,617.5 million between 2009 and 2021 respectively (SARS, 2010; 2021). Despite the industrial policy's objective to create jobs, incentive programme approval patterns are still dominated by capital intensive industries, thus the policy intervention maintains the inherited industrial path. The export basket also remains dominated with capital-intensive industries leading contribution to the basket. This further demonstrates the policy's failure to change the industrial structure. It was however noted that as the manufacturing sector grew in line with the overall growth of the GDP, the sector's contribution to employment has declined thus questioning the role of the manufacturing sector to create the required growth. Growth is recorded in capital-intensive

industries, while high employment multiplier industries such as clothing and textile struggle to compete with imports. It is further noted that while South Korea and Japan's industrialisation path started with a focus on light industries, shifting towards heavy and chemical industries, post-apartheid industrial policy in South Africa required a balance between supporting existing industries and promoting labour-intensive which were identified to address unemployment challenges.

5.2.2 Constraints of job creation in the manufacturing sector

To address research question 2, which focuses on understanding the constraints to the manufacturing sector to play its role in job creation, the study identified three key constraints in the implementation of the industrial policy. The identified constraints namely the continued reliance of capital-intensive industrialisation path, slow transformation of the skills base and institutional capabilities inhibiting successful implementation of interventions.

i. The maintained path of capital-intensive industrialisation

The New Growth Path envisioned long-term structural change in the case of employment creation to entail supporting labour-absorbing activities to generate large-scale employment in the short to medium-term (EDD, 2010). In the long-term the policy envisioned increasing support to capital and knowledge intensive sectors to remain competitive (EDD, 2010). While the NGP viewed generating large-scale employment important in the short to medium-term, industrial policy interventions continued the status quo of investment on energy and mineral industries, with development on labour-intensive industries lagging behind. The findings indicate that the industrial policy interventions maintained bias towards capital-intensive industries despite the identified role of labour-intensive industries in contributing to structural change. While sectors such as the clothing, textile, footwear and leather, and agro-processing sector specific incentives, the sector's contribution to employment has not achieved anticipated outcomes.

Industrial financing patterns misaligned the targeted objectives of the NIPF and NGP for a labour absorbing growth to address the challenge of unemployment in the country. Approvals under the MCEP incentives programme were concentrated in capital-intensive industries, with the programme focused on retaining and sustaining jobs. The agro-processing industry which was identified as labour-intensive, the sector specific programme was only launched in 2017. The findings align with Black (2012) and Goga et al (2020) that South Africa's

economic policy choices have reinforced the industrialisation path. They also align with Nattrass and Seekings (2015) view that industrial policies promote capital intensive development and capital-intensive projects. The continued dominance of capital-intensive industries previously supported under apartheid demonstrates implementation of the industrial policy is path dependent. The dominance of capital-intensive industries can be seen in both industrial financing patterns and the export basket, thus demonstrating that industrial development in South Africa is path dependent.

ii. Lack of skilled labour force

While South Africa has abundant labour which can support the labour-intensive path, the labour cost is seen as high. It is further noted that the skills available do not meet the economy's requirements, resulting in a skills mismatch between labour supply and the economy's demand. While various skills development strategies developed to upskill labour in South Africa, the research focused on skills development interventions through industrial policy. The NIPF and the NGF emphasised the role of skills development to facilitate the labour-intensive industrialisation path and the importance of coordinating the industrial and skills policy to ensure that skills development interventions align with the requirements of the targeted industries.

The findings indicate that in addition to the National Skills Development Strategy and skills development policies, the Industrial Policy Action Plan adopted and implemented skills development initiatives responding to skills gaps in the targeted sectors. The DTIC implemented incentives to promote skills development at the sector and firm level. In line with the targets of the NDP, New Growth Path, the DTI implemented the National Tooling Initiative which sought to train artisans to support the manufacturing sector. The initiative sought to address the shortfall of artisans and technical skills.

Additionally, the DTI implemented the Monyetla Work Readiness Programme with targeted training of call center agents, to support the Business Processing Sector. Though the intervention targeted the services sector, it demonstrates initiatives by the government through industrial policy to promote skills development in sectors targeted for development. The initiative further demonstrates how the government can collaborate with key institutions such as the National Skills Fund to support projects towards skills training in targeted sectors.

