A REVIEW OF INDUSTRIAL POLICY IN THE NORTHERN CAPE PROVINCE

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DECLARATION

I declare that this research report submitted to the University of the Witwatersrand School of Governance in partial fulfilment of the degree of Master of Management in Governance is my work. Furthermore, I affirm the necessary authorisation and permission obtained to carry out this research.

____ (Signature of candidate)

__________day of________________________2022 in_________________________

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I offer all glory and honour to the living God who has protected me this far to realise this momentous occasion in my life. I would also wish to acknowledge my supervisor, Professor Pundy Pillay, for his constant encouragement and support, which ensured that I delivered a well-researched and informative report. Special heartfelt gratitude goes to my loving wife and children for their patience, understanding and confidence in me. I dedicate this to my mother in heaven and aunt in appreciation of my upbringing and your motherly love and for ensuring that I had the best education.

ABSTRACT

Although industrial policies have been in place in South Africa for over a decade, their implementation to support and prioritise the manufacturing sector has generally been slow and ineffective, particularly in the province of the Northern Cape (NC), which was the study area. Although the NC has a long history of industrialisation reaching back to the discovery of large diamond deposits in Kimberley in 1867, it has been slow in becoming fully industrialised owing to its weak performance in the manufacturing sector. Moreover, provinces such as Gauteng, the Eastern Cape and KwaZulu-Natal are more advanced in terms of industrialisation. Thus, the researcher aimed to understand the phenomenon by researching the implementation and benefits of industrial policy in the context of the NC. An in-depth investigation revealed several weaknesses in the implementation of policy, which has minimised benefits such as support mechanisms for the manufacturing sector.

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ABBREVIATIONS AND ACRONYMS

AIDC	Automotive Industry Development Centre
APDP	Automotive Production and Development Programme
AMTS	advanced manufacturing technology strategy
DBSA	Development Bank of Southern Africa
DEDAT	Department of Economic Development and Tourism
dti	Department of Trade and Industry
dtic	Department of Trade, Industry and Competition
EDD	Economic Development Department
EGDF	Economic Growth and Development Fund
EIA	environmental impact assessment
EMIA	Export Marketing and Investment Assistance
EOI	export-oriented industrialisation
FB	Frances Baard
GDP	gross domestic product
GIPF	Gauteng Industrial Policy Framework
HDI	Human Development Index
ICT	information and communications technology
IDS	industrial development strategy
IDZ	industrial development zone
IMS	Integrated Manufacturing Strategy

IoT	internet of things
IPAP	Industrial Policy Action Plan
IS	import substitution
ISI	import substitution industrialisation
JTG	John Taolo Gaetsewe
KIDJA	Kimberley International Diamond Jewellery Academy
KDJI	Kimberley Diamond Jewellery Incubator
KIP	Kathu Industrial Park
LED	local economic development
LEDA	Limpopo Economic Development Agency
MEC	minerals-energy complex
MECP	Manufacturing Competitiveness Enhancement Programme
MEDGP	Mpumalanga Economic Development Growth Path
MIDP	Motor Industry Development Programme
MIP	Manufacturing Investment Programme
MITI	Ministry of International Trade and Industry
NDT	National Department of Tourism
NGP	New Growth Path
NIP	National Industrial Policy
NIPF	National Industrial Policy Framework
NMK	Namakwa

NWDC	North West Development Corporation
PERO	Provincial Economic Review and Outlook
PIDS	Provincial Industrial Development Strategy
PKS	Pixley Ka Seme
PGDP	Provincial Growth Development Plan
PGM	platinum group metals
PGWC	Provincial Government of Western Cape
REIPPP	Renewable Energy Independent Power Producer Programme
RIDP	Regional Industrial Development Programme
RIDS	Regional Industrial Development Strategy
SA	South Africa
SADC	Southern African Development Community
SAPs	Structural Adjustment Programmes
SAYB	South Africa Year Book
SEDA	Small Enterprise Development Agency
SEZ	Special Economic Zone
SMEs	small and micro enterprises
SMMEs	small, micro and medium enterprises
SKA	Square Kilometre Array
SOEs	state-owned enterprises
SSA	sub-Saharan Africa

Stats SA	Statistics South Africa
TASEZ	Tshwane Automotive Special Economic Zone
TMR	transformation, modernisation and re-industrialisation
TV	television
UK	United Kingdom
US	United States
USA	United States of America
WTO	World Trade Organisation
WWII	Second World War
YARD	Youth in Agriculture and Rural Development
ZFM	ZF Mgcawu

CHAPTER 1

INTRODUCTION

1.1 Introduction

Industrialisation is defined as a socio-economic process, which comprises “a rapid transformation in the significance of manufacturing activity concerning all other forms of production and work undertaken within national or local economies” (Naudé et al., 2013). It is linked to the attainment of high levels of development and economic growth. Furthermore, it is frequently described as an engine of growth (Sampath, 2016), evidenced by countries such as Great Britain, which became the industrial centre of the world’s economy in the 19th century. Even though industrialisation involves manufacturing industries in the main, it goes beyond manufacturing, covering service sectors as well.

Manufacturing involves a process of converting raw materials into finished goods using human labour, machinery and chemical processing (Investopedia, n.d.). The process of industrialisation refers to the increased efficiency in the use of both labour and capital in activities such as manufacturing. Moreover, it depends on economic and political relations, which are governed by the precise economic formation that is targeted by e policy. According to Chang (1989), socio-economic conditions and problems such as weak sector performance are determining factors in developing an industrial policy, which involves citizens, the government and private sector agents. Lin (2014) asserts that an industrial policy is used by governments as an instrument for the promotion of economic development, both historically and in the present. Furthermore, economic development occurs at different levels of government through policy frameworks, which are available to government departments (Ndaguba & Hanyane, 2019).

Many countries have undergone industrialisation during the past two hundred years, with Britain being the first to use technology to its advantage during the First Industrial Revolution in Britain in the 18th century, followed by Belgium and Netherlands (Álvarez & Brando, 2019). However, France, Germany and Switzerland rapidly caught up with Britain between the nineteenth and twentieth centuries, while countries, such as Italy, Norway, Spain, Sweden and Japan underwent accelerated industrialisation after World War 1 (Álvarez & Brando, 2019). South Korea and Taiwan joined the industrialised world only later in the twentieth century.

This process of industrialisation in Britain influenced South Africa (SA) where the history of industrialisation goes a long way back to the 1800s with the discovery of large diamond deposits in Kimberley in 1867, followed by the discovery of gold in the Witwatersrand in 1886 (Potenza, 2019). Thus, SA transformed from an agriculture-based economy to an industrial society during the late 19th century (Verhoef, 2015). Moreover, SA's industrial base was and still is comprised of light and heavy industrialisation (Fakir, 2018). According to the World Atlas Fact Dataset, the United States (US) is the leading industrialised country with an industrial production valued at 283 billion US dollars per year, which accounts for 61.43% of the world's industrial production, while SA's industrial production is worth 9,140 billion US dollars, ranking 22nd (Knoema, 2022)

Despite the industrialisation of many areas of the world, some countries, including advanced economies, underwent what is termed "de-industrialisation," which is a decline in manufacturing (Rowthorn & Ramaswamy, 1997). The concept will be discussed later in this report in the literature review. According to Fakir (2018), SA, the United Kingdom (UK) and the US, amongst other countries, experienced de-industrialisation two decades ago mainly because of market liberalisation and increasing globalisation with countries capable of low-cost manufacturing pursuing entry into the global market. De-industrialisation in the US was evidenced by the lack of industrial diversification in Detroit. In the UK, de-industrialisation was due to a global shift in manufacturing to emerging economies and mechanisation (Stafford, 1989).

Nevertheless, the US, Japan, Germany, the Republic of Korea and the UK are still amongst the major industrialised economies (Liu, Dunford & Gao, 2018). The Republic of Korea's government worked in collaboration with enormous family-owned industrial enterprises (Chaebol) during the process of industrial policymaking by assisting them to upgrade their technologies, improve their products, introduce new products and begin large-scale exports (Amsden, 1989). Japan's increasing industrialisation during the 1950s and 1960s was due to its change from an agricultural to an industrialised economy resulting in a remarkable annual growth of 9.6% between 1950 and 1960 (Lin, 2014).

Industrial policy, which was the focus of the study described in this research report is described by Warwick (2013:16) as follows:

> Any type of intervention or government policy that attempts to improve the business environment or to alter the structure of economic activity toward sectors, technologies or tasks that are expected to offer better prospects for economic growth or societal welfare than would occur in the absence of such intervention.

South Korea used the coordination of competition for investment as the most frequent component of industrial policy in avoiding too much competition and the social waste of resources (Chang, 1998:6-7). Industrialisation in SA is a key component of the economies in the provinces of the Eastern Cape (EC), Gauteng (GP), Kwazulu-Natal (KZN) and the Western Cape (WC) (TIPS, 2016). The manufacturing sector in Gauteng comprises the production of basic iron and steel; clothing and textiles; fabricated and metal products; food and beverages; electrical machinery' appliances and supplies; paper and publishing; transport and equipment; and chemical products (BER, 2022). Furthermore, half of SA's agro-processing companies operate in Gauteng (Mthombeni et al., 2021). The Eastern Cape has a major seaport and is considered the hub of the automotive industry in Africa with its production of Volkswagen and Mercedes Benz vehicles (Konar, 2012). The province has also the largest industrial development zone (IDZ) in the southern hemisphere (Coega IDZ), which is host to several companies, ranging from steel smelters to manufacturers of dairy products (Chinguno, 2011).

KZN's manufacturing sector is the second largest in SA, after Gauteng, with almost a third of all the country's manufactured exports produced in this province (Ngibe, & Lekhanya, 2019). The paper and paper products industry, ferroalloys (aluminium) and other chemical industries are the driving force behind KZN's manufacturing sector growth (Altman, 2002). The Western Cape's economy has a competitive advantage in manufacturing sub-sectors, such as electrical, electronic, metal, steel products and beverages, and this has had a great influence on the economy of Cape Town, which grew at higher rates than the national average for the period 2013-2017/18 (John, 2019). Moreover, the Western Cape accounts for 70% of SA's beverage exports, while grapes and wine sales to Europe remain very strong, although the Chinese market is increasing (Young, 2019).

The study focussed on industrialisation in the province of the Northern Cape (NC) in SA, which is not as developed as it is in the provinces mentioned above (Stats SA, 2021). Industrialisation in the NC is in the form of projects like the Square Kilometre Array (SKA), renewable energy initiatives, a manganese smelter and sinter plant[1], a rail line upgrade for iron ore mining, an anticipated Special Economic Zone (SEZ) in the Namakwa district and industrial parks in Kathu and Upington. According to a study undertaken by Urban-Econ for the Department of Economic Development and Tourism (DEDAT) in 2019, the province has the potential for manufacturing petrochemicals; electrical machinery; radio and television (TV) components; watches and clocks; and transport equipment, but none of these have been pursued (DEDaT, 2019).

The country's Industrial Policy Action Plan (IPAP), which will be explained in this report, was introduced by the SA government to diversify the economy, contribute to industrial development and encourage the participation of historically marginalised individuals. The Department of Trade Industry and Competition (dtic), which was formerly known as the Department of Trade and Industry (dti), developed the first IPAP, which was approved by the Cabinet in 2007 (dtic, 2007).

IPAPs were published on an annual basis from 2007 until 2018 when new sectoral focus areas were introduced for the different sectors. Amongst the IPAP sectoral focus areas prioritised and subsidised during that period, were the following:

- Aerospace and defence industry
- Agro-processing
- Automotive manufacturing
- Business services

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[1] The **sinter plant** processes fine grained raw materials into a coarse-grained iron ore **sinter**, ready to be charged to the blast furnace (Van den Berg, 2008)

- Capital and rail transport equipment
- Chemicals and cosmetics production
- Clothing and textiles manufacturing
- Electro-technical industries
- Forestry
- Green industries
- Leather and footwear production
- Marine manufacturing and associated services
- Metal fabrication
- Mineral beneficiation
- Paper and furniture production
- Pulp manufacturing
- Plastics production
- Pharmaceutical industry
- Timber industry
- Water and sanitation services (dtic, 2007).

The importance of the production and consumption sectors of the economy, including agriculture, manufacturing, construction, transport, mining and utilities, was emphasised in the IPAPs, which were vehicles for growth and employment creation (dti, 2013).

The DEDAT has been implementing the IPAPs throughout the NC province through district engagements and presenting the benefits offered by the IPAP sectoral focus areas, especially those relevant to the province, such as clothing and textiles manufacturing, the green industry, mineral beneficiation and other types of production. Furthermore, the DEDAT has attempted to support IPAP sectoral focus during their implementation through the Economic Growth and Development Fund (EGDF), which makes funding available for enterprise development in the NC.

In light of the background to the study explained above, the researcher sought to explore industrialisation in the NC by focussing on the implementation and benefits of the IPAP in the province. The study examined economic growth and employment, especially in manufacturing, to understand the industrialisation of the province.

1.2 Problem statement

Although the manufacturing sector, a key component of industrialisation, has the potential for growth through increased production and employment, it has not been successful (Haraguchi et al., 2017) in the NC despite the DEDAT's efforts to support the IPAP sectoral focus areas. Furthermore, the implementation and the benefits of the IPAP in the NC Province have not been researched. Therefore, to fill the research gap, the study investigated the implementation of industrial policy in the NC and ascertained whether it has led to economic development. Furthermore, the study sought to understand the implementation challenges or failures of IPAP in the NC.

1.3 Research questions

To guide the study, the researcher formulated the following research questions:

- What are the challenges or failures of implementing IPAP in the NC
- Has the implementation of the Industrial Policy Action Plan benefited the NC
- If so, how has the province benefitted?
- If not, what are the remaining/ongoing challenges?
- What recommendations can be made for industrial policy to address the economic challenges of the NC

1.4 Research objectives

In line with the above research questions, the following research objectives were formulated:

- To investigate the challenges or failures in implementing IPAP in the NC
- To determine whether the implementation of the Industrial Policy Action Plan has benefited the province of the NC;
- To determine how the province has benefited, if at all;
- To discover the remaining/ongoing challenges that the province might still be facing; and
- To make recommendations for industrial policy to address the economic challenges of the NC

1.5 Research design and methodology

To answer the research questions and achieve the research objectives, the study adopted a qualitative, action research design (Bryman, 2012). An action research design entails collecting and analysing available information about current initiatives to formulate improvement plans. The research design informed the methodology, which involved using desktop research as a method of gathering qualitative (textual) data covering the period 2007 to 2019, which was the period of IPAP development and implementation. The data were gathered from secondary sources, such as the dtic, the Department of Economic Development and Tourism (DEDAT), IHS Markit (formerly known as Global Insight), Statistics SA (Stats SA) and news/government websites.

The data on the manufacturing performance (growth and employment) of the NC were extracted from the Stats SA, IHS Markit and dtic websites. The dtic website provided the IPAP 2007-2018 reports, whilst the DEDAT website provided the district engagement and monitoring and evaluation reports. The manufacturing performance data were analysed, while the IPAP, district engagement and monitoring and evaluation reports were used to confirm industrial sector promotion of industrialisation in the province.

The selected study area, which was the NC, comprises Frances Baard (FB), John Taolo Gaetsewe (JTG), Namakwa (NMK), Pixley Ka Seme (PKS) and ZF Mgcawu (ZFM) District Municipalities. The province is sparsely populated with only a few industrialised towns, namely Kimberley, Upington and Kuruman.

The data were contextually analysed, which involved identifying, organising, consolidating, interpreting and communicating key themes. In addition, the information underwent exploratory analysis to discover patterns and evaluative analysis to identify factors that contribute to beneficial industrial policy implementation.

1.6 Study limitations and permission

The study was limited to the province of the NC. Delays were experienced when requesting information from relevant sources because of the COVID-19 pandemic, which resulted in various working arrangements in both the public and private sectors. Permission to conduct the study was requested and approved by the Head of DEDAT, which is the researcher's employer and the source of some of the information.

1.7 Chapter outline

This research report is structured as follows:

- Chapter 1 provided a background to the study and the problem statement. In addition, the research questions, objectives, design and methodology were explained.
- Chapter 2 explains the findings of the review of the literature and theory on industrial policy. In particular, the chapter explains the neoclassical, neo-liberal, Austrian economic and orthodox trade theories, which were the theoretical framework of the study, and development theory, which is linked to the process of industrialisation.
- Chapter 3 presents, interprets and discusses the findings of the analysis of the data gathered through desktop research.
- Chapter 4 concludes the report and provides recommendations.

Chapter 1 was an introduction to the study which is reviewing the implementation and impact of IPAP in the NC with reference to economic growth and employment creation. Furthermore, the concepts such industrialisation, manufacturing and industrial policy were defined for ease of reference. The chapter also focused on history of industrialisation across the globe with reference to specific countries. The problem statement, research question, purpose, objectives, design, methodology as well as study limitations were briefly explained.

CHAPTER 2

LITERATURE AND THEORETICAL REVIEW

2.1 Introduction

This chapter reviews the literature on industrial policy and theories relevant to the study. The focus is to review literature on industrialisation internationally, in Africa including South Africa as well as provincial experiences. The history and processes of industrial policy in South Africa will also be addressed in this chapter

2.2 Literature review

2.2.1 Industrial policy

The international and national literature on industrial policy comprises a wide range of themes, namely; environment, gender, globalisation, foreign, investment, innovation, organisational and institutional culture, networks and inter-sectoral linkages, Technological acquisition and capabilities, privatisation, finance, trade policy and exports, specific industries especially manufacturing (Lall & Wangwe, 1992).

Industrialisation can take place by way of import-substituting industrialisation (ISI) or export-oriented industrialisation (EOI). ISI is the use of industrial development to protect domestic “infant” industries through tariffs, import quotas and exchange rate controls (Ogujiuba et al., 2011). EOI is a strategy to improve a country’s industrial performance and job creation by exporting manufactured goods in which it has a comparative advantage (Krainara, 2007).

According to the World Bank (Naku, 2019, the ISI is self-limiting in two ways. Firstly, it discourages the growth of agriculture and exports by ensuring that foreign exchange does not keep up with the need to import raw materials and spares for the many import-substituting industries that have been set up. Secondly, industries depending on imports become inefficient in utilising local resources because of the effective protection granted to them.

According to Sahoo and Sethi (2019), industrialisation, together with urbanisation, is one of the characteristics of economic development as experienced, for example, in South Korea in the 1960s. Furthermore, a fundamental aspect of developing the economy is a change in the sectoral composition of economic activities (Mayer, 2004). Moreover, individuals tend to migrate from rural to urban areas for better opportunities that result from industrialisation (Sahoo & Sethi, 2019), which leads to an increase in the urban population and the demand for basic services was scrutinised closely in the study.

2.2.2 International industrialisation

This section looks at the literature on industrialisation and policies to determine its success or failure. The topic of industrialisation was studied intensively in the early 1970s in Europe where basic industries, such as those based on extractives (raw materials from the earth), steel, metals and chemical products thrived. For example, Finland in Northern Europe, which was highly rural at the beginning of the 20th century, adopted a policy on the rationalisation of the primary sector in the mid-1960s and a regional policy that promoted rural industrialisation. The economy of Finland was highly dependent on natural resources, which resulted in the agriculture and forestry sector employing about 70% of the active population, but this fell to just under 50% during World War II (Tykkyläinen, 2006).

2.2.2.1 Finland

The Finnish economy grew rapidly led by the expansion of information and telecommunication technology between 1960 and 1970 and experienced a manufacturing boom in the 1970s, which was supported by the regional policy. This resulted in the migration of people from rural to urban and urban-rural peripheral areas, despite an increase in the number of people working in the manufacturing sector in rural areas, which rose by 46% in the 1970s, followed by a decline in the 1980s with a loss of more than one-tenth of the manufacturing jobs (Tykkyläinen, 2006).

The country’s rural industrialisation was based on developing a new light industry rather than relocation. However, the economy was not immune to the economic catastrophe of the early 1990s, which led to a decrease in manufacturing output by 10% and employment by 20% before recovering in the latter part of 1990, while the traditional labour-intensive sectors were declining (Tykkyläinen, 2006). Nevertheless, Finland is used as a role model for good governance in economic policy, education, equality and sustainability because of its interventionist government policies and socio-economic success (Parella, 2019). Furthermore, the country operates as a laissez-faire society in which the power and size of the government are limited and free-market policies are adopted. The success of the Finnish economy is due to economic and social cohesion, social trust, economic freedom, the ease of doing business, education, advanced technology and a competitive market (Parella, 2019).

2.2.2.2 Japan

Japan's development through industrialisation is due to four distinctive features: a proto-industrial base (high agricultural productivity to sustain substantial craft production in both rural and urban areas); investment-led growth (growth driven by local investment in industry and infrastructure); rapid total factor productivity growth (shifting from low-productivity agriculture to high-productivity manufacturing, mining, and construction); and dualism (a capital intensive sector paying relatively high wages and the labour-intensive sector paying relatively low wages) (Mosk, 2010).

Japan has experienced a high level of urbanisation, well-developed road networks; the channelling of river water flow with embankments; the extensive elaboration of irrigation ditches; the development of proto-industrial (craft) production; and the promotion of education from the mid-17th century to the 1850s (Mosk, 2010). The sustained growth of proto-industrialisation in urban Japan resulted in the mass production of paddy rice and the growing of industrial crops, such as tea, fruit, mulberries and cotton (Mosk, 2010).

Economies of scale were created owing to the building of electrical railroads in the industrial belt between 1904 and 1911 (Mosk, 2010). During the 1910s, a dualistic economy emerged with small firms, light industry and agriculture offering relatively low wages, while big enterprises in the substantial industries offered much more favourable compensation, which resulted in inequalities between the metropolitan and rural areas. This also affected the progress of technology in the agriculture sector, which was slowing down (Mosk, 2010). Furthermore, the consolidation of two huge hydroelectric power grids further coagulated the relative advantage of the factories in the industrial belt (Mosk, 2010).

During the 1920s in Japan, the introduction of electrical machinery, which spread swiftly to small factories, had a radical impact on manufacturing. The improvement of roads through paving and widening during the 1920s also bolstered the infrastructure. Furthermore, the country managed to achieve continued growth in per capita income between 1880 and 1970 as a result of industrialisation. During the period 1953–1970, Japan experienced a “Miracle Growth” (Williamson, & De Bever, 1978) due to the remarkable growth in the domestic fixed capital formation rate and an increase in the investment proportion. In addition, Japan has experienced effective and successful industrial policy implementation in its automotive industry, which led in 1971, to its largest production of buses and trucks (Sato, 2017).

The Ministry of International Trade and Industry (MITI) in Japan took control of industrial policy, acted as a single buyer of technology, encouraged the rapid distribution of technology amongst Japanese firms and foreign companies and ensured that domestic patent periods were kept short (Mosk, 2004). The success of Japan’s industrialisation can therefore be attributed to the four distinctive features highlighted above and the implementation of industrial policy in its automotive industry. Furthermore, as a result of the success of the East Asian newly industrialised countries such as Japan, questions and debates rose in different scholarly camps about the responsibility of industrial policy in the 80s and 90s (Amsden, 2001; Chang, 1998, 1997).

2.2.2.3 United States

The US adopted a protectionist policy for infant industries through the Tariff Act of 1816 on products, such as cotton cloth, iron and wool. The country experienced an estimated annual average growth rate of 2.4% within the period 1829-1831 and 1909-1911, while between 1870 and 1913, the growth rate of per capita income bypassed that of all major European countries (Salazar-Xirinachs et al., 2014) because of the protectionist policy.

The intervention by the US government was less in the domestic economy than in foreign trade during the early periods of industrialisation. However, the intervention in the domestic economy was mainly promoting development and industrialisation, especially in capital accumulation (physical, social, infrastructure and human) and encouraging technological development, organisational change and institutional build-up (Shafaeddin, 1998). Although the intervention was moderate at the beginning, it intensified mainly in 1824 and from 1828 to the early 1830s, despite the southern states being against the protection of manufactured goods because they were mainly agricultural producers. Manufacturing goods benefited from the tariff rates, which were higher than the nominal rates (Shafaeddin, 1998).

Trade liberalisation was strengthened during the period 1846-1861 owing to pressure from the southern states which led to American industries suffering, as a result of premature trade liberalisation (Shafaeddin, 1998). In 1861, the process of trade liberalisation was reversed to finance the civil war and protect domestic industries. This protection was reinforced during the periods 1875 to 1883 and 1880 to 1913. In 1913, pressure to revise the US trade policy substantially resulted in the Tariff Act of 1913, which decreased overall tariff rates and those of manufactured goods from 44 to 25% (Shafaeddin, 1998).

Capital accumulation, infrastructure improvement, institutional development, infant industry protection and substantial government intervention in the foreign sector played a substantial part in the industrial success of the US (Shafaeddin, 1998).

2.2.2.4 China

The success story of China emanates from its economic reform, which began in 1978 when it adopted a development strategy based on an import substitution trade and economic policy that advocated replacing imports with domestic production; growth based on rapid industrialisation; increased trade openness; exports; and the gradual liberalisation of financial markets, which is a model similar to other successful East Asian countries. These reforms resulted in accelerated growth with China registering the world's highest growth rates of 9.9 and 10.3%, respectively, in the 1980s and 1990s (Kniivilä, 2007). However, even though China is fully industrialised, it is still heavily dependent on its agriculture sector, which has contributed considerably to the transformation and development of the manufacturing sector through surplus labour migrating to the manufacturing sector (Kniivilä, 2007). Furthermore, the growth in the agricultural sector played a more crucial role in poverty reduction than growth did in the secondary or tertiary sectors during the 1980s and 1990s (Kniivilä, 2007).

Industrialisation in China increased per capita income significantly from 990 purchasing power parities (PPP) dollars in 1990 to 16 730 PPP dollars in 2019 (World Bank Group, 2022). However, inequality amongst regions and between rural and urban areas increased by 15 Gini points after 1990 (SWIID Version 5.1 and IMF staff calculations) because industrial development had occurred only in some parts of the country (Szirmai, & Verspagen, 2015). Thus, inequality in China remains the highest in the world (Jain-Chandra et al., 2018). However, in Taiwan and South Korea, for example, the combination of economic growth and industrialisation decreased inequality (Kniivilä, 2007)

2.2.2.5 India

Like China, India opted for an import substitution economic development policy strategy, which involves industrialisation and state control of the economy. The Indian economy has experienced a radical structural change in the past 40 years. The country embarked on policy reforms in the 1980s because the current chosen strategy was ineffective. These reforms led to accelerated economic growth, especially in the manufacturing and services sector, which led to a significant decrease in people living in poverty from 45.7 to 27.1% between 1983 and 2000 in rural areas and from 40.8 to 23.6% in urban areas (Kniivilä, 2007).

However, Kniivilä (2007) argues that changes in the secondary sector have not reduced poverty because of inequality in human resource endowment, and the prevention of the poor from partaking in non-farm formal sector activities. Kniivilä, (2007) maintains that since poverty is a rural problem in India, it could be resolved through agricultural development. After a macroeconomic crisis, the country's reforms became systematic and broader at the beginning of 1990. However, the agriculture sector, which still employed many people, was not affected by these reforms.

In terms of liberalisation, which fostered innovation, profits and growth in technological industries (Aghion et al., 2003), India followed a different approach from that of the standard Washington consensus, which was gradual and controlled, while avoiding capital account liberalisation (United Nations, Department of Economic, Social Affairs

Staff, & United Nations. 2007). Owing to slow liberalisation, the changes in inequality have been comparatively modest in India, compared to those in transition economies (countries undertaking macroeconomic reforms in an attempt to change the ways of managing their economies) (Kniivilä, 2007).

2.2.2.6 South Korea

Because of significant structural change, South Korea achieved remarkable growth in the manufacturing sector, which averaged 17% between 1960 and 1979 and was accompanied by a reduction in inequality and poverty. However, growth and employment in the agricultural sector declined continuously (Kniivilä, 2007).

South Korea differed from China and India by pursuing a comparatively protectionist import substitution strategy in the late 1950s whereby imports were restricted by high tariffs and an import licensing system. It shifted from import substitution to export orientation in the early 1960s with the export of light industry products in which it has an advantage. This reform, which had an impact on growth through the creation of high labour demand and job creation, resulted in poverty reduction. Furthermore, Korea invested extensively in human resources as compared to other developing countries. The economic policy changed in the 1970s with the introduction of heavy industries, while the light industry benefited slightly from the policy change (Kniivilä, 2007), resulting in a decline in or stagnation of exports of labour-intensive goods such as clothing.

South Korea experienced swift growth in the income of urban areas and rising income inequality amongst rural and urban areas as a result of an industrial policy that emphasised industrialisation and urbanisation.

2.2.2.7 Taiwan

Taiwan like China, India and Korea adopted an import substitution policy in the 1950s but changed to an export orientation in the 1960s. Taiwan experienced rapid economic growth between 1960 and 1970 (Kniivilä, 2007) because of manufacturing growth and export orientation from the 1960s onwards. The country experienced accelerated export-driven growth in employment and labour-intensive manufacturing industries with an emphasis on SMEs, which led to a decline in income inequality. Moreover, reduced inequality and rural poverty were due to major post-war land reforms.

2.2.2.8 Indonesia

Although Indonesia was one of the least industrialised developing countries in the mid-1960s (Kniivilä, 2007), with widespread poverty as well as economic and political chaos, economic growth averaged 7% during the period 1960 to 1997 (Kniivilä, 2007). The high growth performance was due to a shift from mainly agricultural production to a more industrialised base resulting in the manufacturing sector driving the country's economic growth, while the agriculture sector remained the highest employer. Poverty dropped from more than 70% in the mid-1960s to 11% in 1996 (Kniivilä, 2007) owing to accelerated economic growth.

Even though during 1966, there were reforms, which included economic liberalisation, encompassing a shift to a more market-oriented economy from a closed economy and heavily interventionist policies (Kniivilä, 2007), Indonesia was not immune to the 1997 Asian economic crisis, which led to a poverty rate increase. As a result of economic liberalisation policies, which brought foreign investments to the country, and the oil boom of the 1970s, the government introduced import substitution and public financing (Kniivilä, 2007). The oil boom of the 1970s benefited the poor through infrastructure and public goods investments. After the oil boom, growth in the country was driven by an increase in manufacturing exports, while private sector manufacturing became highly labour-intensive, thereby boosting the agriculture sector, creating employment opportunities for the poor and ultimately reducing poverty significantly.

However, after the oil boom shock of the early 1980s, the import-substitution strategy financed by oil revenues was not sustainable. Hence, the Indonesian government opted for an export-promoting strategy and involved more private sector participation for growth, which led to a rise in manufacturing exports moving from a share of 2.3& in 1980 to 51.4% in 1996 (Kniivilä, 2007).

Although most people were still living in poverty in the late 1960s, the fast and tenacious economic growth, with an emphasis on urban-based manufacturing, which was sustained until the late 1990s, had a substantial effect on poverty. However, the emphasis on manufacturing without any rural development programmes led to slow growth in the agriculture sector, causing a widening rural-urban gap and an increase in inequality (Cornia, 2005).

2.2.2.9 Mexico

Mexico just like China, India, Indonesia and Taiwan adopted an ISI policy (Esquivel & Rodríguez-López, 2003), which included high protective tariffs and other import barriers between 1940 and the mid-1980s. Even though the country experienced accelerated growth in the economy during the 1970s, it was undermined by a deteriorating investment climate and fiscal mismanagement, which resulted in an economic crisis at the beginning of the 1980s, forcing the country to embark on economic reforms in the form of trade liberalisation, export promotion and privatisation. Regardless of these reforms, the economy deteriorated and by 1986, the gross domestic product (GDP) growth rate was negative, although it recovered by the end of the 1990s.

Even though the agricultural sector contributed the least to the country's economy, it employed the most people, accounting for 16% of total employment in 2003. The services sector contributed the highest to the GDP with a share of 70% and manufacturing with 18% in 2005 (Kniivilä, 2007). However, owing to trade liberalisation, the share of manufacturing exports accounted for approximately 80% in 2004.

The rate of poverty fell during the period 2000-2002 despite economic deterioration, although inequality increased as a result of technological change brought by trade liberalisation, which increased manufacturing wage inequality in the late 1980s and 1990s (Esquivel & Rodríguez-López, 2003). The high inequality coupled with sluggish economic growth subdued progress in poverty reduction, although the country made progress in providing healthcare and education to the poor (Kniivilä, 2007).

2.2.2.10 Brazil

Brazil adopted an aggressive export development strategy as well as trade liberalisation measures, which resulted in the specialisation of capital-intensive industries such as the automotive industry (shipbuilding and aircraft), which was also shielded from international competition (Kniivilä, 2007). Meanwhile, the unemployment rate increased on average from 4.3 to 12.3% between 1990 and 2003, especially in the informal sector due to the neglect of labour-intensive sectors, which normally attract labour. Nevertheless, there was significant poverty reduction in Brazil, especially during the period 1990-1999, while the poverty rate stagnated until the early 2000s (Kniivilä, 2007).

The contribution of the industrial sector (construction, manufacturing, mining and utilities) in Brazil has remained comparatively persistent over the past three decades, although economic performance has been volatile. The manufacturing sector contributes nearly two-thirds of the country's industrial GDP, while the contribution of the agricultural sector to GDP has been less than 10% since the early seventies (Kniivilä, 2007). Although the agriculture sector contributes less to the country's GDP, it is still the highest employer (Kniivilä, 2007), as in other countries already examined. Exports, especially of agricultural products (including processed goods), mining, beverages, tobacco, chemicals and fuel have been a crucial factor in stimulating output in Brazil, while the country is a net importer of other industrial products and services (Kniivilä, (2007).

The section above focussed on seven countries in Asia and Latin America in addition to Finland and the US with an emphasis on their growth, performance, strategies and the state's industrial development policies. The contribution of industrial policies to economic growth, poverty and income inequality was explained. However, of particular relevance to the study is the success or failure of the industrial policies adopted by these countries. Moreover, lessons learned would assist in ascertaining the benefits of implementing an effective industrial policy in the study area.

2.2.3 Industrialisation in Africa

It is also necessary to understand industrialisation from the African continent's perspective. Africa has a disappointing record of industrial development owing to structural constraints and policies linked to its colonial legacy, including apartheid in SA (Fahnbulleh, 2006). The average share of manufacturing in the GDP of sub-Saharan Africa (SSA) remained the same between 1970 and 2010 at 2.4% (World Bank Group, 2022). Africa's industrialisation was stifled by the aid offered by the Structural Adjustment Programmes (SAPs), which involved conditional lending by the

Bretton Woods Institutions, which were funded by the International Monetary Fund (IMF) and the World Bank. The scheme did not achieve its goal of industrialisation and economic growth in Africa, which became dependent on foreign aid and did not develop export policies, as did the Asian and Latin American countries examined above. The policies were neoliberal and market-oriented, which did not meet the countries' needs.

African economies, including that of SA, are dependent on natural resources (Perez & Claveria, 2020), the export of which in the form of unprocessed primary commodities is high (Maswana, 2015). These countries are not competent in beneficiating local products before exporting them, whereas if they were industrialised, they would be able to process raw materials for export, thereby contributing to economic growth and raising living standards (Ahmad et al., 2020).

The economic structure of African countries was designed and controlled by colonisers forcing them to adopt neoliberal policies, while Asia and Latin America were adopting export-oriented policies in the new era of globalisation. African leaders were unsuccessful in pursuing bold economic policies owing to a fear of being victimised (Tafirenyika, 2016). According to the UN Economic Commission for Africa (ECA), in Africa, the contribution of the manufacturing sector to the continent's GDP deteriorated from 12% to 11% between 1980 and 2013. With few exceptions, African countries failed to take advantage of the commodity price boom in the 1990s by spending profits on resolving problems such as raising salaries for civil servants (Tafirenyika, 2016). Furthermore, the number of poor people living in poverty in sub-Saharan Africa increased significantly between 1981 and 2001 (Kniivilä, 2007).

Globalisation, which spreads industrial activities from developed to developing countries as a consequence of worldwide demand for manufactured goods, provided opportunities for industrialisation in Asia and Latin America, of which they took advantage between 1980 and 1990 (Lall & Wangwe, 1998; Mayer, 2004). Therefore, African countries needed policies that were intentionally designed to reform their colonial economic structures and promote international trade.

African governments expected that their economies would be transformed into dynamic, modern ones through industrial development, productivity and economic growth (Lall & Wangwe, 1998). They tried to rebuild their economies between 1960 and 1970 after de-industrialisation (reduction of manufacturing) and experienced an impressive GDP growth led by the manufacturing sector. African countries (initially Nigeria, Tanzania and Zambia) adopted the ISI policy whereby local industry was developed and the import of manufactured products was reduced. This policy was adopted earlier by Latin American countries, which were restoring their economic independence (Mendes et al., 2014) and rapidly industrialising their economies. However, this measure largely failed to produce sustainable growth in the African economies.

2.2.3.1 Ghana

Ghana, a poor country, adopted three industrialisation strategies between 1965 and 2001: the previously mentioned ISI strategy (1965–1983), an outward-orientated industrialisation strategy (1984–2000) and the private sector-led accelerated industrial development strategy from 2001 onwards. ISI and the creation of an improved industrial structure set the tone for industrialisation after Ghana gained independence from Britain and the colonial system in 1957 (Killick, 2010). During this time, its industrial sector consisted mainly of manufacturing, which contributed very little to the economy, although most of the country's investments were directed towards it. In addition, manufacturing declined between 1980 and 1985, lagging behind the growth of the economy.

2.2.3.2 Kenya

Kenya, like many developing countries, followed the ISI strategy between 1963-1970 with direct support and tariff protection in the industrial sector provided by the government with the main objective of industrialisation and creating employment. However, the manufacturing sector (mainly light industries) grew by only 8%, with the agriculture sector remaining the main employer by far, especially in the urban areas. The slight growth of the manufacturing sector was due to the introduction of food, textiles, garment, beverage and tobacco industries, which are still the most produced items in Kenya (Mendes et al., 2014; Newman et al., 2016).