In addition to identifying and implementing targeted interventions, the DTIC implemented incentives that aimed at encouraging firms to train staff. Such an intervention can be seen through the 12I tax allowance incentive which can be accessed at a minimum set investment in green and brown fields. While such an incentives programme can contribute to encouraging skills development in targeted industries, the programme limits access to such incentives to large businesses. While emphasis is placed on upgrading of skills, the DTI acknowledges that incentives through the industrial policy to encourage skills development through firms are limited. The integration of industrial and skills policy was not emphasised in the IPAPs. These findings align with Bell, Goga, Mondliwa and Roberts (2018) finding that there is no coherence between skills development and industrial policy. A well coordinated structure is required to ensure that education and skills development align with South Africa's industrial policy and economy requirements.

iii. Institutional constraints on implementation public procurement to lead localisation

The study found that while localisation was promoted as an instrument to support industries that are displaced by imports, initial interventions were guided by government preferential procurement and the local content requirement policy. The findings indicate effectiveness of the instrument to support targeted industries is hampered by the institutional incapacity to fully implement the policy thus affecting the outcomes of the intervention. The policy further lacked instruments to ensure compliance by government and state owned enterprises. The promotion of localisation was largely led by government procurement and local content policy on creating a market for local industries. With emphasis on localisation in the current industrial policy, the Re-Imagined Industrial Strategy, the industry masterplan has strategic intervention to promote import replacement and state localisation to promote local industries (DTIC, 2022). The extension of localisation beyond public procurement, localisation can be used to promote development of small and medium enterprises by supplying large firms as well.

The above identified constraints indicate that though industrial policy sought to transform and diversify the economy, implementation of the industrial policy demonstrates industrial development was path dependent. While policy sought to divert from the capital-intensive path, intervention favoured existing industries that can provide immediate growth. It is also seen that institutional capacity and policy coordination is a challenge in the implementation of policy.

5.3 Conclusion

The study sought to establish why the current industrial policy failed to promote employment creation in the manufacturing sector. To answer the research question, the study focused on the implementation of industrial policy through incentives, public procurement and efforts to upgrade skills to meet the requirements of the economy. Though the manufacturing sector's contribution to the economy and employment declined in comparison to other sectors like the services sector, the research found the sector experienced growth between 2009 and 2021. It was however noted that the performance growth did not result in growth that would absorb the labour force. The identified constraints to achieving labour-absorbing growth which was emphasised in the NIPF and NGP is that South Africa maintain the capital-intensive industrialisation path. Support towards the manufacturing sector continues to be dominated in the heavy and chemical industries.

The research further noted that while key industrial policy instruments were adopted to support the local manufacturing sector, the challenge is the enforcement and institutional capacity to implement policy. The IPAP emphasised the use of public procurement and local content policy to support industries overtaken by imports like the clothing and textile sector, however it was found that the implementing organisations do not have the capacity and understanding of the policy.

The overall result is that support to the manufacturing sector is path dependent, building on already established industries such as the chemicals and vehicles industries. The South African economy is dominated by the services industry, led by finance and personal services industries. For a country that has socio-economic challenges like unemployment and poverty, more needs to be done for the economy to be labour absorbing.

References

Acharya, S. and Mehrotra, S. (2018). Industrial Planning in a Human Development Framework - Experiences in Asia. *The Indian Journal of Industrial Relations*, 54 (1).

Adams, C. and Yu, D. (2022) Labour market trends in South Africa in 2009-2019:A lost decade? *Stellenbosch Economic Working Papers*: WP03/2022 www.ekon.sun.ac.za/wpapers/2022/wp032022

Aiginger, K., and Rodrik, D. (2020). Rebirth of industrial policy and an agenda for the twenty-first century. Journal of Industry, Competition and Trade, 20, 189-207.

Andreoni, A. and Chang, H-J. (2019). The political economy of industrial policy: Structural interdependencies, policy alignment and conflict management. *Structural Change and Economic Dynamics* 48, 136–150.

Andreoni, A. and Tregenna, F. (2018). Stuck in the Middle: Premature Deindustrialisation and Industrial Policy. Center for Competition, Regulation and Economic Development. Working Paper No. 11.

Andreoni, A., & Tregenna, F. (2020). Escaping the middle-income technology trap: a comparative analysis of industrial policies in China, Brazil and South Africa. S*tructural Change and Economic Dynamics,* 54, 324-340.

Athukorala, P-C. & Sen, K. (2015). Industrialisation, Employment and Poverty. *Working Papers in Trade and Development.* Working Paper No. 2015/11

Avenyo, E., Bell, J., Nyamwena, J. and Robb, N. (2021). Identifying vulnerable and priority manufacturing sectors for economic recovery in South Africa: An empirical approach. CCRED-IDTT Working Paper 2021/05

Aza, N.G. and Dodo, C.A. (2014). The Impacts of Industrial Policies on the Manufacturing Sector in Nigeria: An Assessment. *Research On Humanities and Science*, 4(21).