In the 1970s, Kenya's economy deteriorated because the country penalised the agricultural sector, which suffered high input costs, although the country promoted and financed new industrial projects to revive the economy (Newman et al., 2016). The Kenyan government introduced the aforementioned SAPs, which were driven by the IMF during the 1980s to promote industrialisation and competitiveness. Furthermore, to improve the industrial sector, the government introduced the National Industrial Policy (NIP) in 2007, the same year that SA introduced the National Industrial Policy Framework (NIPF). Regardless of these efforts, the manufacturing sector, comprising the textiles, food and metal industry remained the third largest sector, with a contribution of 10.3% to GDP after transport and communication (11.3%) and agriculture and forestry (23.4%) (Chege et al., 2016). Moreover, the textile industry collapsed in the 1980s due to market liberalisation policies.

2.2.3.4 Mozambique

Mozambique was the eighth largest industrialised country in sub-Saharan Africa in 1975, with its industrial sector as the largest contributor to the economy due to its Cahora Bassa Dam, one of the largest hydropower plants in the region (Newman et al., 2016). It had a growing colonial, urban and industrialised population as well as a local majority population dedicated to low-productive agriculture and other manual activities, such as mining and public works (Newman et al., 2016). The country has currently a private and public industrial sector, although the agriculture sector remains dominant in Mozambique despite the sequence of revolutions since the end of WWII.

The country experienced de-industrialisation in the first eleven years after adopting a socialist policy, losing export markets and its industrial base. In 1987, the economy started growing with the introduction of liberalisation, which also brought new economic opportunities. However, this liberalisation approach led to the de-industrialisation of industries, such as cashew nuts, chemicals, construction materials, equipment, food processing (tomato, fruit juices, milk products, wheat and other cereal products), metallurgy and textiles (Newman et al., 2016). Furthermore, the local industry was exposed by liberalisation to the global economy through the exploitation of mineral resources.

2.2.3.5 Nigeria

Nigeria is often considered the giant of Africa due to its large population of over 211 million and its economy, which is the largest economy in Africa. It is also the continent's biggest oil exporter and has large natural gas reserves. Nevertheless, the economy is structured like a typically underdeveloped country with poverty continuing to be high. Moreover, Nigeria is ranked very low on the Human Development Index (HDI) and is amongst the most corrupt countries in the world (Kayode et al., (2013).

Even though the oil and gas sector is the driving force behind the Nigerian economy, the agriculture sector plays the primary role by contributing over half of the GDP, with the industrial sector accounting for a small share of the economy. During the post-war era (1970-1978), the country adopted an industrial policy focussed on ISI, which led to economic growth that was, however, brief because of the oil crisis and global recession, which led to negative economic growth in the first half of the 1980s.

As opposed to other countries such as Mozambique which experienced de-industrialisation, the Nigerian economy recovered with real GDP growth of 4% annually during the period 1988–1997 owing to the introduction of the SAPs in 1986. However, this recovery was slow, especially in the manufacturing sector, which saw a fall in its contribution to GDP from 4.9% in 1999 to 4% in 2005 (Newman et al., 2016).

2.2.3.6 Africa post World War II

The pattern followed by most African countries after WWII and their successful move to independence was to remove colonial hindrances to industrialisation and pursue economic reforms by adopting strategies, such as ISI and EOI, which worked for most countries, although for a short period. Furthermore, the ISI strategy led to inefficient and non-competitive patterns of industrialisation due to overvalued exchange rates. Therefore, the industrialisation process in Africa was not vigorous enough to enable African economies to be self-sustainable.

According to Morris & Fessehaie, (2014), Africa’s industrial policies should focus on sectors that require unskilled labour, such as light manufacturing, as opposed to capital- and skills-intensive industries. However, Africa’s production of light goods faces competition from China’s exports, which led to SA promoting the buying of locally produced goods in support of localisation, which is the focussing of business in local areas on the products which should be bought rather than imported produce from international locations (Lamprecht & Grobbelaar, 2017).

SA was not immune to the effect of the Bretton Woods Institutions, as it was amongst the countries that were offered a bailout in 1994 in the form of financial assistance when the country was faced with the debts of the former apartheid government. This bailout came with the proviso that the country adopted neoliberal policies, such as deregulation, economic stabilisation, privatisation, trade openness and fiscal discipline, as per the conditions set out by the SAPS/Washington Consensus (Fine & Rustomjee, 1997), which, however, led to the country's de-industrialisation, as it could not compete with most of the industrialised countries. Moreover, the outsourcing of cleaning and security services affected the growth of manufacturing employment in the country.

Most developing countries in Africa regard industrialisation as an essential tool for economic growth, which leads to the realisation of societal objectives, such as access to education and healthcare, the alleviation of poverty, employment, gender equality and fair labour standards (European Commission, 2006; Jelilov et al., 2016). Nevertheless, industrialisation can harm the environment, such as that experienced near the Xolobeni mine situated in the Wild Coast region of the Eastern Cape the community of which was against mining on their land (Bennie, 2010). Furthermore, although the gold mines in Witwatersrand in Gauteng province brought regional development, employment and wealth, they also brought economic inequality, civil unrest, the most disturbing war in the history of SA, social uprooting, pollution, negative health effects and ecological destruction (Durand, 2012).

2.2.4 Industrial policy in South Africa

Industrial policy in SA goes back to the 1920s, with the adoption of an ISI policy, while the origins of modern industrial policy can be traced to the period following World War II (Verhoef, 1998). The Industrial Development Corporation (IDC) was established by the then ruling party in 1940 to provide industrial financing after realising the dearth of long-term investment capital for domestic enterprises. However, the industrialisation promoted by the apartheid system caused economic inequality, which the country is still experiencing. The apartheid government restricted the mobility of African labour and excluded Africans from skilled jobs by reserving the best education for the white minority, thereby making it difficult to establish an internationally competitive manufacturing sector, as it lacked skilled labour (Moritz, 1994).

The ISI policy supported the transition from the production of consumer goods to capital and intermediate goods, although this was at the expense of job creation in SA, especially between the 1970s and 1980s (Moritz, 1994). The economy worsened during the 1980s as a result of the inability of the manufacturing sector to create job opportunities between 1976 and 1988 (Moritz, 1994) or produce products that met the standards and needs of the domestic and global market. Hence, Chinembiri, (2010), concludes in her study that the industrialisation process in SA required imports of capital, as the manufacturing industry's expansion was severely affected by the low domestic demand due to the reduction in domestic markets.

SA was faced with an economic catastrophe during the early 1990s, which resulted in a declining GDP and investment, an external capital account, which was in deficit for almost a decade and a volatile and sometimes negative growth rate in the export of goods and services, which were mostly mining and mineral products, and an overvalued exchange (Zulu, 2014). In addition, because of apartheid, the country also experienced a high rate of unemployment, economic inequality, the exclusion of the majority from economic activities and prevalent poverty. However, even though poverty levels have currently decreased, the country is still faced with unemployment, poverty and inequality.

It was against this background and after the recognition of challenges, SA agreed to a shift towards opening up to world trade by adopting an export-oriented strategy, which replace their inwardly focussed and imprudent protected domestic economy. According to Fine and Rustomjee (1997), the South African economy is still based on the minerals-energy complex (MEC), which is evidenced by its diversification of exports post 1994. Furthermore, the challenge of the MEC approach was custom-made through policy design to benefit the minority, who were provided with training and education during the apartheid era.

As mentioned above, SA introduced an official industrial policy in the form of the NIPF and the first iteration of the IPAP in 2007/8. The objectives of the IPAP are to do as follows:

- Facilitate a shift away from relying on traditional commodities and non-tradable services and promote value-added goods and services that compete in the export markets (against the import market)
- Intensify the process of industrialisation and move towards a knowledge-rich economy
- Promote a more labour-absorbing industrialisation path, which emphasises reducing unemployment, and tradable labour-absorbing goods and services
- Promote a broad-based industrialisation path, which is characterised by increasing the participation of historically marginalised groups and regions in a conservative industrial economy
- Create an additional 350 000 manufacturing jobs by 2020 as outlined in the New Growth Path (Patel, 2011)

Even though SA, like many advanced and developing countries has adopted an industrial policy, industrialisation still needs to be developed in many areas. Moreover, lessons learned from Latin American and East Asian countries suggest that a successful industrial policy is not determined only by good policy design but also by the effective implementation and coordination of that policy. The current study aimed to ascertain the degree to which SA's industrial policies have succeeded. SA is considered as having many sound economic and other policies but the implementation of these policies is invariably a challenge (Bardill, 2000). Furthermore, the capacity of the government to develop and implement effective industrial policies is currently very weak (Kaplan, 2006). Nevertheless, SA, as one of the fastest developing economies, is acknowledged as recognising the importance of industrialisation and technological innovation. Hence it is categorised as one of the most industrialised countries on the continent (Ashman & Newman, 2018).

The following economic and industrial policy initiatives have been implemented in SA since 1994:

- Growth, Employment and Redistribution strategy (GEAR)
- New Growth Path (NGP)
- Accelerated and Shared Growth Initiative of SA (ASGI-SA)
- Integrated Manufacturing Strategy (IMS)

- Advanced Manufacturing Technology Strategy (AMTS)
- Manufacturing Competitiveness Enhancement Programme (MECP)
- Manufacturing Investment Programme (MIP
- Industrial Development Strategy (IDS)
- Regional Industrial Development Strategy (RIDS)
- Provincial Industrial Development Strategy (PIDS),
- Industrial Policy Action Plan (IPAP)
- Motor Industry Development Programme (MIDP)
- Automotive Production and Development Programme (APDP)
- Presidential Nine-Point Plan

The Presidential Nine-Point Plan was introduced in the 2015 State of the Nation address with the target of boosting economic growth and job creation through reinvigorating agriculture and agro-processing, increasing beneficiation and implementing a more effective implementation of an improved IPAP. In 2019, the government developed the re-imagining industrial strategy with the main objective of boosting private sector investment and economic inclusion by learning from the automotive sector, prioritising certain sectors and adopting a collaborative approach with industry and related stakeholders. The strategy is based on five engines of growth, namely industrialisation, innovation, inclusion, integration, investment and infrastructure.

GEAR involved fiscal, monetary, exchange, trade, industrial and small enterprise policies. The ASGI-SA focussed on investment in infrastructure, skills and education initiatives, while the primary focus of the IMS was on improving competitiveness. The RIDS intended to ensure that all regions could accomplish their economic potential by addressing impasses and barriers, such as the damaged manufacturing industry as a result of the dumping of goods from countries like China.

Nevertheless, these policies and strategies have not yielded the expected results, such as improved economic growth and job creation. Employment has been declining (dti, 2017), especially in the agriculture and mining sectors on which the country including the NC province has been and is still dependent. However, the mining sector, in particular, has been significant in the economy of SA and the development of the industrial sector. Moreover, the decline in employment in the traditional tradable sectors (manufacturing industry) has not been sufficiently offset by an adequately large increase in comparatively labour-intensive employment in non-traditional tradable goods and services sectors (health, education, retail and construction), particularly manufacturing.

The MIDP in post-apartheid SA is considered the most ambitious and successful industrial policy intervention. The automotive industry received the largest support in 1995 and 2014 through the MIDP and the APDP, respectively. However, in general, SA has been unable to formulate and implement industrial policy effectively over the last decade because of inadequate coordination of the industrial initiatives of the national, provincial and local three spheres of government. Moreover, the capacity to formulate and implement high-quality industrial policy interventions has been uneven across government departments.

Industrialisation in SA began in the city of Kimberley in the then Cape colony, which is now called the province of the NC, after the discovery of large diamond deposits in the 18th century, as highlighted in the background section of this dissertation. The process of industrialisation in the city, which proceeded to Gauteng on the goldfields of the Witwatersrand, played a huge role in transforming the country from a mainly agricultural society to an increasingly urbanised state. The Premier of the Cape Colony, Cecil Rhodes, who owned De Beers Consolidated Mines, dominated the production of diamonds from the 1880s, which led to protests by Kimberley residents (Worger, 2004), which was not a success, as he had spies in the company. In addition, the city attracted many urban immigrants in the last quarter of the 19th century, with only a small proportion remaining behind. Skilled workers, mainly from Britain, arrived in Kimberley in the 1880s to develop underground shafts and tunnels, while machinery and equipment were also imported to Kimberley from Britain and Europe.

2.2.4.1 Provincial experiences of industrial policy in South Africa

This section assesses whether industrial policies have had any impact on the economy of SA's provinces by focussing on provincial and sector growth, employment, poverty and inequality.

(a) Northern Cape

The NC is the largest in terms of land and the most sporadically populated province in the country with a population of 1.3 million (Stats SA, 2022). Like other provinces in the country, it is still experiencing high levels of inequality, poverty and unemployment at a rate of 24,9% in the third quarter of 2021 (Stats SA, 2022), which is lower than all the other provinces at that time. The province is mostly dependent on the primary sector with mining as the highest contributor to the provincial GDP making up approximately 7% of the country's total mining value, while agriculture plays a crucial role in employment.

The NC developed a manufacturing strategy in 2012 to accelerate manufacturing development and create jobs based on the province maintaining a comparative advantage. The strategy identified three manufacturing sub-sectors, namely agro-processing, mineral-beneficiation and energy technology as well as potential areas for development of the sub-sectors (DEDaT, 2012). Nevertheless, the manufacturing base of the provincial economy remains weak because of the small population, which means there is hardly any local market for the manufactured products. In addition, the distance from the main markets means that the manufacturing sector remains non-competitive. Although the IPAP and NC Manufacturing Strategy have been implemented in the province, the manufacturing sector is still not doing well, as mentioned above.

The manufacturing sector, which is important for industrialisation, does not contribute much to the economy of the province, which lags behind other provinces, although industrialisation in the country began in this province with the discovery of diamond deposits as explained above. Nevertheless, the province still has planned projects, such as the Namakwa SEZ; Kathu and Upington Industrial Parks; and the Metals Cluster, which will be examined in Chapter 3.

(b) Gauteng

Gauteng is the most industrialised and wealthiest province, with a population of 15.8 million, which is the highest of the nine provinces (Stats SA, 2022). Gauteng dominates in almost all industries except for agriculture and mining (Stats SA, 2022). This high population is because of in-migration from rural and South African Development Community (SADC) countries to the urban Gauteng with an abundance of work opportunities, especially in industrial sectors, such as mining and manufacturing. This migration has an impact on the provision of basic services like electricity, housing, water and sanitation.

The Gauteng Industrial Policy Framework (GIPF) from 2010 to 2014 was developed to conduct detailed sector studies, which would result in action plans for particular sectors, including the automotive, and automotive components, construction, food and beverages, furniture, textiles and clothing, machinery and equipment sectors (Gauteng department of economic development, 2012). Furthermore, a sector desk would be established with a focus on three priority sectors, namely capital and transport equipment, the green economy and services.

The Gauteng provincial government on behalf of the dti, reviewed the National Electric Vehicle Strategy of 2011 to understand the factors that must be in place for the electric vehicle sub-sector to take off. This was done through international benchmarking of the manufacturing and use of electric vehicles. In addition, the province made recommendations to the dti for funding, infrastructure requirements and red tape in the manufacturing of electric vehicles in SA.

The provincial government of Gauteng introduced the Transformation, Modernisation and Re-industrialisation (TMR) strategy with a focus on strengthening the main economic sectors, such as the automotive, agro-processing and aquaculture industries. Pillar 9 of the TMR is the re-industrialisation of the transport sector with a focus on the launch of the second Automotive Industry Development Centre (AIDC) in Rosslyn, support for Nissan and Ford simulators, the local manufacturing of buses, incubator projects to produce black industrialists and growing the small and medium-sized enterprises (SMME) automotive manufacturing sector.

The province has two SEZs, namely the OR Tambo SEZ and the recently established Tshwane Automotive SEZ (TASEZ). The OR Tambo SEZ aims to develop OR Tambo International Airport land and ultimately stimulate economic development in the province. This SEZ supports the growth of the beneficiation of precious metals and minerals, with a focus on the light, high-margin, export-oriented manufacturing of South African precious and semi-precious metals. The dtic provides financial support to the TASEZ infrastructure, while the Gauteng Department of Economic Development

(2013) and the City of Tshwane provides resources and both financial and non-financial support.

Despite the development experienced, a 2019 socio-economic review showed that the strategies introduced have not made a great impact, and the provincial economy has been decelerating since 2013 to an estimated 0.9% in 2018, although it grew by 1.5% between 2015 and 2017.

(c) Eastern Cape

The Eastern Cape province, which has a population of 6.6 million, is the second poorest of the country's provinces with the highest unemployment rate of 47.4% in the third quarter of 2021 (Stats SA, 2022). The widespread poverty is due to the province's dependence on subsistence agriculture, which dominates the former homelands. The province contributes 8% to the national GDP making it the fourth-largest economy in SA before Limpopo and Mpumalanga (Stats SA, 2021). The province's main sectors include agriculture; catering and accommodation; community and social services; forestry and fishing; trade; the automotive industry; clothing and textiles; and food processing.

The Eastern Cape government decided to institute the PIDS, which was informed by the RIDS, to solve the problems of economic activity being concentrated in urban areas, the decline of manufacturing outside of the automotive sector and the small primary sector. According to the Provincial Industrial Development Strategy, the fifteen-year strategy was introduced in 2010 to save jobs, curb deindustrialisation and place the province on a more equitable and labour absorptive growth path. The strategy prioritises sectors, such as agro-processing, petrochemicals, green industries and automobile manufacturing.

The RIDS as compiled by the dti emphasised the necessity of synergy and linkages at the provincial level between PIDS, the Provincial Growth Plan (PGDP) and other industrialisation strategies, such as the Cooperatives Strategy, the Local and Regional Economic Development Strategy, the SMME Strategy, the Tourism Master Plan and the Rural Development Strategy. However, these plans and strategies for industrialisation have not been successful and the province's economic structure remains unchanged.

The province prides itself on the largest SEZ in Southern Africa, the Coega SEZ (Phiri & Manchishi, 2020), which was planned in 2001. The SEZ is located strategically in the Nelson Mandela Bay Metropolitan Municipality on the East-West trade route to service African and world markets. The public sector has invested in the Coega SEZ to attract domestic and foreign direct investment, especially in the manufacturing sector with a focus on exports. To date, the SEZ has attracted investment in the agro-processing, automotive, aquaculture, energy, business process services and the metals logistics sectors, which has advanced socio-economic development in the province through job creation, skills development and technology transfer. In the Buffalo City Metropolitan Municipality, the province has a second SEZ, East London SEZ (ELSEZ), which was established in 2003 to improve economic growth and industrial competitiveness in the country. The industries operating in the ELSEZ include the automotive, agro-processing and aquaculture industries.

Provincial economic growth has averaged 1.5% for the period 2007 to 2019 (IHS MarkiT, 2022), owing to the decline in manufacturing, which was due to inadequate investment in infrastructure, for example. The Eastern Cape province has the highest unemployment rate, which has increased from 26.3% in 2008 to 37.2% in 2019 (Stats SA, 2022). The number of people living below the food poverty line increased by 489 956 between 2007 and 2019 (IHS MarkiT, 2022). Therefore, it can be concluded that the industrial policies and strategies implemented by the province have been unsuccessful.