Balassa, B. (1971). Trade policies in developing countries. *The American Economic Review*, 61(2), 178-187.

Bell, J.F., Goga, S. and Robb, N. (2021). Emerging issues for industrial policy in South Africa. *CCRED-IDTT Working paper*, 6.

Bell, J., Goga, S., Mondliwa, P., and Roberts, S. (2018). Structural Transformation in South Africa: Moving towards a smart, open economy for all. Centre for Competition Regulation and Economic Development. Working Paper 9

Bhorat, H., Cassim, A. and Hirsch, A. (2017). Policy Coordination and Growth Traps in a Middle-Income Country Setting. The case of South Africa. In Page, P and Tarp, F. (Eds.) *The Practice of Industrial Policy. Government Business Coordination in Africa and East Asia.* (pp 211-233). Oxford University Press. United Kingdom

Bhorat, H., Lilienstein, K., Oosthuizen, M., & Thornton, A. (2020). Structural transformation, inequality, and inclusive growth in South Africa (No. 2020/50). WIDER Working Paper.

Bhorat, H., & Rooney, C. (2017). State of manufacturing in South Africa. Cape: Development Policy Research Unit, University of Cape Town.

Black, A., Craig, S. and Dune, P. (2016). Capital Intensity, Industrial Policy and Employment in the South African Manufacturing Sector. REDI 3x3, Working Paper 23

Black, A., Craig, S. & Dunne, P. (2018) Why has manufacturing employment decline so rapidly? Retrieved from: https://www. econ3x3.org/article/why-has-manufacturing-employment-declined-so-rapidly

Black, A., Craig, S. & Dunne, P. (2018) Why has manufacturing employment declined so rapidly? Available at: https://www. econ3x3.org/article/why-has-manufacturing-employment-declined-so-rapidly

Bowen, G.A. (2009). Document Analysis as a Qualitative Research Method. Qualitative Research Journal. Vol.9.

Busetto, L., Wick, W. and Gumbinger, C. (2020). How to use and assess qualitative research methods. *Neurological Research and Practice*, 2(14). https://doi.org/10.1186/s42466-020-00059-z

Chang, H-J. (1998). Evaluating the current industrial policy of South Africa. *Transformation* 36. 52-72

Chang, H. J., & Andreoni, A. (2020). Industrial policy in the 21st century. *Development and Change*, 51(2), 324-351.

Cheon, B.Y. (2014). Skills development strategies and the high road to development in the Republic of Korea. In Salazar-Xirinachs,J.M, Nübler, I. and Kozul-Wright, R. (Eds.), *Transforming Economies. Making industrial policy work for growth, jobs and development,* pp.213-236. International Labour Office. - Geneva.

Creswell, J.W., and Creswell, J.D. (2018). Research Design: Qualitative, Quantitative and Mixed Methods Approaches. Fifth Edition. SAGE Publications, Inc

Dalglish, S.L., Khalid, H., McMahon, S.A. (2020). Document analysis in health policy research: the READ approach, Health Policy and Planning, 35 (10)1424–1431. https://doi.org/10.1093/heapol/czaa064

Day, C.L. & Merkert, R. (2023). Unlocking public procurement as a tool for place-based industrial strategy, *Regional Studies*, 57 (6), 1029-1042. DOI: 10.1080/00343404.2021.1956682

Dawar, K., & Oh, S. C. (2017). The role of public procurement policy in driving industrial development (Version 1). University of Sussex. https://hdl.handle.net/10779/uos.23446328.v1

Deardorff, A. V., & Park, J. H. (2010). A story of trade-induced industrialization. *International Economic Journal*, *24*(3), 283-296.

Department of Higher Education and Training. (2013). National Skills Fund Annual Report 2012/13. Retrieved from: https://nsf.org.za/wp-content/uploads/2023/06/NSF-Annual-Report-2012-13.pdf

Department of Higher Education and Training. (2014). National Skills Fund Annual Report 2013/14. Retrieved from: https://nsf.org.za/wp-content/uploads/2023/06/NSF-Annual-Report-2013-14.pdf

Department of Higher Education and Training. (2014). National Skills Development Strategy III. Retrieved from: https://www.gov.za/sites/default/files/gcis_document/201409/national-skills-development-strategyiiia.pdf

Department of Higher Education and Training. (2015). National Skills Fund Annual Report 2014/15. Retrieved from: https://nsf.org.za/wp-content/uploads/2023/06/NSF-Annual-Report-2014-15.pdf

Department of Higher Education and Training. 2019. Skills Supply and Demand in South Africa. Retrieved from: https://www.dhet.gov.za/SiteAssets/Report%20on%20Skills%20Supply%20and%20Demand%20in%20South%20Africa_%20March%202019.pdf

Department of Statistics South Africa (2009). Labour market dynamics in South Africa, 2008.

Department of Statistics South Africa (2022). Quarterly Employment Statistics (QES). Statistical Release, P0277. December 2022. QES_Details_Breakdown_200909_202212.

Department of Statistics South Africa. (2021). Manufacturing industry: Financial, 2021. Report No.: 30-02-03.

Department of Trade and Industry. Industrial Procurement. Retrieved from: https://www.thedtic.gov.za/sectors-and-services-2/industrial-development/industrial-procurement/

Department of Trade and Industry. (2002). Accelerating Growth and Development: The Contribution of an Integrated Manufacturing Strategy. Retrieved from: https://www.gov.za/sites/default/files/gcis_document/201409/ims0.pdf

Department of Trade and Industry (2007a). National Industrial Policy Framework. Pretoria. Retrieved from: http://www.thedtic.gov.za/wp-content/uploads/NIPF_r2.pdf

Department of Trade and Industry. (2007b). Industrial Policy Action Plan (IPAP). August 2007. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/IPAP_r1.pdf

https://www.thedtic.gov.za/wp-content/uploads/IPAP_r1.pdf

Department of Trade and Industry (2010a). A South African Trade Policy and Strategy. Pretoria.

Department of Trade and Industry. (2010b). Industrial Policy Action Plan (IPAP) 2012/13 - 2014/15. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/IPAP2012-15.pdf

Department of Trade and Industry. (2011). Industrial Policy Action Plan 2011/12 - 2013/14. Economic Sectors and Employment Cluster. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/IPAP_2011_2013-1.pdf

Department of Trade and Industry. (2013). Industrial Policy Action Plan. Economic Sectors, Employment & Infrastructure Development Cluster. IPAP 2013/14 - 2015/16.

Department of Trade and Industry. (2014). Industrial Policy Action Plan. Economic Sectors and Employment Cluster. IPAP 2014/15 - 2016/17. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/IPAP2014.pdf

Department of Trade and Industry. (2015). Industrial Policy Action Plan 2015. Economic Sectors, Employment & Infrastructure Development Cluster. IPAP 2015/16 - 2017/18. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/Industrial_Policy_Action_Plan2015.pdf

Department of Trade and Industry. (2016). Industrial Policy Action Plan. IPAP 2016/17-2018/19. Economic Sectors, Employment and Infrastructure Development Cluster. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/IPAP2019.pdf

Department of Trade and Industry. (2017). Industrial Policy Action Plan 2017/18-2019/20. Economic Sectors, Employment and Infrastructure Development Cluster. Part 1: Brief Overview. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/publication-IPAP1.pdf

Department of Trade and Industry. (2017). Industrial Policy Action Plan 2017/18-2019/20. Economic Sectors, Employment and Infrastructure Development Cluster. Part 2: The Engine Room of Change. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/publication-IPAP2.pdf

Department of Trade and Industry. (2017). Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulation, 2017 (Notice 32). Government Gazette, 40553

Department of Trade and Industry. (2017). The Incentive Development and Administration Division (IDAD). 2016/17 Annual Incentive Performance Report. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/publication-thedti_IDAD-AR.pdf

Department of Trade and Industry. (2018). 2017/2018 Annual Incentive Report. The Incentive Development and Administration Division (IDAD). Retrieved from:

Department of Trade and Industry. (2018). Clothing and Textiles Competitiveness Programme (CTCP): Annual Report, 2017. Available at https://www.ctcp.co.za/wp-content/uploads/2018/05/1886AD-ANNUAL-REPORT-2018-Web-Final-Revised.pdf

Department of Trade and Industry (2018). FACTS AND FIGURES ON SKILLS IN MANUFACTURING Information Brief No.5 February 2018

Department of Trade and Industry. (2018). Industrial Policy Action Plan. Economic Sectors, Employment and Infrastructure Development Cluster 2018/19-2020/21. Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/publication-IPAP.pdf

Department of Trade, Industry and Competition. (2019). 2018/2019 Annual Incentive Report. Industrial Financing Branch (IFB). Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/2018-2019_Annual_Incentive_Report.pdf