(d) Free State

The Free State province, which has a population of 2.9 million people, progressed from depending on primary sectors, such as agriculture and mining, to an economy which is more orientated to manufacturing and export as well as high-technology industries. Nevertheless, the province has twelve gold mines, which makes it the fifth-largest producer of gold in the world resulting in the mining sector being the largest employer (Van der Walt et al., 2016). The newly established Maluti-A-Phofung SEZ lies at the mid-point of the Durban-Johannesburg logistics route and supports light and medium manufacturing.

The mining and agriculture industry historically dominated the economy of the Free State, although the contribution of mining to the GDP of the province dropped from

16% in 1996 to 9% in 2010, resulting in a decline in employment in the sector from 180 000 in 1980 to 33 000 in 2010. In addition, the contribution of agriculture dropped from 5.3% in 1996 to below 3.8% in 2010 (FSGDS, 2013). Although the petrochemical sector constitutes more than 85% of manufacturing, the province still faces challenges in mining and agriculture

As was the case in the former homeland of Bophuthatswana, which is now part of the Free State, the apartheid government offered incentives for industrial development in the Botshabelo, Thaba Nchu and Qwaqwa areas, which are also now part of the Free State. The termination of the RIDS in the early 1990s resulted in the rationalisation of the industrial bases in QwaQwa, Harrismith and Botshabelo. However, this did not result in the collapse of these industrial economies, as compared to other former homelands.

Various small towns across the Free State experienced the closure of manufacturing industries from the early 1990s (Nel et al., 2006; Premier's Economic Advisory Council, 2006) owing to the centralisation of manufacturing for the sake of competitiveness regardless of the increasing costs of transporting raw materials to the country's main markets. Amongst the industrialisation policies of the Free State government during the IPAP period was the Free State Regional Industrialisation Policy, which was formulated to build industrial sites and encourage investment in the manufacturing sector.

According to IIHS Markit (2022), the Free State GDP declined between 2010 and 2019, during the implementation of the IPAP implementation. Although a study conducted by the Free State Provincial Treasury on poverty and inequality (using all three poverty lines) found that poverty rates in the province declined between 2006 and 2015 and the level remains high (Mashibini & Omoshoro-Jones, 2016). According to IHS Markit 2022, the number of people living below the food poverty line increased by 146 933 between 2007 and 2019, while the unemployment rate increased to 34.7% in 2019 from 23.6% in 2008. Therefore, it can be concluded that the industrial strategies and policies of the Free State provincial government during the IPAP implementation period did not have an impact.

(e) KwaZulu-Natal

KwaZulu-Natal has the second-highest population in SA with 11.5 million people and the second-largest regional economy in the country after Gauteng due to its successful manufacturing sector (Stats SA, 2022). The province, which is the now second-highest industrialised province in SA after Gauteng (Stats SA, 2022), adopted the IDS to grow the economy as quickly as possible to meet its goals. The IDS identified key sectors for industrial development: agri-processing, automotive, capital equipment, chemical, metal, maritime, transport and logistics, tourism, wood/wood products and green economy sectors. In addition, the 2012 IDS identified the sub-sectors of these, while the 2005 IDS focussed on enhancing manufacturing. The contribution to the provincial GDP by the manufacturing sector increased between 1995 and 2010, which can be attributed to the 2005 IDS.

The Richards Bay SEZ associated with the international sea port of Richards Bay aims to attract export-orientated manufacturing investment and encourage the manufacturing sector to be internationally competitive. The second SEZ in Kwazulu-Natal is the Dube TradePort located 30km north of Durban, which is the only establishment in Africa with a cargo terminal, hotels, an international airport, offices, a retail sector and warehouses in the same area. The Dube TradePort is situated between the two biggest sea ports of Southern Africa and linked to the rest of Africa by road and rail. The Dube AgriZone within the SEZ has a high-tech and future-farming facility that hosts the continent’s main climate-controlled growing area under glass and focusses on high-value, niche agricultural and horticultural products.

KwaZulu-Natal’s economy deteriorated significantly between 2015 and 2016 because of the global commodity price shock in 2011 and the severe drought that hit most parts of the country. This downward trajectory persisted until 2019 when the provincial economy reported an average growth rate of 0.8% (KZN Treasury, 2022). Most of the industrial sectors registered a growth of less than 2.6% between 2017 and 2019 with some reporting negative growth rates (IHS Markit, 2022). The unemployment rate increased from 21.7% in 2008 to 25.5% in 2019 (Stats SA, 2022), while people living below the food poverty line increased by 1.1 million between 2007 and 2019 (IHS Markit, 2022). The Gini coefficient has been generally decreasing since 2007 but increased back to 0.64 in 2019 with little effect and rather worsening inequality.

Therefore, given these findings, it can be concluded that the Kwazulu-Natal has not had much impact.

(f) Mpumalanga

Mpumalanga with a population of 4.7 million (Stats SA, 2021) is mainly dependent on the mining sector, which accounts for 83% of SA's coal production (Chinomona & Mathu, 2013). The Nkomazi SEZ, which is approximately 65km from the central business district of Nelspruit in Mpumalanga and located in the Nkomazi Local Municipality area, aims to transform the historically rural corridor into a high-tech agri-hub to promote agri-processing based on renewable energy use and provide logistics and warehousing facilities. The Nkomazi SEZ has the competitive advantage of being placed strategically between northern Swaziland and southwest Mozambique.

The economy of Mpumalanga is dominated by mining at 22%, which supplies coal to Eskom (the national electricity provider), followed by manufacturing at 12%. The provincial government developed the Mpumalanga Economic Growth and Development Path (MEGDP) aligned to NGP in 2011. The MEGDP was based on four pillars, namely human capital, rural and infrastructure development and production/beneficiation. In addition, the MEGDP outlined plans to support these pillars, such as a comprehensive rural development plan, a human development strategy, an infrastructure master plan and an industrial plan.

The province benefited from the commodity boom from 2003 to 2011 before experiencing sluggish growth. Mpumalanga benefited from the national industrial policy and development initiatives of the MECP, which supported 19 projects with R75 million from 2013/2014 to 2014/2015, and 16 projects approved under the MIP to a tune of R156 million. According to IHS Markit (2022), the Gini coefficient in Mpumalanga marginally decreased from 0.63 in 2007 to 0.62 in 2019, which reflects a still unequal society. The number of people living below the poverty line increased by 316 650 between 2007 and 2019. Furthermore, the unemployment rate increased from 23.4% in 2008 to 34.5% in 2019 (Stats SA, 2022). Therefore, the policies and strategies implemented by the Mpumalanga province did not have a positive impact.

(g) Limpopo

Limpopo with a population of 5.9 million is a typical developing area and one of the poorest in the country with inequality, particularly in rural areas (Stats SA, 2021). The provincial economy is dominated by the mining sector which contributes almost 29% to the value of total production, while comparative contributions of manufacturing, trade and tourism have deteriorated.

The province introduced the Limpopo Development Plan (2015-2019) to identify specific manufacturing clusters for appropriate industrial value-chains to enable the manufacturing sector to be more competitive nationally. Furthermore, the Limpopo government created the Limpopo Economic Development Agency (LEDA) as a special purpose vehicle that would carry out the province's set vision of facilitating inclusive economic growth and promoting industrialisation. The Industrialisation Division was also established within the Limpopo Economic Development Agency (LEDA) the objective of which was to accelerate industrialisation through strategic economic development interventions.

The provincial government also developed the Limpopo Five-Year Industrial Master Plan, which identified potential projects for the province to drive industrial and sectoral diversification and reduce dependence on the primary sector. The aim was to increase the comparative and competitive advantages of the economy and promote the general development of the industrial sector through intensified technology development and the promotion of investment in high-value products and value-added technologies and activities (Limpopo Provincial Government, 2012). The master plan had the following objectives:

- Appraise the national industrial structure as the background setting
- Explore the position of the economy relative to the main industrial concentrations
- Evaluate the comparative resources base and locational advantages
- Identify sectoral growth patterns, trends and opportunities
- Identify competitive and comparative advantages and new opportunities resulting from external changes, linkages and opportunities in the regional value chain

Limpopo established the Musina SEZ, which targets the agro-processing and light industrial clusters, and the Makhado SEZ, which is a metallurgical/mineral beneficiation complex. The third site identified was for petrochemical industries.

The provincial economy is dominated by the mining sector which grew from 2.9% in 1999 to 3.4 %in 2019 (SERO, 2019), although generally, the economic growth rate has decreased since 2011, with shrinkage from 2.2 to 0.5% between 2017 and 2018 and a further decline to a marginal -0.1% in 2019 (SERO, 2019). It can, therefore, be concluded that the industrial policies implemented by the province did not have much impact on the industrial sectors, especially manufacturing.

(h) North West

The province of the North West has a population of 4.1 million people (Stats SA, 2021) and its economy is mainly dependent on the mining sector, which is the highest employer. The province encompasses the former homeland of Bophuthatswana where people depended on subsistence farming and remittances from those working in the white SA, although this income was not enough. This resulted in migration to industrialised and urban areas for employment, which did not meet the approval of the apartheid government and led to an attempt to industrialise areas in, adjacent to, or on the borders of, the homeland (Phalatse, 2000). This was articulated in the recommendations of the 1995 Tornlinson Commission encouraging white entrepreneurs to establish factories on the borders of the African Reserves (homelands) (Phalatse, 2000).

The former homeland of Bophuthatswana was declared independent in 1977, which resulted in the banning of trade unions through labour legislation thus incentivising and creating a favourable environment for investment in industry (Phalatse, 2000).

The homeland areas experienced industrial expansion after independence in the 1980s, with the implementation of the 1982 Regional Industrial Development Programme (RIDP). White entrepreneurs were incentivised to industrialise the homeland areas, predominantly the Mogwase regions (Phalatse, 1995), which resulted in industrial growth between 1960 and 1990 and a substantial increase in the labour force that included women whose livelihoods improved whereby they gained economic independence.

The programme to decentralise industry to the homelands had little impact, however, on curbing outmigration or the economic development of the areas and merely concentrated the population there. In addition, the ultimate cancellation of incentives harmed industrial development, leading to de-industrialisation and a socio-economic decline, despite the industrial decentralisation that had been put into effect.

In the new dispensation, the provincial government of North West formed the North West Development Corporation (NWDC), which is the official investment agency with the ultimate goal of industrialising the economy and attracting investments. Furthermore, the NWDC launched an Entrepreneurial Support Centre at Mogwase in 1998, which was an initiative of both the North West provincial government and the Centre for Scientific and Industrial Research (CSIR), to revive the manufacturing sector to create jobs. In addition, the North West Provincial Industrial Development and Implementation Strategy was formulated during the IPAP period.

The North West provincial government held an industrialisation summit in 2012 to stimulate industrial development. Key industrial sector projects in line with the IPAP were to be rolled out such as Agro-processing (especially meat processing), Manufacturing of automotive products and components, Business process services (BPSs), Electronics production, Game beneficiation, Small-scale maize milling, Infrastructure development, Green production, Mining supply parks, Metal fabrication, Development zones, Platinum beneficiation, Plastics and chemicals industry.

The province has a potential SEZ (Bojanala), which is also known as the Platinum Valley SEZ, led by the NWDC focussing on the beneficiation of platinum group metals (PGM). The provincial economy is dominated by the mining industry mainly in the Rustenburg area, which contributes 26.1%, followed by manufacturing at 6.1%, agriculture at 2.8% and construction 3% in 2018 (IHS MarkiT, 2022). However, the province experiences volatility in its economic growth because it relies on the mining industry.

North West and Mpumalanga provinces contributed 8% each in 2018 to the national economy, which makes them the fourth highest provincial contributors. The level of equality in the North West, as illustrated by the Gini coefficient, decreased from 0.60 in 2009 to 0.63 in 2020 (IHS Markit (2022). According to IHS Markit (2022), the number of people living below the food poverty line increased by 263 136 between 2007 and 2019, while the unemployment rate increased to 29.7% in 2019 from 24.3% in 2008. This shows that the province did not benefit from any of the provincial government’s industrial initiatives.

(i) Western Cape

The Western Cape province with a population of 7.1 million people is the third-highest contributor ’to the country's GDP after Gauteng and Kwazulu-Natal (Stats SA, 2021). It had the lowest unemployment rate in the country at 26.3% in the third quarter of 2021 (Stats SA, 2022), although there is a great deal of inequality in the province, as measured by an increasing Gini coefficient of between 0.60 and 0.62 (IHS Markit, 2022). The province has many fisheries, is rich in agriculture and is one of the world’s finest grape-growing regions with a threefold increase in agricultural exports over the past few years.

The Western Cape government realised it had to develop and implement effective industrial policies (Kaplan, 2006) and thus formulated the Micro-Economic Development Strategy (MEDS) for a wide range of sectors (HSRC, 2004). The main objective of the MEDS was to create an environment where firms could operate with the assurance of the availability of resources and personnel. It is the first unambiguous attempt at the institutionalisation of an industrial policy (HSRC, 2004).

The strategy identified priority sectors, which had the potential to contribute significantly to economic growth, and equity targets for the Provincial Government of the Western Cape (PGWC). The sectors prioritised were call centres; business process outsourcing, information and communications technology (ICT), oil and gas services, small and medium enterprises (SMEs) and tourism. They would receive support, such as training, infrastructure and promotion, and, in particular, personnel, who would remain in place for several years, would be assigned to each sector.

The Saldanha Bay SEZ (SBSEZ) was launched on 31 October 2013 to serve the oil and gas services, marine repair and logistics services sector. In addition, the province proposed the Atlantis SEZ in 2011 in response to the Department of Energy’s Renewable Energy Independent Power Producer Programme (REIPPP), which prioritised the localisation of manufacturing and job creation as part of an initiative to establish a green tech manufacturing hub in Atlantis. Currently, the project capitalises on the province’s already booming renewable energy and green technology sectors.

The economic growth of the Western Cape steadily declined from 3.8% in 2011 to -6.9% in 2020 (Treasury, 2020). Furthermore, a sectoral analysis of the Western Cape’s economy from 2015 to 2019 revealed that finance was the fastest-growing sector, while the manufacturing sector recorded no growth and agriculture, construction, utilities and the mining sectors recorded negative growth (Treasury, 2020). The number of people living below the food poverty level in the province increased by 589 824 between 2007 and 2019 (IHS Markit, 2022), while the unemployment rate increased from 17.9% in 2008 to 20.6% in 2019. It can, therefore, be concluded that the MEDS increased neither industrialisation in the province nor economic growth.

The Western Cape like other provinces formulated and implemented industrial policies either before or during the IPAP implementation period (2007-2019), although none of them led to industrial sector growth, more employment, less poverty and more equality. Nevertheless, Gauteng, Kwazulu-Natal and Limpopo established two SEZs each, and the Eastern Cape built the largest SEZ in Southern Africa. However, the NC has been struggling to obtain its planned SEZ. Furthermore, the NC’s strategy to increase manufacturing and create jobs has not been successful, its manufacturing base remains weak and unemployment is still high. Therefore, the province should conduct benchmarking of the manufacturing success in other provinces.

2.3 Theoretical review

2.3.1 Fourth Industrial Revolution

Industrialisation has been historically associated with a loss of employment resulting from laying off personnel when a company moves to capital-intensive production. This situation has been worsened by the Fourth Industrial Revolution (4IR or Industry 4.0), which features artificial intelligence, robotics, 3-D printing and the internet-of-things (IoT) (Van den Berg, 2020). However, the Fourth Industrial Revolution has the advantages of efficiency and quality in processes, enhanced decision-making with data-based tools, increased productivity, greater safety for workers by reducing jobs in dangerous environments and improved competitiveness by developing customised products (Enrique et al., 2021).

2.3.2 Industrial policy

From the 1950s to the 1980s, various theories, such as classical economics, neoclassical, Keynesian and neoliberal economics, were developed to explain the role of the state in economic growth. Furthermore, industrial policy, which was initially centred on understanding the role of the government in supporting economic growth and development, has stimulated development and structural transformation through state intervention, which saw to the implementation of the policy (Oqubay, 2017).

As stated by Senoo and Armah (2015:28), “The failure of industrial policy initiatives in South Africa is an indication that policy adoption does not necessarily result in the successful implementation of a policy.” According to Chang (1998:6-7), there are four fundamental characteristics, which are essential for the implementation of a successful industrial policy and they are as follows:

- Selectivity (positive discrimination in the promotion of industries, firms and technologies)
- Flexibility (change of strategies when circumstances change)
- Combination of social and firm/industry-specific goals
- Incentives related to the performance of firms and industries in achieving specific targets

Chang (1998) argues that the formulation and implementation of policies can only be developed through a learning-by-doing process guided by industrial policy.

There are different theories of policy implementation, such as the neoclassical and Keynesian theories. Theories against policy implementation include the neo-liberal theory, the Austrian school and orthodox trade theory. According to the neoclassical theory, intervention by the government is only justified if the market process fails to allocate resources efficiently, i.e., the non-achievement of Pareto optimality, which involves economic changes making one individual better off without making at least one other individual worse off (Hasan et al., 2004). Chang (1998) asserts that the Pareto optimal allocation of resources can be achieved through the market mechanism if they distort resource allocation away from market-determined comparative advantages, which means that industrial policies and strategies are unnecessary. The neoclassical theory maintains that policy intervention is also justifiable when actors are unable to react appropriately to environmental change.

The Keynesians, who are proponents of policy implementation, as opposed to neo-liberal theorists, who are against policy implementation, see government policy as a crucial aspect of the stimulation of aggregate demand, especially during times of recession or high unemployment (Dang & Sui Pheng, 2015). Hence the proponents hold the opinion that growth should be led by the state, which has led to an increasing demand for an industrial policy to prevent and correct market failure, which has become fashionable in recent times, especially after the 2008 financial crisis (Rodrik, 2004).

Rodrik (2004) argues that a government should consult the private sector, which knows (if imperfectly) about market failure before considering preventative and corrective measures. However, most economists appreciate the substantial role that a government can play in the development of industrial policies targeted at supporting economic transformation and growth (Lowitt, 2011). Furthermore, the significance of government intervention and the ability to grow economic activity for the benefit of society was emphasised by political and development economists, such as Paul Rosenstein-Rodan, Albert Hirschman, Alexander Gerschenkron and Raúl Prebisch.

According to Edward's (1980) model (Mubarok et al., 2018) of policy implementation, policy implementation success is determined by four variables: communication, resources, behavioural trends and the bureaucratic structure. In contrast to Edward's (1980) model, Grindle (1980) (Mubarok et al., 2018) emphasises that it depends on two variables, which are the content of the policy and the context of its implementation (Mubarok et al., 2018). Meanwhile, the view of Mazmanian and Sabatier (1983) and Mubarok et al. (2018) is that the actual policy implementation is influenced by three factors: characteristics of the problem, policy characteristics and environmental variables.

The opponents of policy intervention such as the neoliberal theorists support minimal state intervention in policy implementation by maximising economic freedom for individuals and eliminating government-imposed restrictions (Wikan, 2015). Thus, neoliberalists believe in minor state intervention, the free market and competition, which is based on Adams Smith's "invisible hand", which is the belief that if markets are left to function on their own, outcomes, such as economic transformation and growth, will be realised.