Department of Trade and Industry (2019). Section 12l Tax Allowance Incentive (12l). Accessed https://www.thedtic.gov.za/wp-content/uploads/12I_TAI.pdf

Department of Trade, Industry and Competition. (2020). 2019/2020 Annual Incentive Report. Industrial Financing Branch (IFB). Retrieved from: https://www.thedtic.gov.za/wp-content/uploads/DTIC-Incentives-Report-2020.pdf

Department of Trade and Industry. (2020). Local Content Policy and Designation. Measure to ensure compliance and verification. Presentation to the Portfolio Committee on Trade and Industry

Department of Trade, Industry and Competition (2021a). A Guide to the DTIC Incentives Schemes

Department of Trade, Industry and Competition. (2021b). Policy Statement on Localisation for Jobs and Industrial Growth. 18 May 2021.

http://www.thedtic.gov.za.wp-content/uploads/Policy_Statement

Department of Trade, Industry and Competition. (2021c). A Trade Policy for Industrial Development and Economic Growth. 20 May 2021. http://www.thedtic.gov.za/wp-content/uploads/SA_Trade_Policy.pdf

Department of Trade, Industry and Competition. (2022). Programme Guidelines: Agro-Processing Support Scheme (APSS). https://www.thedtic.gov.za/wp-content/uploads/APSS-Guidelines_Amendments.pdf

Department of Trade, Industry and Competition. (2022b). Annual Report 2021/2022

Department of Trade, Industry and Competition. (2022c). Masterplan for the South African Furniture Industry - Presentation to the Portfolio Committee on Trade, Industry and Competition.

Dixon, P.B., Rimmer, M.T., & Waschi, R.G. (2018). Evaluating the effects of local content measures in a CGE model: Eliminating the US Buy America(n) programs. *Economic Modelling*, 68, 155-166.

Economic Development Department. (2011). New Growth Path: Accord 1. National Skills Accord.

Economic Development Department. (2011). New Growth Path: Accord 3. Local Procurement Accord. Access 17 February. https://www.gov.za/sites/default/files/gcis_document/201409/accordprocure3.pdf

Edwards, L., & Lawrence, R. (2008). South African trade policy matters. Trade performance and trade policy*. *Economics of Transition*, *16*(4), 585-608. https://doi.org/10.1111/j.1468-0351.2008.00338.x

Fedderke, J.W., and Hill, A.J. 2011. Industry structure and labour market flexibility in the South Africa manufacturing sector: A time series and panel data approach. *Economic Modelling*, 28, p1291-1302.

Goga, S. and Avenyo, E. K. (2021). Industrial Policy, the Manufacturing Sector and Black Empowerment in South Africa. *SCIS Working Paper*, 25.

Grandia, J. & Meehan, J. 2017, "Public procurement as a policy tool: using procurement to

reach desired outcomes in society", T*he International Journal of Public Sector Management*, 30 (4), 302-309.

Haraguchi, N., Cheng, C. F. C., & Smeets, E. (2017). The Importance of Manufacturing in Economic Development: Has This Changed? *World Development*, *93*, 293-315. https://doi.org/10.1016/j.worlddev.2016.12.013

Haraguchi, N., Martorano, B., Sanfilippo, M. (2019). What factors drive successful industrialization? Evidence and implications for developing countries. *Structural Change and Economic Dynamics,* 49, 266–276.

Hasan, R., Mitra, D., Sundaram, A. (2013). The Determinants of Capital Intensity in Manufacturing: The Role of Factor Market Imperfection. *World Development*, 51, 91–103 http://dx.doi.org/10.1016/j.worlddev.2013.05.012

Hoekman, B., & Nicita, A. (2011). Trade Policy, Trade Costs, and Developing Country Trade. *World Development*, 39(12), 2069-2079. https://doi.org/10.1016/j.worlddev.2011.05.013

Industrial Development Corporation. (2020). Integrated Report 2020. Retrieved from: https://www-idc-co-za.b-cdn.net/wp-content/uploads/2020/10/IDC-Integrated-Report-2020-LR.pdf

Industrial Development Corporation. (2019). Integrated Report. Retrieved from: https://www.idc.co.za/annual-results/2019-annual-report/

Industrial Development Corporation. (2018). 2018 Integrated Report. Partnering for Inclusive Industrialisation. Retrieved from: https://www-idc-co-za.b-cdn.net/wp-content/uploads/2018/08/IDC-IR-2018-Final.pdf

Industrial Development Corporation. (2017). 2017 Integra Https://www.idc.co.za/annual-results/2017-annual-report/ated Report. Advancing Transformative Industrialisation. Retrieved from: https://www.idc.co.za/annual-results/2016-annual-report/

Industrial Development Corporation. (2016). 2016 Integrated Report. Driving South Africa's Competitiveness through industrial development. Retrieved from:

Kaplan, D. (2007). The Constraints and Institutional Challenges facing industrial policy in SA: A way forward. *Transformation 64*.

Kaplan, D. E. (2015). The structure and performance of manufacturing in South Africa. In W.A.Naudé, A. Szirmai, and N. Haraguchi (Eds) *Structural Change and Industrial Development in the BRICS.* Pp 244-263. Oxford Press.

Kaplan, D. (2019). South Africa's Industrial Policy. Time for review and a rethink. Centre for Development and Enterprise. No.8

Kay, Adrian. (2005) A Critique of the Use of Path Dependency in Policy Studies. *Public Administration (London)*, 83,(3), 553–571, https://doi.org/10.1111/j.0033-3298.2005.00462.x.

Kivunja, C., & Kuyini, A. B. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education*, *6*(5), 26-41.

KPMG. (2014). Sector Report - Manufacturing in Africa. Available at https://assets.kpmg.com/content/dam/kpmg/za/pdf/Manufacturing-in-Africa.pdf

Kivunja, C., & Kuyini, A. B. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education*, 6(5), 26-41.

Kuntze, J.C. & Moerenhout, T. 2013. Local content requirements and the renewable energy industry – a good match? ICTSD

Lall, S. 2013, "Reinventing Industrial Strategy: The Role of Government Policy in Building Industrial Competitiveness", *Annals of Economics and Finance*, 14,(2), 767-811.

Maisiri, W., & Van Dyk, L. (2021). Industry 4.0 skills: A perspective of the South African manufacturing industry. *SA Journal of Human Resource Management*, 19(0), a1416. https://doi.org/10.4102/sajhrm.v19i0.1416

Mariotti,M. (2012). Estimating The Substitutability Of African And White Workers In South African Manufacturing, 1950-1985. *Economic History of Developing Regions*, 27:2, 47-60, DOI: 10.1080/20780389.2012.745664

McCarthy, C.L. (1988). Structural Development of South African Manufacturing Industry - A Policy Perspective. *South African Journal of Economics*, 56(1), 1-23.

McCarthy, C.L. (1994) The 1980s — a lost decade for the South African manufacturing sector?. *South African Journal of Economic History*, 9:2, 66-83, DOI: 10.1080/20780389.1994.10417232

McCarthy, C.L. (1999) The manufacturing sector during the 1970s. S*outh African Journal of Economic History*.14:1-2, 143-161, DOI: 10.1080/10113439909511114

McCarthy, C.L. (2003) Manufacturing during the 1990s Facing up to trade liberalisation, *South African Journal of Economic History*, 18:1-2, 159-187, DOI: 10.1080/10113430309511158

McCrudden, C. (2004). Using public procurement to achieve social outcomes. *In Natural Resources Forum,* 28(4), 257-267. Oxford, UK: Blackwell Publishing.

McGrath, S., & Akoojee, S. (2007). Education and skills for development in South Africa: Reflections on the accelerated and shared growth initiative for South Africa. *International journal of educational development*, 27(4), 421-434

merSETA. (2018). Sector Skills Plan Update 2019/20. Promoting Artisan Development for Employability. Retrieved from: https://www.merseta.org.za/wp-content/uploads/2022/02/SectorSkillsPlan_2019-2020.pdf

Martorano, B., Sanfilippo, M and Haraguchi, N. (2017) What factors drive successful industrialization? Evidence and implications for developing countries. I*nclusive and Sustainable Industrial Development Working Paper Series WP 7*

Moyo, T. (2014) The Case for a Developmental Trade and Industrial Policy for Africa in Moyo, T. (eds) Trade and Industrial Development in Africa: Rethinking Strategy and Policy.

Moyo, T. (2016). Promoting Industrialisation in Mauritius, South Africa and Botswana: Lessons for the Future. Africa Development, 41(3), 139–163. http://www.jstor.org/stable/90013883

Moyo, T. (2018). Development of Human Capital for Industrialisation: Drawing on the Experiences of Best Performers. Africa Development, Volume XLIII, 2, pp.107-127

Mnguni, P and Simbanegavi, W. (2020). "South African Manufacturing- A situational analysis," Occasional Bulletin of Economic Notes 10410, South African Reserve Bank. National Treasury Government Gazette, No. 34350. Preferential Procurement Policy

Framework Act, 2000: Preferential Procurement Regulation, 2011. 8 June 2011. Accessed https://www.gov.za/sites/default/files/gcis_document/201409/34350rg9544gon502.pdf

Mukherjee, S. (2012). Revisiting the Debate over Import-substituting versus Export-led Industrialization. T*rade and Development Review* 5 (1), 64 - 76.