Based on this theory, the Bretton Woods Institutions offered assistance to African countries on the condition that they implemented the policy reforms prescribed under the SAPs, as explained earlier in the thesis. However, this assistance, which involved minimal direct intervention in policy implementation led to deindustrialisation and deteriorating growth, thereby forcing many African countries to enter into long-term debt agreements to solve short-term balance of payments problems instead of financing industrialisation.

Orthodox trade theorists also argue that instead of government intervention in policy implementation, countries should maximise their production and consumption by specialising in products with a relative advantage. The orthodox trade theorists doubt the ability of governments to oversee the economy because of an inability to achieve developmental goals, incompetence and a lack of concern for citizens' welfare Therefore, irrespective of markets being inherently efficient, the government remains inferior.

Orthodox trade theorists support liberalisation and globalisation in policy implementation because the free movement of capital and goods accelerates economic transformation growth (Castel-Branco, 2002), while critics of globalisation believe that it has been bad for the poor in developing countries and worsened inequality (Aisbett, 2007).

The Austrian school of thought argues that because no one has the essential knowledge and intellectual capacity to achieve results by the uncoordinated combination of uneven fragments of knowledge existing in different minds, the implementation of economic policy is best left in the hands of entrepreneurs (Chang, 1998). Thus, this theory is also in support of minimal government intervention and believes that the communication of information, the coordination of economic activity and prices play a role. In the early 1980s, there was a shift in policy development towards a more market-orientated approach emphasising competition resulting in limited governmental intervention in policy formation and implementation. Hence, some economists argued that the best industrial policy is not to have such a policy at all (Becker, 1985).

Notwithstanding the above, critics of industrial policy point out the incapability of government to facilitate structural change, which was advocated for by most of the economic policies shaping the world in the 1940s and 1950s as a pre requisite for economic development (Siddiqui, 2020). The critics argue that several developing countries that implemented the structuralism approach to development failed. State intervention was blamed for distorting prices which resulted in inefficient functioning of markets (Altenburg, 2011).

2.3.3 Industrialisation

Lin and Chang (2009), asserts that following the comparative advantage process, industrialisation should be seen as a baseline for development. Lin and Chang (2009) advocates that for a country to be competitive, it may need to defy the comparative advantage notion through entering new industries by accumulating factor endowments and technologies. Lin (2011), who holds a neoclassical view, argues that development should happen in line with the comparative advantage, while developmental state theorists base their theories and empirical analysis on the structuralist approaches to development (De Medeiros, 2020), which defies the comparative advantage.

The heterodox scholars advocate theories, assumptions and methods that may be radically different from or contradict those used in mainstream economics and have an interesting theory on manufacturing, which supports the statement that industrialisation is the engine of economic growth and development (Rasiah,1996). They argue that less developed economies need to industrialise and increase manufacturing output and employment to establish economic growth (Lowitt, 2017).

According to Rasiah (1966), another important role of manufacturing in fostering economic growth is its ability to achieve increasing returns to scale, which is also supported by empirical evidence provided by structuralist theories, which are in favour of industrialisation. This view suggests that manufacturing offers an opportunity for capital accumulation, which is one of the sources of economic growth (Szirmai, 2011).

Thus, manufacturing leads to economic development through production and employment.

Nevertheless, the role allocated to the manufacturing sector as the driving force behind growth in developed economies has been questioned in de-industrialised and post-industrial societies owing to the failed industrialisation in Africa and Latin America, which has led to doubt on the effectiveness of manufacturing to stimulate economic development (Cantore et al., 2014). However, the manufacturing sector has been long recognised as playing a leading role because it is wealth-producing, while the service sector tends to be wealth-consuming (Dhokpande et al., 2017) because it circulates money without creating wealth and uses more labour which requires funding. Kaldor (1970) and Cornwall (1977) assert that the expansion of the manufacturing sector is the driving force of an industrial revolution leading to economic growth and technological change, while technological progress is necessary for successful industrialisation (Naudé et al., 2013).

2.3.4 Theoretical framework of the study

The theoretical framework of the current study was based on the Keynesian theory of the role that the state/government plays in industrial policy formulation and implementation, which leads to economic development (Haggard, 2018). The theory on manufacturing of the heterodox scholars which also support the statement that industrialisation is the engine of economic growth and development was also used in analysing the manufacturing sector of the NC province. Therefore, the Keynesian theory on the formulation and implementation of industrial policy by government and theory on manufacturing by heterodox scholars are in line with the scope of the study and research problem, which is the review of implementation and impact of IPAP in the NC with reference to economic growth and employment creation in the manufacturing sector through investigating the challenges or failures of the implementation. Finally, the theories against policy implementation were used in ascertaining whether industrial policy implementation was necessary for the NC. Thus, these theories guided the analysis of the benefits of implementing an industrial policy in the NC and the study conclusions.

In conclusion, chapter 2 focused on the literature and theoretical review. The literature review focused on industrialisation in the context of international, and African as well as provincial experiences. The theoretical review was based on the neoclassical and Keynesian theories in support of policy implementation, neoliberal and orthodox trade theorists opposing policy implementation as well as other theorists such as the heterodox scholars on manufacturing and industrialisation as the engine of economic growth and development.

CHAPTER 3

ANALYSIS AND FINDINGS

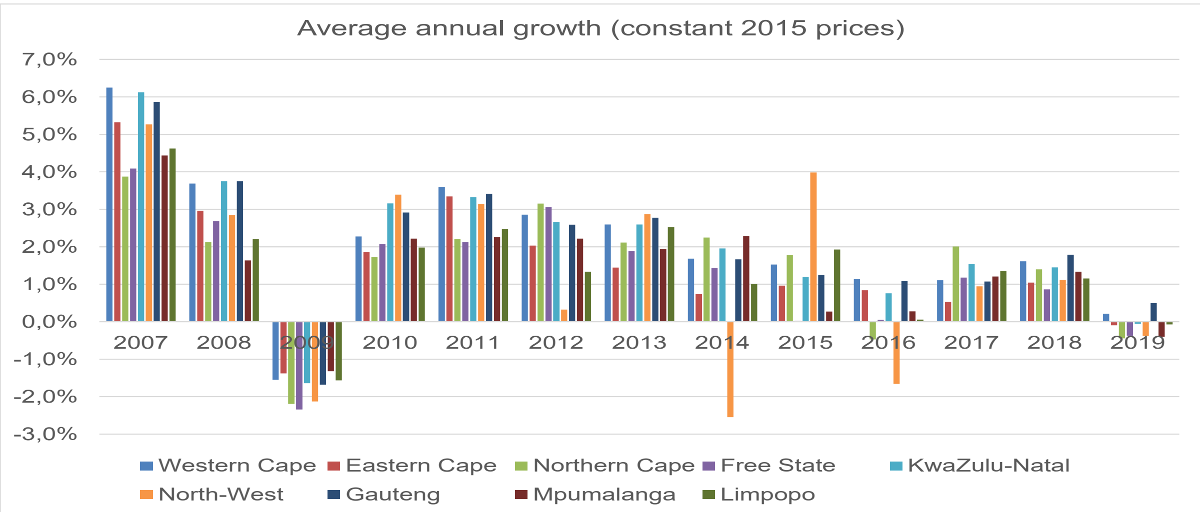
3.1 Introduction

In this chapter, provincial growth rates are analysed to ascertain their impact during the IPAP implementation period from 2007 to 2019 with emphasis on the NC. In addition, the poverty levels of the NC during the IPAP implementation period will be analysed and the Gini coefficient explained. Thereafter, the chapter will cover the industrial projects planned for the NC; the support provided to SMMEs and cooperatives by the DEDAT; the NC monitoring and evaluation reports; and the district engagement reports. According to the Deloitte Outcomes report of June 2018 "Gearing for Growth: Achieving the elusive trinity of (re)industrialisation, productivity and employment", South Africa's key challenges to achieving economic development are poverty, inequality and unemployment hence poverty and inquality will be analysed.

3.2 Provincial growth rates

This section compares the growth rates of all nine provinces with a focus on the NC province. Figure 3.1 below illustrates the average annual growth for all nine provinces during the period 2007 to 2019.

Figure 3.1: Average annual growth (constant 2015 prices) (2007-2019)

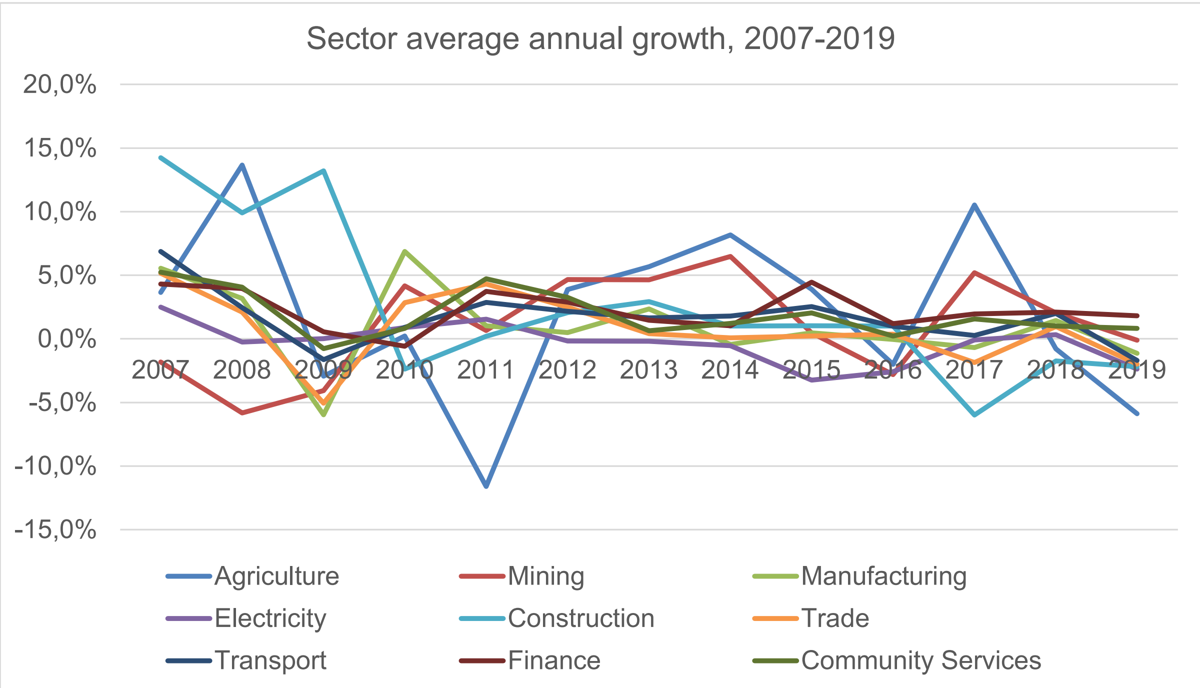


Source: IHS Markit Regional Explorer version 1946 (2022)

The figure above shows that the growth rates for all the provinces decreased between 2007 and 2019 and were negative in 2019 except for the Western Cape. The average growth rates for NC, Eastern Cape and Limpopo provinces were the second highest at 1.5% during this period, which is an indication that the NC was doing better than some provinces.

Figure 3.2 illustrates the NC sectors' average annual growth rate, which decreased between 2007 and 2019. The agriculture sector was hit the hardest in 2011 with a negative growth rate of 11.6%. Most of the sectors experienced a negative growth rate in 2019 except for the finance and community services sectors. The manufacturing and mining sectors experienced several negative growth rates during the period under review, although the province's general growth rate was better in comparison with other provinces, as mentioned above. This shows that the IPAP implementation did not assist in bettering the situation, as shown in Figure 3.2 below.

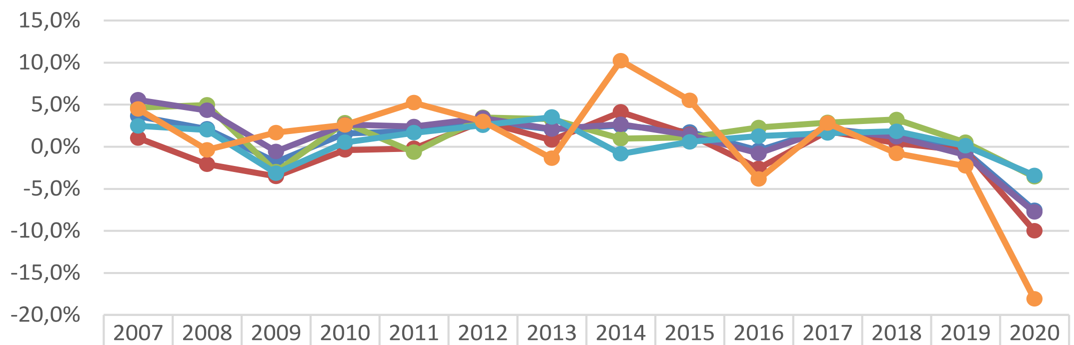
Figure 3.2: Sector average annual growth (2007-2019)



Source: IHS Markit (2022)

The figure below shows the economic growth rates for the NC and its districts during the period 2007 to 2020. As indicated earlier, the abbreviations for the districts are as follows: Frances Baard (FB), John Taolo Gaetsewe (JTG), Namakwa (NMK), Pixley Ka Seme (PKS) and ZF Mgcawu (ZFM).

Figure 3.3: NC provincial and district economic growth rates (2007-2020)



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NC	3,6%	2,1%	-1,8%	1,6%	1,9%	3,0%	2,1%	2,5%	1,8%	-0,4%	2,1%	1,3%	-0,6%	-7,6%
NMK	1,0%	-2,1%	-3,5%	-0,4%	-0,2%	3,0%	0,8%	4,1%	1,5%	-2,6%	1,8%	0,4%	-0,5%	-10,0
PKS	4,7%	5,0%	-3,0%	2,9%	-0,7%	3,5%	3,3%	1,0%	1,1%	2,3%	2,9%	3,2%	0,5%	-3,6%
ZFM	5,6%	4,3%	-0,6%	2,6%	2,4%	3,4%	2,1%	2,7%	1,4%	-0,8%	2,1%	1,2%	-1,0%	-7,8%
FB	2,5%	2,0%	-3,1%	0,5%	1,7%	2,5%	3,5%	-0,8%	0,6%	1,3%	1,6%	1,8%	0,1%	-3,4%
JTG	4,5%	-0,4%	1,7%	2,6%	5,2%	3,0%	-1,4%	10,2%	5,5%	-3,9%	2,8%	-0,8%	-2,3%	-18,1

Source: IHS Markit (2022)

The figure above shows that the economic growth of the NC in general and its districts, in particular, decreased after 2017, with JTG, a mining district, being the least. The JTG district experienced negative growth in 2018, while other districts experienced positive growth in the same year. The provincial growth rate decreased from 3.6% in 2007 to -0.6% in 2019, showing the ineffectiveness of the IPAP implementation in the province. In 2019, all the districts experienced negative growth, except for FB and PKS, which experienced positive growth at 0.1 and 0.5%, respectively. All the districts experienced negative growth in 2020 mainly due to the COVID-19 lockdown, which affected economic activities.

According IHS Markit (2022), the mining sector in JTG (68%), NMK (40,4%), ZFM (23,9%) and contributed the highest to the provincial GDP. The community services sector in FB (32,5%) and PKS (32,2%) contributed the highest, while construction, electricity and manufacturing were the least contributors in all the districts. Although the agriculture sector in ZFM contributed only 6% to the economy, it contributed significantly to employment and exports.

Although the analysis above shows that the mining contribution was significant provincially, it was not enough to stabilise the total provincial GDP, which decreased to negative levels in 2019. It can further be concluded that there was not any improvement in the NC economy during the IPAP implementation period from 2007 to 2019.

The manufacturing sector in SA has been underperforming since the dawn of democracy in 1994, which is witnessed by its declining share in the economy. Furthermore, the manufacturing sector's contribution to GDP growth has been insignificant in the past decade (Bhorat & Rooney, 2017). Although in 1994, the manufacturing sector represented 19.2% of the South African economy, it declined to 11.8% in 2020. This decline has had an unfavourable effect on the economy of SA and jobs as a whole, although the sector is regarded as the engine of economic growth. Table 3.1 below compares SA with other countries in 2018.

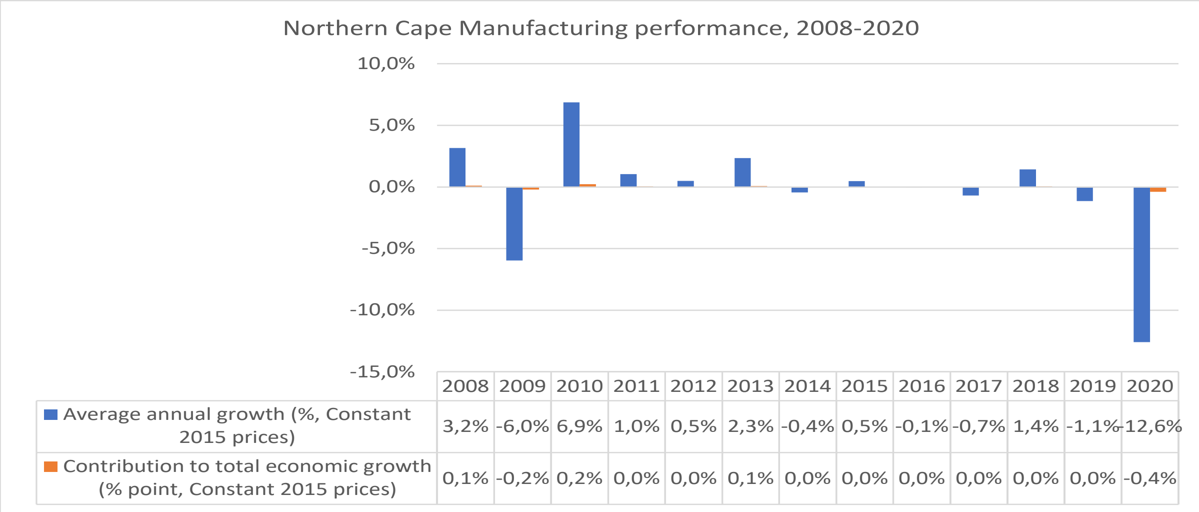
Table 3.1: Manufacturing output as a percentage of gross domestic product

China	26.8
Thailand	25.3
Japan*	20.7
Indonesia	19.7
Middle income countries	18.3
Turkey	18.3
Mexico	17.3
Egypt	15.9
European Union	14.4
India	13.6
Russia	13.1
South Africa	11.8

Source: World Bank (2019; * 2018)

Figure 3.4 shows manufacturing performance in the NC for the period 2008 to 2020. According to Stats SA (2022), the growth of the manufacturing industry in the NC, which has the smallest population in SA at 1.3 million, has been very slow with the provincial contribution to the national GDP averaging 3.1% for the IPAP implementation period 2007 to 2016 as indicated in Figure 3.4 below.