National Treasury. Preferential Procurement Regulations, 2002. Pertaining to The Preferential Procurement Policy Framework Act: No. 5 of 2000.

Nattrass, N and Seekings, J. (2015). Should and can labour-surplus, middle income economies pursue labour intensive growth? The South African Challenge. *CSSR Working Paper No. 351.*

Nel, P.S., Kirsten, M., Swanepoel, B.J., Erasmus, B, J. & Poisat, P. (2011). South Africa Employment Relations, Theory and Practice. Sixth Edition. Van Schaik Publishers, Pretoria.

Neuman, W.L. (2014) Social Research Methods: Qualitative and Quantitative Approaches. 7th Edition. Pearson New International Edition.

Page, J., & Tarp, F. (2017). Overview and Insights. In. Page, J., & Tarp, F, *The Practice of Industrial Policy: Government-Business Coordination in Africa and East Asia*. Oxford University Press.

Pally, T.I. (2012). The Rise and Fall of Export-Led Growth. *Inv. Econ*, 71, (280), Ciudad de México abr

Palm, J. G. (2014). De-Industrialisation, 'Premature' Deindustrialization and the Dutch Disease. Revista NECAT - Ano 3, nº5.

Patton, M. Q. (2014). Qualitative research & evaluation methods: Integrating theory and practice. Sage Publications.

Pretorious, A., Bezuidenhout, C.,Matthee, M. and Blaauw, D. (2022). Offshoring within South African manufacturing firms: An analysis of the labour market effects. South African Journal of Economics 90, 123–148.

Rangasamy, L., & Harmse, C. (2005). South Africa's tariff liberalisation policy: an appraisal of developments during the 1990s. Journal of Public Administration, 40(1), 23-51.

Rehman, A. A., & Alharthi, K. (2016). An introduction to research paradigms. *International journal of educational investigations*, 3(8), 51-59.

Rekha, R. & Suresh B.M. (2022). Premature deindustrialisation and growth slowdowns in middle-income countries. *Structural Change and Economic Dynamics*, *62*, 377-389.

Rodrik, D. (2016). Premature deindustrialization. J Econ Growth (2016) 21:1–33 DOI 10.1007/s10887-015-9122-3

Rodrik, D. & Stiglitz JE.(2024). A New Growth Strategy for Developing Nations. Accessed https://tinyurl.com/ymrg8qom

Sorte Junior, W. F. (2016). Nurturing domestic firms through public procurement: A comparison between Brazil and Japan. Public Policy and Administration, 31(1), 29-50. https://doi.org/10.1177/0952076715603444

South Africa. National Assembly. (2015). Trade, Industry and Competition Committee Meeting Report - Trade and Industry Budget Review and Recommendations Report. 20 October 2015 Retrieved from: https://pmg.org.za/committee-meeting/21661/

South Africa. National Assembly. (2016). Trade, Industry and Competition Committee Meeting Report - Industrial Policy Action Plan (IPAP 8); Steel industry: DTI briefing. 24 May 2016. Retrieved from: https://pmg.org.za/committee-meeting/22598/

South Africa. National Assembly. (2020). Trade, Industry and Competition Committee Report - Measures to ensure compliance with local content requirements & verification: DTI, NT & SABS briefings; ITAC 2019/20 Quarter 3 Performance. 11 March 2020. Retrieved from: https://pmg.org.za/committee-meeting/30022/

South African Revenue Services. (2021). 2021 Merchandise Trade Statistics - December 2021. Retrieved from: https://www.sars.gov.za/wp-content/uploads/Docs/TradeStats/2021/Dec0708/Trade-Statistics-December-2021.pdf

South African Revenue Services. (2020). 2020 Merchandise Trade Statistics - December 2020. Retrieved from: https://www.sars.gov.za/wp-content/uploads/Docs/TradeStats/2020/Dec/Trade-Statistics-December-2020.pdf

South African Revenue Services. (2010). 2010 Merchandise Trade Statistics - December 2010. Retrieved from: https://www.sars.gov.za/wp-content/uploads/Docs/TradeStats/2020/Dec/Trade-Statistics-December-2020.pdf

Stiglitz, J. E. (2017). Industrial policy, learning, and development. In P. Page & F. Tarp (Eds) The Practice of Industrial Policy. Government Business Coordination in Africa and East Asia. Oxford University Press. United Kingdom

Sugihara,K. (2007). The Second Noel Butlin Lecture: Labour‐Intensive Industrialisation In Global History. *Australian Economic History Review*, 47 (2). 121-154.

Sugihara, K. Labour-intensive industrialisation in global history: An interpretation of East Asian experiences In G. Austin, & K. Sugihara (Eds.). (2013). *Labour-Intensive Industrialization in Global History (1st ed.)*. Routledge. https://doi.org/10.4324/9780203067611

Sugihara, K. (2019) Multiple Paths to Industrialization: A Global Context of the Rise of Emerging States In K. Otsuka, & K.Sugihara (eds), Paths to the Emerging State in Asia and Africa. Springer Singapore

Torfing, J. (2009). Rethinking path dependence in public policy research. *Critical Policy Studies*, 3 (1), 70-83.

Tregenna, F. (2015). Deindustrialisation, structural change and sustainable economic growth. *UNU-MERIT Working Papers* No. 032

Tregenna, F. and Andreoni, A. (2020). Deindustrialization reconsidered: Structural Shifts and sectoral heterogeneity. UCL Institute for Innovation and Public Purpose. Working Paper No. 6.

Ulua, Kalu & Ezenekwe, Uju. (2021). Industrial Policy and Sustainable Development: Theoretical Perspectives in W. Leal Filho, A.M.Azul, L. Brandli, A. Lange Salvia, T. Wall (eds) Industry, Innovation and Infrastructure, Encyclopedia of the UN Sustainable DevelopmentGoals. pp.564-576 https://doi.org/10.1007/978-3-319-71059-4_141-1

United Nations Conference on Trade and Development (UNCTAD). (2016). Virtual Institute Teaching on Structural Transformation and Industrial Policy.

UNIDO. (2017). Demand for Manufacturing: Driving Inclusive and Sustainable Industrial Development. Industrial Development Report 2018. Vienna: UNIDO.

UNIDO. (2020). African industrial competitiveness report: An overview of the manufacturing industry in the region. Retrieved from: https://www.unido.org/sites/default/files/files/2020-11/UNIDO%20African%20Industrial%20Competitiveness%20Report.pfd

United Nations Economic Commission for Africa. (2015). Enhancing domestic private sector development in Africa: Construction and energy sectors.

Van Zyl, G. & Matswalela, K. (2017). A comparative analysis of the level of competitiveness of the South African Clothing and Textile Industry. *Journal of Economic and Financial Sciences,* 9 (2). DOI: https://doi.org/10.4102/jef.v9i2.47 |

Venter, R.B., Grossett,M., Hills, S.M. (2003). Labour relations in South Africa. (Rev. ed.). Oxford University Press Southern Africa.

Venter, R., Levy, A., Contadie, M. and Holtzhausen, M. (2009). Labour Relations in South Africa. (3rd Edition). Oxford University Press, Southern Africa

Vinti, C. (2021). An Evaluation of the "Designation" of Products, Sectors and Industry for Local Production and Content under the Preferential Procurement Policy Framework Act 5 of 2000. Journal of Law, Society and Development, 8, 20-pages.

Wagner, C., Kawulich, B., & Garner, M. (2012). *EBOOK: Doing social research: A global context*. McGraw Hill.

Wang, X., Liu, Y., & Ju, Y. (2018). Sustainable Public Procurement Policies on Promoting Scientific and Technological Innovation in China: Comparisons with the U.S., the UK, Japan, Germany, France, and South Korea. *Sustainability*, *10*(7), 2134. https://doi.org/10.3390/su10072134

Whitefield, L. and Zalk, N. (2020). Phases and Uneven Experiences of African Industrial Policy. In A. Oqubay, C. Cramer, H.J. Chang & R. Kozul-Wright (Eds.)*The Oxford Handbook of Industrial Policy.* Pp 842–866. https://doi.org/10.1093/oxfordhb/9780198862420.013.32

Yanai, A. (2013). South African Trade Policy: Interaction between Trade Policy and the WTO Negotiations. In K, Makino and C. Sato (Eds), *Public Policy and Transformation in South Africa after Democratization*. Institute of Developing Economics, JETRO.

Zhang, P. & London, K. (2013). Towards an internationalized sustainable industrial competitiveness model. *Competitiveness Review*, 23 (2), 95-113.