Figure 3.4: NC manufacturing performance (2008-2020)



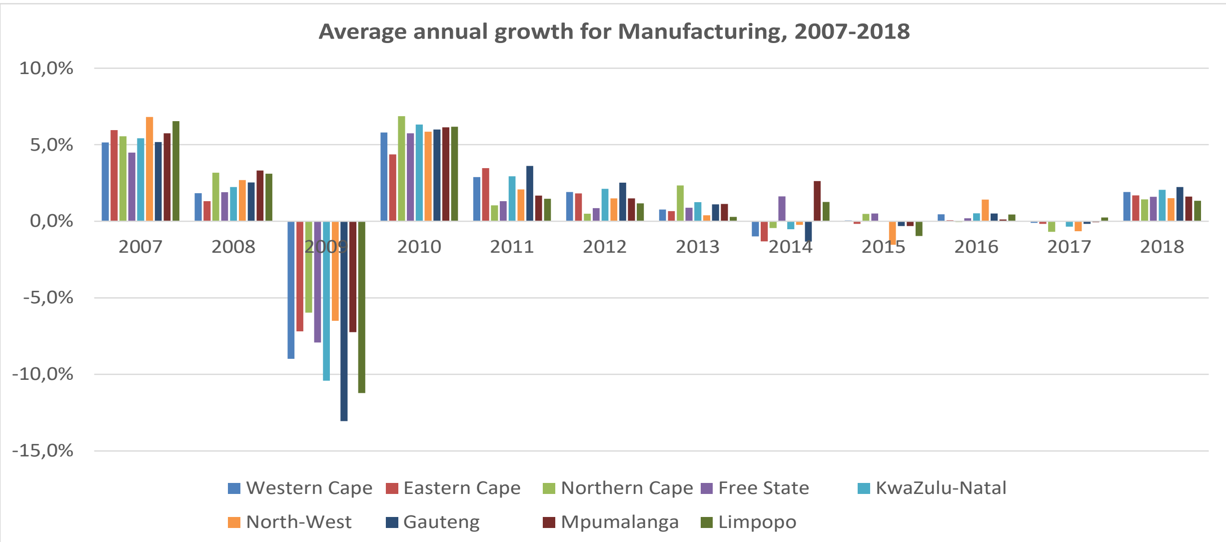
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Average annual growth (%, Constant 2015 prices)	3,2%	-6,0%	6,9%	1,0%	0,5%	2,3%	-0,4%	0,5%	-0,1%	-0,7%	1,4%	-1,1%	-12,6%
Contribution to total economic growth (% point, Constant 2015 prices)	0,1%	-0,2%	0,2%	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	-0,4%

Source: IHS Markit (2022)

The figure above shows that the manufacturing sector has generally not done well in the province, as indicated by the negative average annual growth in 2009, 2014, 2016, 2017, 2019 and 2020, and manufacturing contribution to total economic growth was insignificant. Moreover, the negative growth fell within the IPAP implementation period from 2007/08 to 2018/19.

Figure 3.5 illustrates the average annual growth of manufacturing in all nine provinces during the period 2007-2018.

Figure 3.5: Av. annual growth for manufacturing in provinces (2007-2018)

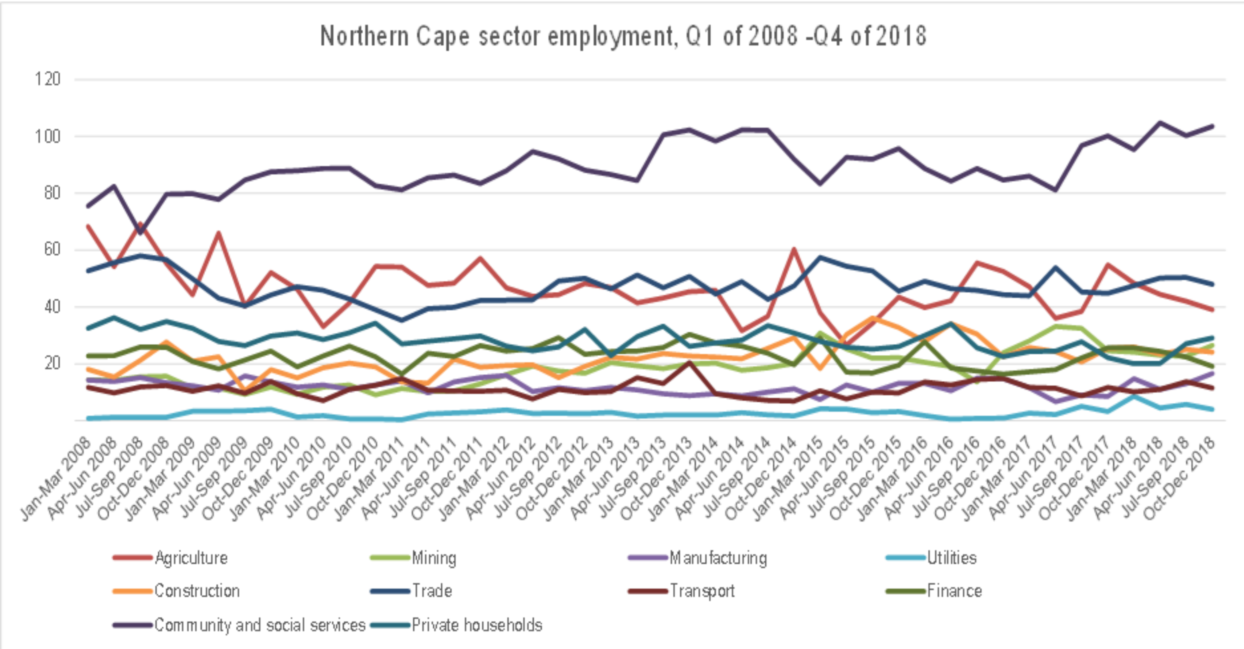


Source: IHS Markit (2022)

The figure above shows that the average annual growth for the manufacturing sector was the highest for all the nine provinces in 2007 and 2010 only. Furthermore, all the provinces experienced negative growth in 2009 because of the recession, while some provinces also experienced negative growth in 2014, 2015 and 2017. All the provinces did well in 2010 at an average of 5.9% as a result of the production of commodities and amenities for the 2010 Soccer World Cup. Nevertheless, the provinces experienced a steady decline from 2011 to 2017 before picking up again in 2018. Although the NC did well in other years compared to other provinces, its performance was generally insignificant, as can be seen in Figure 3.5 above.

Figure 3.6 is an illustration of employment provided by each sector in the NC from the first quarter of 2008 to the fourth quarter of 2018.

Figure 3.6: NC sector employment (Q1 of 2008 to Q4 of 2018)

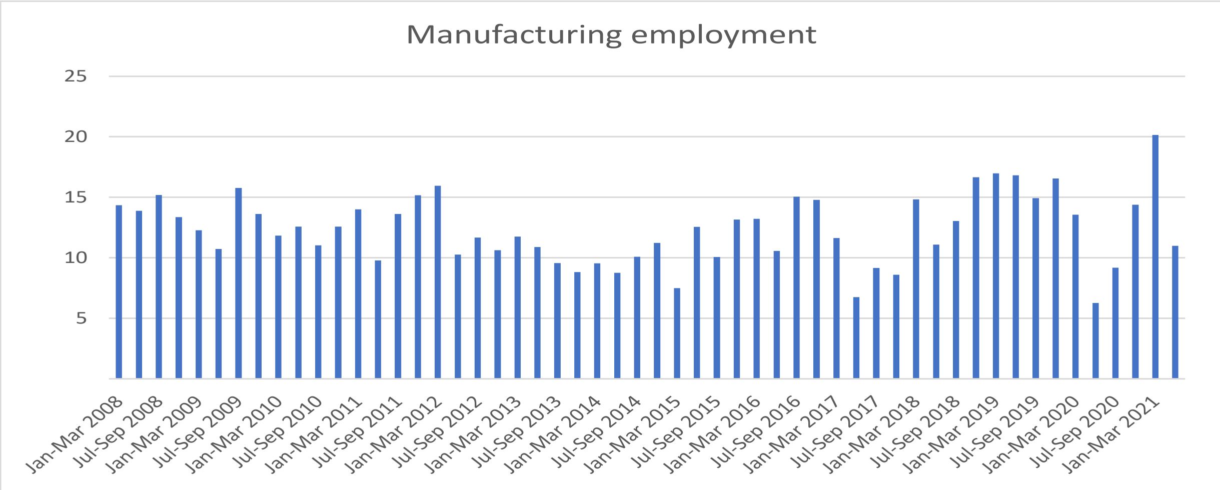


Stats SA (2022)

The figure above shows that the community and social services sector, followed by trade and agriculture employed the most people, while the manufacturing sector was the third least employer in the NC during the period under review.

Figure 3.7 illustrates the number of people in thousands employed by the manufacturing sector from the first quarter of 2008 to the first quarter of 2021.

Figure 3.7: NC manufacturing employment (2008-2021)

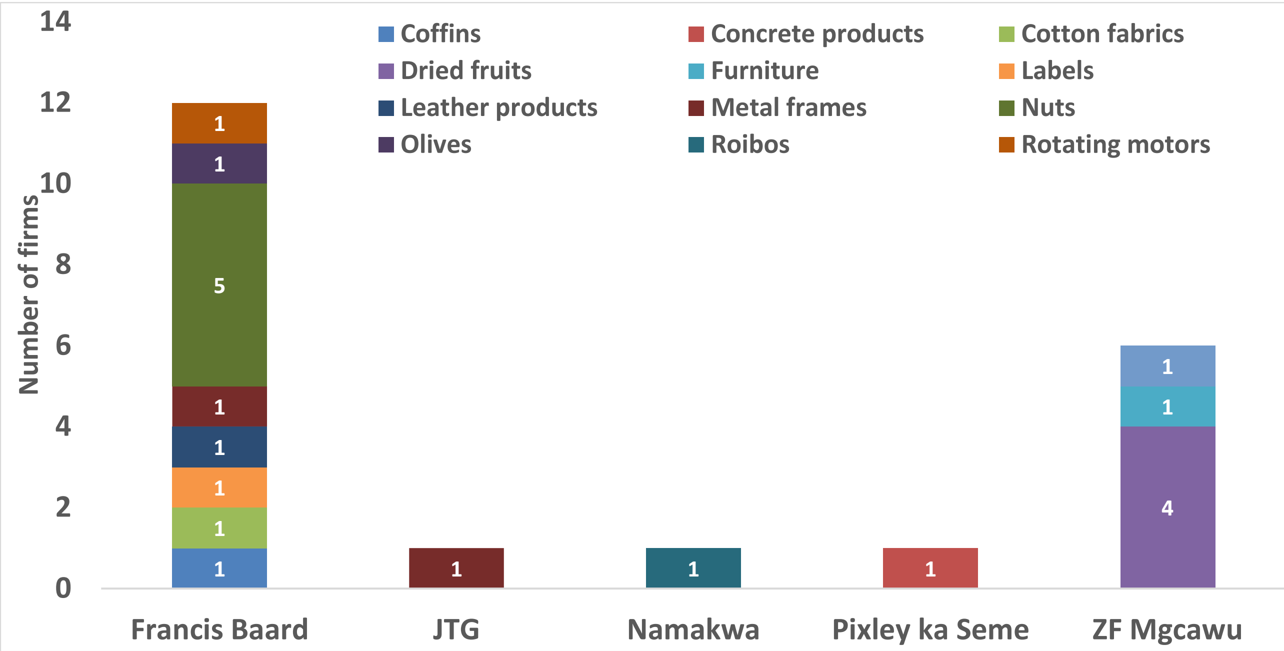


Source: Stats SA (2021)

The figure above illustrates that most people were employed during the first quarter of 2021 at 20000, followed by 17000 people employed between the fourth quarter of 2018 and the second quarter of 2019 as well as in the fourth quarter of 2019, while the least number of people (approximately 7000) were employed in the first quarter of 2015 and the second quarter of 2017 at 7000. Therefore, it can be concluded that the sector did not have much impact in terms of job creation during the IPAP implementation period.

The Sector Development Sub-Programme of the DEDAT conducted a study on the characteristics of exporting manufacturing firms in the NC. There is a total of 148 manufacturing firms according to the NC Industry Database with only 32 of these firms classified as exporters. The firm distribution of the sub-sectors is classified as follows: 61 for food and beverages; 13 for textiles and clothing; 21 for wood and wood products: 5 for petroleum products: 22 for other non-metal products: 21 for metal products excluding machinery; 11 for furniture, 1 doe radios and TVs; and 1 doe electrical machinery. Figure 3.8 shows the NC manufacturers' location and products, with the spatial distribution and the commodities that are manufactured.

Figure 3.8: NC manufacturers' location and products



Source: DEDAT (2015)

More than half of the manufacturers are located in the Frances Baard District while more than a quarter are located in ZF Mgcawu. Together Frances Baard and ZF Mgcawu account for more than 85 percent of the manufacturers with the remainder spread equally across the other three Districts of the Province. The concentration of manufacturers in Frances Baard and ZF Mgcawu is expected given that the two districts host Kimberley and Upington respectively which are the main economic centres of the Province.

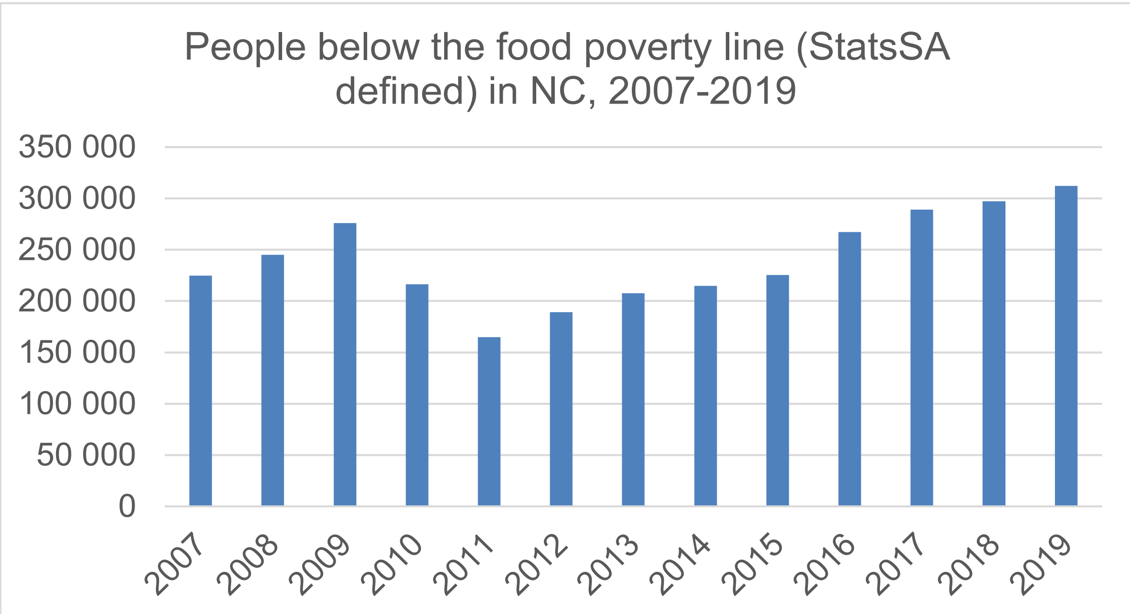
Furthermore, a total of 12 commodities are manufactured in the province and they range from wooden coffins to rotating motors. However, the mostly produced commodities are by far agricultural commodities, mainly nuts and dried fruits respectively. All the producers of nuts are located in the Frances Baard district and concentrated in the towns of Jan Kempdorp and Hartwater. The producers of dried fruits on the other hand are located in ZF Mgcawu district and spread across the towns of Keimos, Kakamas and Marchand. Nevertheless, Frances Baard differs from ZF Mgcawu in that it has a diversified composition of exporters that includes exporters of non-food commodities as well.

Therefore, the manufactured products are not geographically diversified, which requires the province to formulate strategies to ensure diversification in the manufactured products.

3.3 Poverty levels in the NC

According to Sahoo & Sethi, 2019, individuals tend to migrate from rural to urban areas for better opportunities that result from industrialisation. Furthermore, industrialisation leads to economic growth and poverty reduction in the short and long run (Scandizzo, 1995). Therefore, this section intends to ascertain the impact of industrialisation on poverty reduction hence poverty level is analysed which is in line with the scope of the study in terms the implementation and impact of IPAP in the NC. Globally, the number of people living in poverty has declined during the last few decades because of rapid economic growth due to industrialisation in countries, such as China, Korea, Taiwan and Indonesia (Kniivilä, 2007). The South African IPAP policy has aimed to realise similar results in SA and the NC. Therefore, this section explains whether the implementation of the IPAP benefited the NC province in reducing poverty during the IPAP implementation period from 2007 to 2019. Figure 3.9 illustrates the number of people living below the food poverty line in the NC during the period 2007 to 2019, as defined by STATS SA.

Figure 3.9: People below the food poverty line in the NC (2007-2019)

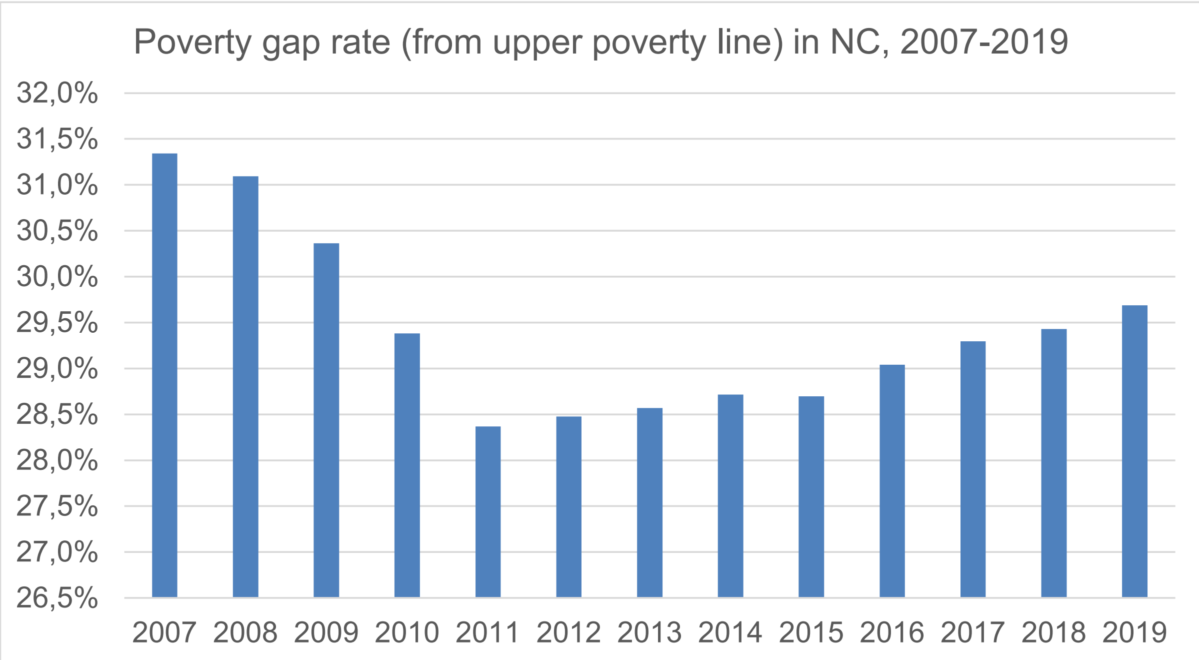


Source: IHS Markit (2022)

The number of people living below the poverty line generally increased from 224696 to 312286 between 2007 and 2019. Furthermore, it is clear from the figure above that the number of impoverished people in the NC province was the highest in 2019 at 312286. The number of people living below the poverty line increased between 2007 and 2009, decreasing to 164832 in 2011. From 2012 to 2019 the number increased sharply from 189209 to 312286, although the NGP had been adopted nationally in 2010 to create five million jobs by 2020 and reduce poverty, which shows that the plan was unsuccessful.

Figure 3.10 shows the poverty gap, which is a ratio showing the average shortfall of the total population from the upper-level poverty line (the minimum level of income required to lead a decent life), in the NC during the period 2007 to 2019.

Figure 3.10: Poverty gap rate in the NC (2007-2019)



Source: IHS Markit (2022)

Although the poverty gap decreased from 31.3% in 2007 to 28.4% in 2011, it rose again steadily from 28.5% in 2012 to 29.7% in 2019. Therefore, the implementation of the IPAP in the NC province was not beneficial in reducing the poverty gap.

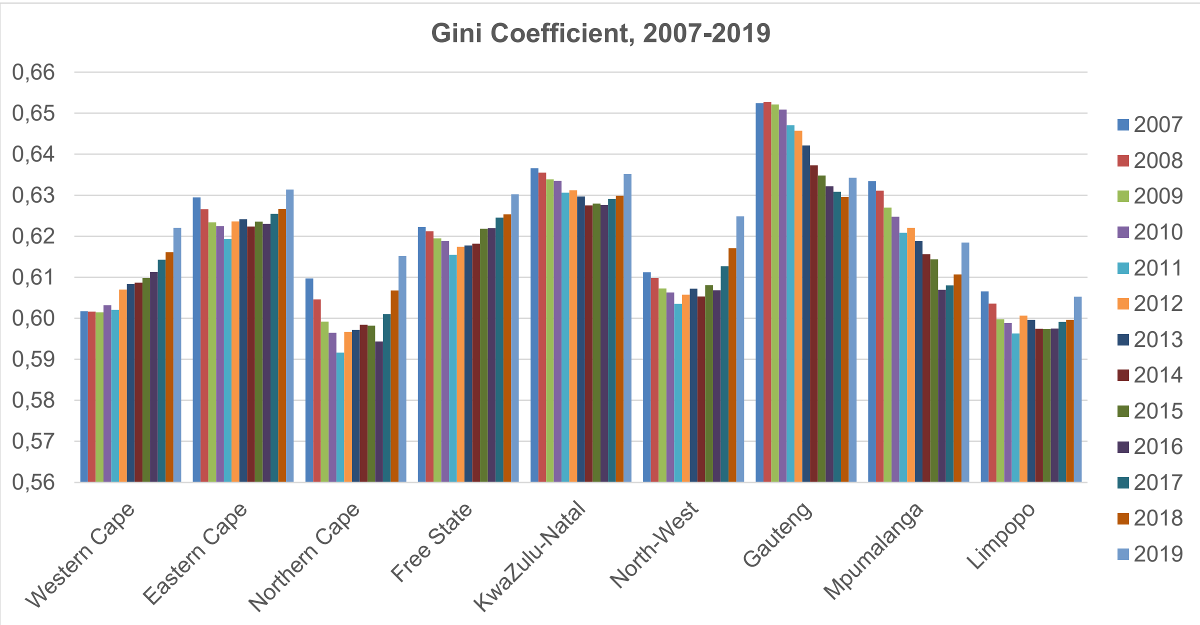
3.4 Gini coefficient

The Gini coefficient, which ranges between 0 and 1, where 0 indicates perfect equality and 1 perfect inequality, is a popular and widely used index for measuring inequality (Yitzhaki, 1983). Inequality is one of South Africa's key growth challenges since the country is the most unequal society globally which limits the country's growth potential. Countries with high Gini coefficients (i.e. most inequality) tend to have low manufacturing value add (MVA) as a share of GDP, and the countries with higher MVA have lower Gini coefficients. Therefore, South Africa needs to revisit its industrial policy in order to reduce inequality.

The literature review indicated that industrial policy led to a reduction in inequality in some international and African countries, which the South African IPAP policy aimed to do too. Therefore, this section explains whether the implementation of the IPAP in the country and NC particularly reduced inequality or has the latter been a hindrance in realising the impact of IPAP in the NC which will provide guidance in reaching the conclusion on the problem statement

Figure 3.11 shows the Gini coefficient for the nine provinces of SA for the period 2007 to 2019.

Figure 3.11: Provincial Gini coefficient (2007-2019)



Source: IHS Markit (2022)

The figure above shows that the Gini coefficient for the Gauteng and Mpumalanga decreased during the period under examination. The Eastern Cape, the NC, North West and Limpopo decreased between 2007 and 2011 but increased from 2012 to 2019. Even though Gauteng experienced high inequality in the earlier years it decreased thereafter and was surpassed by the Eastern Cape with a Gini Coefficient of around 0.73. All the provinces experienced a sharp increase between 2018 and 2019, showing that inequality was increasing in SA. Even though there might be various factors contributing to this, the figure shows that there was no improvement during the IPAP, which worsened at 0.60 to 0.62 Gini coefficient levels.

3.5 NC industrial projects during the IPAP period

This section provides planned and or implemented NC industrial investment projects during the IPAP implementation period from 2007/8 to 2018/19. The intention is to ascertain whether the implemented industrial investment projects had any impact with reference to economic growth and employment creation as per the scope of this study. Furthermore, missed opportunities for industrialisation during the IPAP implementation period will also be illustrated in planned but never implemented projects.

3.5.1 Kimberley International Diamond and Jewellery Academy (KIDJA)

The KIDJA was established in 2011 to build skills in diamond sorting, cutting and polishing as well as jewellery design, which are scarce skills nationally and internationally. They contribute to the beneficiation of minerals, which are transported to other countries and processed to become finished products sold in the province at a higher price. The Academy is fully operational and has to date trained 410 learners from SA and the SADC, including Zimbabweans, Namibians and citizens of Lesotho (Bosothu), who complete courses accredited by the Mining Qualifications Authority, such as rough diamond evaluation and diamond cutting/polishing.

The success of the institution can be measured by the number of people trained in mineral beneficiation, although that does not indicate how far they have taken their skills. The success of the institution is also indicated by the number of individuals absorbed by the Kimberley Diamond and Jewellery Incubator (KIDJI) as SMMEs running their own mineral beneficiation business.

3.5.2 Kimberley Diamond and Jewellery Incubator (KIDJI)

The KIDJI services SMMEs by providing access to facilities, infrastructure, business and technology skills, markets and mentoring. To date, 27 SMMEs (20 males and 7 females with 17 being youths) have been supported through various programmes, which include business development, financial management, and technical jewellery manufacturing skills. This shows the commitment of the government to ensuring that there is mineral beneficiation, which is part of industrialisation and contributes to the economic growth of the NC.

3.5.3 Clothing and textiles cluster

According to McCormick (1999), sectoral clustering lays the groundwork for industrialisation and enables enterprises to overcome constraints to growth and development. The NC province through DEDAT has plans to establish a clothing and textiles cluster in the Sol Plaatje Local Municipality, which is in the Francis Baard District Municipality. All businesses that follow the programme for the cluster will be profiled to determine their capacity levels in terms of skills, production levels and equipment. This will determine the markets with which they can be linked and the level of assistance they require. Once the cluster is established, it will have a positive impact on the development of the clothing and textiles sector, job creation and the contribution of the manufacturing sector to the economic growth of the NC.

3.5.6 Northern Cape Metals Industrial Cluster

The Western Cape clothing cluster, which accounts for 45% of SA's clothing production and dominates the manufacture of high-quality fashion clothing (October, 1996), pursues active strategies to reach national and international markets. It is against the background of this cluster's success that the NC province established the Northern Cape Metals Industrial Cluster, which is a national priority sector within the Re-imagined Industrial Strategy of 2019 to boost inclusion and private investment (dtic, 2019). The Metals Industrial Cluster, which is located in Kuruman on 47 hectares, is part of the Industrial Cluster Development Programme initiated by the DEDAT in 2018 to stimulate manufacturing in the NC. Much has been done to prepare the land for construction, namely environmental impact assessments (EIA), geotechnical investigations, traffic impact assessments, the re-zoning of the land, studies of the impact of bulk infrastructure, layout plans and architectural drawings.

The town planning, sub-division of the land and land surveys are currently under-way on a 7-hectare portion of the land as part of Phase 1. In addition, extensive liaison has taken place with the dtic concerning funding from their Cluster Development Programme (CDP) and their infrastructure funding incentives. The application process is still on course, and similar discussions have been conducted with the Development Bank of South Africa. Recently, discussions with Sishen Iron Ore Company (SIOC) have begun, as it has shown interest in establishing an SMME Village in the Metals Industrial Cluster that will be a one-stop centre for SMMEs and other local businesses. Therefore, once fully established and self-sustainable, the NC Metals Industrial Cluster, which already has investors interested in the project, although it is not yet operational, will lead to industrial development and job creation.

3.5.7 Kathu Industrial Park

The Kathu Industrial Park (KIP) is an industrial and commercial development planned to be located in the town of Kathu in the NC Province where mining and renewable energy activities take place. The identified site for the KIP is suitably situated directly leading to the main regional routes, with easy access to national roads connecting the NC to Cape Town, Gauteng and Namibia. The KIP will offer a variety of industrial and commercial space options, allowing for warehousing, industrial, commercial, office and retail premises. The project is widely expected to become a key catalyst for economic and social development in the NC.

The primary objective of the KIP is to create a positive and sustainable socio-economic impact in the Kathu area through the creation of job opportunities, development of the community and economic growth. The project is anticipated to create 1 300 jobs during construction while 2 240 jobs will be created after full development and operation. Well over R100 million has been spent on the project to date, and the investment in establishing it will accrue to R 450 million.

The Executive Council of the Provincial Government approved the equity funding application, and R130 million in bulk infrastructure support has been given. The business plan has been finalised and the application is ready for submission to the dtic. An offset proposal has been presented to KIP (Pty) Ltd, which will result in the reduction of the cost of investment in the bulk infrastructure for investors. Although the project is at an advanced planning stage, implementation has been stalling since 2015 for various reasons, such as investors pulling out because of a lack of confidence in the scheme and a commodity price boom, which affected the project negatively. Nevertheless, the project managers have confidence that this potential industrial project will be realised soon. Therefore, once established the project will benefit the province by boosting the industrial sector, economic growth and employment.

3.5.8 Upington Industrial Park

The South African government seeks to transform the economy into a globally competitive industrial economy by accelerating the country's industrial development agenda and its Special Economic Zones Programme, which was mandated by the Special Economic Zones Act 16 OF 2014 (Phiri & Manchishi, 2020). The SEZs identified in the Act are the Industrial Development Zones, Free Ports, Free Trade Zones and Sector Development Zones.

To date, the country has 11 designated SEZs located in the Eastern Cape (Coega and the East London SEZs), the Free State (Maluti-A-Phofung SEZ), Gauteng (OR Tambo and the recently established Tshwane Automotive SEZs), Kwazulu-Natal (Dube Tradeport and Richards Bay SEZ), Limpopo (Musina/Makhado SEZ), Mpumalanga (Nkomazi SEZ) and the Western Cape (Atlantis and Saldanha Bay SEZs).

A feasibility study was conducted in 2006, which determined that Upington is ideally suited to serve as a cargo hub. Upington was classified as an SEZ by the DTI and comprises Upington International Airport (Aviation Park) with 55 hectares and Upington Industrial Park with 450 hectares. The vision was to establish a world-class industrial hub to service the SADC's solar, mining, agriculture, aeronautics, defence technology and astronomy sectors.

Even though most of the necessary processes were followed, it was later decided that the Upington SEZ would no longer be considered and the Namakwa SEZ would be rather prioritised. Instead, the Upington Industrial Park, which was to be part of the SEZ was approved under the Industrial Park Revitalisation Programme. Upington Industrial Park would be situated next to Upington International Airport and therefore offer the potential investor the luxury, efficiency and convenience of the various modes of transport. However, this is another project, which has negatively affected industrialisation in the province with its delays, especially the last-minute change from an SEZ to an industrial park. Nevertheless, the Upington Industrial Park was recently granted R50 million in funding for Phase 1 of the project by the dtic. This project will, therefore, benefit the province in terms of job creation, the development of industrial sectors and the overall economic growth of the province.

3.5.9 Namakwa Special Economic Zone

The Namakwa SEZ will be an industrial complex with strategic national and regional economic advantages for investment in the mining, beneficiation, agricultural, manufacturing and petroleum sectors. The total investment value of the project is R26 billion with a job creation potential of 2 140 permanent jobs and 8 600 jobs during construction. However, as this project is experiencing challenges in its implementation, it has been escalated to the Minister of Trade and Industry for his attention, with the anticipation that the project will materialise in June 2022 at the latest. In addition, the delay is harming the development of the industrial sector, job creation and the economic growth of the province.

The delay in the establishment of the Namakwa SEZ and other projects mentioned above shows that although there is progress in planning, implementation is slow and a reflection of the inability of the NC provincial government to finalise large projects, compared with other provinces. Moreover, the IPAP implementation period came to an end without the NC province realising the benefits of its implementation. Nevertheless, projects, such as the KIDJA and the KIDJI, were successfully implemented, thereby ensuring mineral beneficiation and job creation, although the latter project is experiencing challenges in funding.

3.5.10 Renewable Energy

The NC has become the preferred investment destination for renewable energy companies catering to the demand for solar, wind, hydro and biomass energy. More than R200bn has been committed by the REIPPP to renewable energy projects across SA to add 13 225MW to the national grid by 2025, with 60% of the projects in the NC. The biggest solar farm in SA to date was launched in March 2016, in De Aar, NC.

3.5.11 Renewable Energy

In terms of the oceans economy, Port Nolloth, Boegoebaai and Hondeklip Bay harbours are targeted for the development of the abalone, fishing and lobster industries. The provincial fish (primarily hake) quota has been increased making the Port Nolloth area attractive for investment in fish processing and abalone ranching. Wine, grapes and raisins, animal hides and abattoirs are amongst the processing operations along the Orange River in the ZFM District Municipality. Dates, olives, citrus and rooibos tea have excellent growth potential in Groblershoop, Kakamas and Upington.

3.6 Support provided to NC SMMEs by the DEDAT

This section explains the non-financial support provided by the NC DEDAT's Enterprise Development Programme for the period 2014/15 to 2018/19, which fell within the IPAP implementation period. The intention is to show that although the dtic encouraged industrialisation through supporting the industrial sectors, the department failed in that regard resulting in the implementation benefits and impact of IPAP being unrealised.

During the 2014/15 financial year, 150 new and existing SMMEs were supported and assisted with business registration, funding and product development, while 20 businesses were assisted with exporting their products.

In the 2015/16 financial year, 36 SMMEs were assisted in accessing public procurement opportunities through effective collaborations with state-owned enterprises (SOEs) and other initiatives. Six agricultural cooperatives were established, while 180 new and existing SMMEs were supported and assisted with business registration, funding and product development and 68 new and existing cooperatives were supported and assisted.

A total of 51 new and 148 existing SMMEs were developed and supported in the 2016/17 financial year, while 33 new and 51 existing cooperatives were developed and supported through campaigns and collaborations with other departments and agencies. There were also 6 new agricultural cooperatives established. Furthermore, 94 youth farmers were supported through various programmes, such as the Youth in

Agriculture and Rural Development (YARD) project, drought relief initiatives and the Fetsa Tlala food production initiative, while 216 female farmers were given training sessions and advice on agricultural production and food security. A total of 44 tourism enterprises were supported non-financially by the organisations, such as the Tourism Growth Directorate, the National Department of Tourism (NDT) and Open Africa, which works with SMMEs to establish rural tourism.

During the 2016/17 financial year, R 26,908 million was allocated to the Economic Growth and Development Fund (EGDF) and was disbursed across the province to assist start-ups and existing businesses. A total of 32 businesses were funded: 12 in FB, 3 in ZFM, 6 in JTG; 6 in NMK and 5 in PKS.

During the 2017/18 financial year, 100% of the new and existing SMMEs were developed in the IPAP sectors, while 87 youth farmers were supported through various programmes, and 145 female farmers were given training sessions and advice on agricultural production and food security. A total of 37 tourism enterprises were supported non-financially in the Umsobomvu Local Municipality, while 30 SMMEs were linked to public procurement opportunities.

In the 2017/18 financial year, a total of 440 EGDF applications were received and 105 enterprises received funding. The funding resulted in 32% women, 26% youth and 4% disabled entrepreneurs receiving financial support with 521 jobs expected to be created. The regional split of the support was 55 enterprises in FB, 19 in JTG, 10 in NMK, 11 in ZFM 10 in PKS.

During the 2018/19 financial year, five groups were targeted for specific opportunities, including construction, by the Department of Cooperative Governance, Human Settlements and Traditional Affairs (COGHSTA) and a shared tourism development grant. Sixteen enterprises were referred to the Small Enterprise Development Agency (SEDA) for business plan development, quality management systems, marketing materials, business mentorship, signage, branding and assistance with product certification. A total of 69 enterprises were assisted with the Cooperative Incentive Scheme (CIS) and Companies and Intellectual Property Commission (CIPC) which was done manually through e-services. Thirty-three tourism enterprises were supported non-financially by the Ubuntu Forum for Local Economic Development and

Tourism and the Karroo Hoogland Municipality. A total of 140 youth farmers and 119 female farmers were supported through the drought relief programme, and more youth farmers were encouraged to take up farming by giving them opportunities.

3.7 NC monitoring and evaluation

The Provincial-Wide Monitoring and Evaluation System [PWMES] aligned to the Government-Wide Monitoring and Evaluation Programme of the DEDAT is tasked with visiting SMMEs and cooperatives across the five districts (FB, JTG, PKS, ZFM and NMK) of the province on an annual basis to assess through observations and personal interviews using a questionnaire the use of the financial support, which is provided mainly by the department's EGDF, and make recommendations. The monitoring and evaluation face challenges, such as not being able to assess all the SMMEs because of a lack of capacity, SMMEs not honouring appointments and the provision of non-existent addresses. Table 3.3 in the Appendices shows the number of businesses assisted during the period 2015/16 to 2018/19. The following are the findings of the investigation of the projects funded by the EGDF during the period 2015/16-2018/20:

- The fund, which was a key support for economic growth, was not properly used and managed, which meant that the objective of developing SMMEs and cooperatives was not achieved
- The disbursement process was a challenge because officials exerted pressure on the recipients to give the information, which the officials provided when the recipients were invited by the Department to apply, to accept help in the application process or to allow the officials to submit applications on behalf of the recipients in return for kickbacks. Some of these kickbacks were given directly to the officials by the recipients or the payment was concealed as part of the scope of the officials' financial transactions.
- The participation of municipal officials, especially in local economic development (LED) units posed a challenge, which is a situation needing attention. While it was useful to involve them, they exerted pressure on recipients, claiming that they were entitled to a certain amount because they facilitated or made it possible for the recipients to be funded. This matter needs to be discussed at the local and provincial government levels.

- Some of the business plans did not holistically explain their goals or correlate with them. Moreover, the plans did not indicate future directions, link to the proposed products or deal with costs.
- Some businesses shifted from their original trade owing to insufficient funding and support.
- Most of the businesses in the manufacturing sector realised that the funding initially provided was insufficient for the expansion of the business and, as they needed more machinery, they had to outsource services which became costly.

Amongst the 85 SMMEs and cooperatives assisted between the 2015/16 and 2018/19 financial years, only 21, which is only about 24%, operated in the industrial sector, which was not enough to consider the province industrialised. Furthermore, the way the fund was being handled did not promote industrialisation and instead promoted the interests of individuals wanting kickbacks regardless of the type of business supported. Nevertheless, the industrial sector did employ more people of which the province can be proud.

Table 3.2 below illustrates the number of jobs created by the SMMEs and cooperatives in the five districts of the NC, which were supported by the DEDAT during the period 2015/16 to 2018/19.

Table 3.2: Total jobs created (2015/16-2018/19)

DISTRICT	2015/16	2016/17	2017/18	2018/19
ZFM	23	10	77	97
NMK	4	31	55	131
FB	135	34	117	90
JTG	0	70	70	217
PKS	17	45	162	108
Total	179	190	481	643

Source: DEDaT, 2021

Even though the NC province can be applauded for creating jobs through supporting the SMMEs and cooperatives financially, the jobs created were mostly casual and/or seasonal. Furthermore, the majority of SMMEs and cooperatives employ five or fewer people, which is not sufficient to boost the economic growth of a province or industrialise it. No more than 107 industrial sector jobs were created in 2015/16, which was followed by 58 in 2016/17 and 41 in 2018/19, while only 24 were created in 2017/18. Therefore, the number of jobs created in the industrial sector was insignificant, as compared to the total number of jobs created.

While there is a need for SMMEs to diversify to avoid saturation, especially in the services sector, the provincial government especially the DEDAT has a responsibility to focus on funding SMMEs operating in the industrial sector.

3.8 District engagement reports

The department of Economic Development and Tourism initiated district engagements in 2016 to inform the districts of incentives available for industrialisation. During the first district engagement with the ZFM district in Upington hosted by DEDaT, it was ascertained that the dtic had visited the district previously and informed it of the incentives it was offering for industrialisation, one such being the Export Marketing and Investment Assistance (EMIA) scheme of the department of trade and industry (DTI). This incentive is an export incentive programme that aims to assist local exporters in establishing export markets for their products through funding, among other things, participation by local firms in foreign trade fairs and outward selling missions, market intelligence research on prospective export markets, and marketing of local firms in foreign markets.

However, a study by the DTI indicated that there is a very low uptake of the EMIA incentives in the Northern Cape relative to the other Provinces (DTI, 2013). EMIA incentive to the value of R88 million and R69 million were approved in the 2011/12 and 2012/13 financial years respectively, with no application submitted from the Northern Cape. It can be concluded that there is limited awareness among Northern Cape Manufacturing firm about the industrial development incentives offered by the DTI. Therefore, a recommendation can be proposed to create awareness and take active steps to encourage manufacturing firms to submit applications for the EMIA incentives by assisting them accordingly.

The challenge of developing the manufacturing industry in the Namakwa district was mentioned, and specific projects were identified as viable in different communities. Furthermore, it was established during the FB District engagement held in Kimberley in 2016 that manufacturers were not ready for industrialisation. It was, therefore, recommended that a programme should be established to develop capacity and establish a shared service centre to bring down manufacturing costs; however, the programme never materialised. Although most of the district reports acknowledged opportunities for industrialisation exist in the FB, NMK, JTG and ZFM districts, SMMEs have not taken advantage of them as shown in Table 3.3 in the Appendices section of the thesis, with only a handful of SMMEs and cooperatives being in the industrial sector.

Concerns were raised during a district engagement held in John Taolo Gaetsewe District that industrialisation might lead to several job losses on top of an already high unemployment rate in the province, and whether industrialisation might not be environmentally friendly. It can be concluded from this that there is already doubt in this region about SMMEs and achieving industrialisation. This doubt is reflected in the general failure to achieve industrialisation in the NC because even though the province has viable industrial projects, most of them have been stalling in terms of implementation. In addition, the performance of manufacturing in the province has been poor, as shown in Figure 3.1 above. Although the DEDAT has provided support to NC SMMEs and cooperatives, they mostly operate in the services sector, regardless of incentives to join the industrial sector as encouraged by the IPAP.

In summary, this chapter focused on the analysis and findings of the study with reference to industrial projects planned for the NC; support provided to SMMEs and cooperatives by the DEDAT; NC monitoring and evaluation reports; and the district engagement reports with particular interest on the industrial or IPAP sectors. All the indicators utilised including poverty level, gini-coefficient, manufacturing, etc. were useful in arriving at the conclusion of whether the implementation of IPAP in the NC has been beneficial or there were challenges or failures in relation to that.

CHAPTER 4

CONCLUSION AND RECOMMENDATIONS

4.1 Introduction

This chapter provides a summary of the chapters and the findings of the literature review and the study of the NC. Recommendations are made for the implementation of industrial policy in the NC to stimulate economic activity.

4.2 Summary of the chapters

The report began with the introduction, which covered the definition and origin of industrialisation and how some countries have adapted to policy reforms, especially industrial policy. Furthermore, the research problem, research question, aim and objectives, methodology and the study outline were also provided. Chapter 2 covered the review of the literature on industrial policy and international, African and South African industrialisation. In addition, Chapter 2 covered the review of different theories on industrialisation and the theoretical framework of the study. Chapter 3 presented the findings of the analysis of the effect of the IPAP implementation on the NC province with an emphasis on economic growth, employment, inequality and poverty levels.

4.3 Summary of the literature review findings

The industrialisation of the African continent has generally been sluggish and inconsistent, which has been exacerbated by the slow technology transfer and development of a knowledge-intensive sector base (Morris & Fessehaie, 2014). However, the examination of several countries revealed that development strategies and economic reforms played a significant role in improving their economic growth, levels of poverty and inequality, although for a very short period in some cases.

Furthermore, amongst the lessons learned from successfully industrialised economies is that some of them were and are still dependent on the agriculture sector, which is the case with the NC. In Asia, especially China, growth in the agriculture sector contributed to the manufacturing sector through agro-processing which was a strong base for industrialisation. However, the NC agriculture sector has not been strong enough to boost the manufacturing sector. Furthermore, the most important lesson learned from East Asia is that industrial policy is a mindset based on experiments, which results in transformation through the identification of bottlenecks and problem-solving leading to success.

Owing to reforms, such as import substitution and export orientation, countries became successful through accelerated growth mostly in the manufacturing sector, which also reduced poverty. The NC province adopted reforms in the form of policies, such as the NGP, which together with IPAP2 aimed at creating five million jobs by 2020 through growth in the manufacturing, agriculture and mining sectors. Provinces such as KZN, Gauteng and the EC are ahead of the NC in having well-established SEZs, while the province experiences delays in the implementation of its plans. Moreover, instead of creating jobs in agriculture, mining and manufacturing, the NC has lost jobs.

The final iteration of the IPAP in 2017 revealed its limitations, such as the concentration of ownership and control, a failure to stop illegal imports and the importation of sub-standard products, which severely threatens local manufacturing customs, high private sector input costs, high electricity costs, transport and logistics constraints and a lack of policy coherence and programme alignment. Furthermore, the DTS's IPAP (2018) report highlighted that poor policy implementation was due to ineffective communication of the policy to all stakeholders, which was the case in the NC.

Salazar-Xirinachs et al., (2014) acknowledge the potential benefits of the IPAP but point out the slow implementation due to a lack of coordination between government departments, which limits the identification of action priorities. To achieve industrial policy objectives, effective communication to all stakeholders through all available information channels is needed.

4.4. Summary of the NC study findings

Although the provincial government made efforts to implement the IPAP in the NC, the performance of the manufacturing sector was not conducive to industrialisation. Furthermore, despite the success of projects, such as KIDJA and KDJI, the NC has not yet succeeded in implementing the plans for Kathu Industrial Park, Upington Industrial Park, the clothing and textiles cluster or the Metals Industrial Cluster.

The financial and non-financial support provided to SMMEs across the province in the IPAP-identified sectors, in particular, manufacturing, was only during the 2016/17 and 2017/18 financial years, which was not enough to stimulate industrialisation. Furthermore, the district engagement reports indicated that the SMMEs were slow to reach out for funding, especially IPAP incentive funding, regardless of the encouragement to apply.

Funding available from the DEDAT was given to non-industrial sectors, which delayed industrialisation in the NC. Although the provincial government tried to implement the IPAP through various forums, the province still has a long way to go before industrialisation is a reality. Moreover, the NC continues to experience slow economic growth, unemployment, high levels of poverty and inequality, which indicate that the IPAP was unsuccessfully implemented.

4.5 Recommendations

Despite its failure to implement the IPAP as proven in the study, the NC has the potential for industrialisation, which it should continue to pursue along with the aforementioned projects. These plans could be implemented if the red tape and other bottlenecks preventing implementation are identified and eliminated. It is recommended that to establish a modern, growing and successful NC, the province should explore all opportunities for industrialisation and ensure the implementation of current projects.

The NC province is unique as a trade and investment destination because of its geographic location, which provides easy access to SADC markets and ports, and its points of direct entry into Namibia and Botswana, which give it a competitive advantage. However, there is too much concentration on manufacturing sub-sectors, such as food and beverages; textiles and clothing; and wood and wood products. It is, therefore, recommended that the province shift its focus to sub-sectors, such as petroleum products, furniture, radios/televisions and electrical machinery to boost its manufacturing sector.

The province is a key iron ore and manganese producer, which is complemented by lime, granite, semi-precious stones and other minerals. The mining sector makes up nearly 7% of SA's total mining value and contributes 23.4% to the provincial economy with significant deposits of copper, gypsum, iron ore, manganese, lead, titanium, pig iron, zircon and zinc. The mineral profile of the province has contributed to the establishment of global trade centres in London and New York and its inclusion in diamond resources and mining listings.

To realise these opportunities, challenges need to be overcome, such as access to financial resources, skills development, technology and cheap, reliable electricity and water, as well as unnecessary red tape hindering industrial project implementation,

Although industrialisation contributes to the GDP of a region, it has disadvantages, such as environmental impact and in-migration, which leads to pressure on basic services, including housing, electricity, water and sanitation.

The government is known for creating a conducive environment for job creation for the highly skilled in the private sector. However, as Hofmeyr (2008), argues, to design and implement an industrial strategy that can support sectors which create jobs for low-skilled workers, the government, including the NC provincial government, would need to play a more developmental and transformative role.

According to Audretsch and Lehmann (2016), the main purpose of an industrial policy is to support and protect domestic industries, and it should be implemented over time to ensure structural change by advancing existing industries and developing new entrants (Bianchi & Labory, 2017), especially in manufacturing. Bianchi and Labory (2017) recommend the following: (1) industrial policy needs to be clear about the strengths and weaknesses of the country's industrial system; (2) different industrial aspects should be considered, such as innovation, investment in infrastructure and competition, which should be combined coherently towards a specific target for industrial development; (3) industrial policy should be viewed as a process; and (4) a constant channel of communication to all stakeholders is required.

An industrial policy does not guarantee industrialisation. The effectiveness of industrial policy in achieving its goals depends on economic, political and social factors (Castel-Branco, 2002). Therefore, governments need to know how to best design and implement policies by learning from the experiences of other countries, although they need to know that countries are unique. Furthermore, four fundamental characteristics essential for the implementation of a successful industrial policy as suggested by Chang (1998:6-7), could be also be considered, namely selectivity (positive discrimination in the promotion of industries, firms and technologies), flexibility (change of strategies when circumstances change), Combination of social and firm/industry-specific goals and incentives related to the performance of firms and industries in achieving specific targets.

The NC provincial government could learn from other countries and South African provinces in implementing industrial policies and projects that suit the province's unique situation. Lastly, lessons from Asian Tigers which evolved from import substitution economies to export orientated having created education and training policies to prepare the labour force for industrialisation, is pertinent.

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APPENDICES

Appendix 1: Supported SMMEs (2015/16-2018/19)

Table 3.3: Supported SMMEs (2015/16-2018/19)

	Name of business	Type of business	Amount received	Amount spent	Jobs created
1.	Ithamba Alitsha Butchery	Retail	R150 000	R150 000	4
2.	Rainbow Granite and Marble Works	Manufacturing	R200 000	R200 000	7
3.	Villa Destiny	Hospitality	R60 000	R60 000	3
4.	Bheka's Locksmith	Services	R350 000	R350 000	1
5.	Morning Glory Vleismark	Services	R450 000	R450 000	5
6.	Glock Agencies	Services	R400 000	R400 000	5
7.	Bokamoso Bakery	Retail	R49 000	R49 000	1
8.	Noah’s Heel Bar Enterprises (Pty) Ltd	Services	R50 000	R50 000	2
9.	Mahobe Shoe Repairers	Services	R50 000	R50 000	2
10.	Mafaratlha Technical Networks	Services	R2 072 000	R2 072 000	5
11.	Jakes General Dealer & Bakery	Services	R200 000	R200 000	2
12.	Kabza Milling	Manufacturing	R250 000	R250 000	15
13.	Tshepang Tshepong	Funeral services	R80 000	R80 000	2

14.	Prieska Loxion Hub	Manufacturing	R250 000	R250 000	15
15.	Dinatla Bakery	Services	R150 000	R150 000	16
16.	Baheso Brickmaking	Manufacturing	R450 000	R450 000	15
17.	Nothembukile NN trading	Services	R628 000	R628 000	10
18.	Ithamba alitsha butchery	Services	R100 000	R100 000	4
19.	Kyolox	Services	R8 000 000	R8 000 000	6
20.	Kleinzee Kafee	Bakery	R300 000	R300 000	4
21.	Cool Ideas Northern Cape Non-Woven Technologies (Spunbond)	Manufacturing	R23 000 000	R23 000 000	55
22.	Phuliso Autozone	Tyre and wheel services	R1 000 000	R1 000 000	20
23.	Pro Print	Printing & print media	R250 000	R250 000	8
24.	E'Tsho Engineering	Engineering	R4 000 000	R4 000 000	-
25.	Jo's Karoo Flavour	Manufacturing	R608 000	R608 000	-
26.	Kgalagadi Horse Racing Events	Events	R1 186 600	R1 186 600	23
27.	Bosco Sports Event Management	Events	R2 000 000	R2 000 000	-
28.	Al-Amir Halaal Butchery	Retail	R80 000	R80 000	1

29.	Auto Galore Auto Repairs	Automotive	R255 000	R255 000	-
30.	Batsumi Guesthouse	Hospitality	R2 300 000	R2 300 000	14
31.	Millenium Car Wash	Services	R50 000	R50 000	-
32.	Springbok One Hour Lab	Manufacturing	R630 000	R630 000	Never opera-ted
33.	Matshimo Holdings	Services	R530 000	R530 000	4
34.	Emthanjeni Printing	Services	R2 856 600	R2 856 600	5
35.	Macronym	Events	R1 000 000	R1 000 000	-
36.	Den M's Breakdown Services	Towing and repair services	R300 000	R300 000	4
37.	Shellmat	Mine restoration	R260 000	R240 000	12
38.	Triponza investments	Diamond mining	R1 500 000	R1 500 000	5
39.	Itile Transport	Transport	R1 655 600	R1 655 600	7
40.	Ingelosi Citadel	Logistics	R800 000	R800 000	4
41.	Sasta's	Manufacturing	R250 000	R250 000	9
42.	Lewis Trading	Manufacturing	R110 000	R110 000	22
43.	Richtersveld Boekwinkel	Printing & graphic design	R390 000		3
44.	Bedect	Mining	R525 000	R520 000	8
45.	Giotay	IT	R200 000	R200 000	3

46.	Nam Petroleum	Manufacturing	R1 000 000	R1 000 000	3
47.	Anvor Engineering Works	Engineering	R 1 000 000	R1 000 000	29
48.	E Fashion House	Manufacturing	R260 000	R260 000	6
49.	AEW	Manufacturing	R750 000	R750 000	29
50.	Green Plan Coop	Recycling	R300 000	R300 000	8
51.	Ubunele Co-operative Ltd	Manufacturing	R150 000	R150 000	8
52.	PMB Absolute (Pty) Ltd	Cleaning	R140 000	R140 000	2
53.	Upington Funeral Services	Funeral parlour	R520 000	R520 000	9
54.	Butterfly Enterprise	Manufacturing	R560 000	R560 000	1
55.	Gudsbo Enterprise	Manufacturing	R350 000	R350 000	4
56.	V4 Energy Solutions	Signage, branding and printing	R480 000	R480 000	5
57.	Ruths house	Fashion design	R75 000	R75 000	24
58.	Nativah Energy group	Renewable energy	R318 000	R318 000	110
59.	Karoo Travel Dimensions	Tourism	R20 000	R20 000	6
60.	Jiyathe Projects	Mining	R375 000	R389 700	45
61.	Mangaliso funeral services	Funeral parlour	R205 000	R205 000	8

62.	TCB Engineering	Manufacturing	R1 500 000	R1 500 000	64
63.	The Hub Tree	Events management, catering and décor	R150 000	R150 000	7
64.	Masigcobe Enterprises	Cleaning material, catering, stationery and other goods.	R150 000	R150 000	3
65.	Sound and Look Better	Sound service	R150 000	R150 000	3
66.	Makhelez General trading	Bakery, food and beverages	R314 000	R314 000	4
67.	Termo Construction	Construction	R50 000	R50 000	1
68.	ABC Laboratories	Testing laboratory	R1 000 000	R1 000 000	3
69.	Maweza Business Enterprise	Water	R325 000	R325 000	6
70.	Resaipela (PTY)LTD	Perfume production	R450 000	R420 000	5
71.	HGL Energy solutions	Energy	R1 715 000	R1 715 000	17
72.	Maiktronix	Manufacturing	R2 200 000	R2 200 000	28
73.	Olerile malera general trade	Catering	R45 000	R45 000	3
74.	Matshimo Holdings	Agriculture	R683 600	R683 600	4
75.	Peo Tiya	Waste management	R300 000	R297 000	2
76.	Oliphantshoek Trading Enterprise	Hydraulics, hoses and fittings	R690 000	R690 000	4

77.	Monica’s Curtain Boutique	Manufacturing	R50 000	R49 900	2
78.	T P Mathe Dominion	Construction	R27 000	R27 000	3
79.	Bubbly Agent	Cleaning	R37 000	R37 000	22
80.	New Dimension	Skills training	R130 000	R130 000	18
81.	Otsile Trading	Computer centre	R200 000	R200 000	2
82.	Fanikie Auto	Car parts and repairs	R246 000	R246 000	4
83.	Delva George's Civil & Gen Cons	Civil and construction	R516 600	R516 600	1
84.	183 Omeida Trading Coop	Clothing and textile	R105 000	R105 000	6
85.	Fritz Business Enterprise	Cleaning service and road maintenance	R100 000	R100 000	4

Source: DEDat, 2021