COMPETING POLICY IMPERATIVES IN POST-APARTHEID SOUTH AFRICA: AN ANALYSIS OF THE EFFECTS AND LARGER SIGNIFICANCE OF ESKOM RESTRUCTURING ON THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY, 2005-2014

by

LUCAS NKOSANA SIBUYI

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SUPERVISOR:
PROFESSOR LUCIEN JACOBUS WHEATLEY VAN DER WALT

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Student Number: 613S4268

I declare that **Competing Policy Imperatives in Post-Apartheid South Africa: An analysis of the effects and larger significance of ESKOM restructuring on the South African automotive industry, 2005-2014** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

30 September 2021

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LUCAS NKOSANA SIBUYI DATE

ABSTRACT

The state has played an indispensable, major role in the industrialisation of South Africa, and its transformation from an economy of agriculture and mining to one based on manufacturing and services by the 1970s. Large state-owned corporations in communications and transportation, finance, industry and power have been key to this process, which also involved an extensive (and racist form of) import substitution industrialisation (ISI) from the 1920s. The 1970s saw a shift towards neoliberal policies, first under the National-Party-led apartheid government and then under the African-National-Congress-led democratic government formed in 1994. Since the 1980s, this restructuring has profoundly affected state-owned enterprises (SOEs), including the monopoly electricity utility ESKOM, and manufacturing industries, such as the automotive sector.

This thesis examines the evolution of and interaction between different areas of neoliberal policy, and their evolution over time through a consideration of the relationship between the restructuring of SOEs and manufacturing, with a focus on ESKOM and autotomotives respectively. Relying on interviews with senior officials, policymakers, union leaders and industrialists, as well as primary documents, the study examines the responses of OEMs in South Africa (BMW, Ford, General Motors, Mercedes Benz/Daimler, Nissan, Toyota and Volkswagen) to ESKOM's actions, and analyses the root of these actions. It argues that while restructuring has been framed by a common framework, policy development and implementation is not coordinated or cohesive. ESKOM, for example, gutted investment in electricity and maintenance generation capacity to become profitable and create space for Independent Power Providers (IPPs) – neoliberal measures for which it was rewarded and lauded. This took place at a time when national policy emphasised the need to grow manufacturing and attract direct investment by creating an investor-friendly climate resting on infrastructure. It also took place when the Department of Trade and Industry (DTI) rolled out highly successful plans – also praised and rewarded – to help adjust automotives to open markets; the sector grew much larger than under ISI, while other sectors like textiles collapsed. ESKOM's measures, however, led to a rapid decline in the capacity and stability of the power system, and directly contradicted the drive to expand and globalise manufacturing, in which automotives was now the leading edge.

Corruption in the utility worsened, much of it through subcontracting measures rooted in neoliberal reforms, but this did not cause the basic problems. It is argued that this situation of competing policy imperatives reflects deeper, long-term problems in the South African state, including contradictory policies, uneven capacity and a lack of coordination. For example, there was no coordination between the DTI and stakeholder departments that regulate ESKOM, being the shareholder ministry, the Department of Public Enterprises (DPE) and its policy ministry, and the Department of Mineral Resources and Energy (DMRE). These types of problems did not start post-apartheid, and post-1994 reforms have not adequately addressed them. What exists is not a "developmental" state, as policymakers hope, but a fractured state of an intermediate type that combines "developmental" and "predatory" features in a one-party dominant system in which lines between ruling party and state blur, and state resources are leveraged for elite class formation. Such was the case under apartheid skippered by the NP, with Afrikanerisation, and it continues today post-apartheid under the ANC with BEE. Major reforms are needed, but not just in SOE governance or budgets, as many have suggested. If we are to take the nation forward, the basic design of the state must be reformed. The state needs professionalised, coherent policy-making and implementation, proper coordination of state entities and hard decisions. It should manage high levels of public infrastructure, guarantee political stability and credit ratings, and provide policy certainty and predictability. Without big reforms it will remain a chronic underperformer.

KEYWORDS

Import substitution industrialisation (ISI), electricity supply industry, load shedding, state-owned enterprises (SOEs), privatisation, original equipment manufacturers (OEMs), ESKOM, state policies, developmental state, apartheid, post-apartheid, neoliberalism

PREFACE

This thesis was carried out in the Department of Sociology and Industrial Sociology at Rhodes University, Makhanda (formerly Grahamstown), in the Eastern Cape Province of South Africa. The research study was carried under the supervision of Professor Lucien van der Walt. This study represents the original work by the author, as advised by the supervisor, and has not been submitted in any form or content to another university. The works of others used in this research study have been duly acknowledged in the text.

DEDICATION

In thanks to my dear wife Tendani Sibuyi and my children.

In memory of my beloved daughter Tshiamo Tshudufhadzo Sibuyi, who passed away on Monday, June 22, 1998.

I dedicate this thesis in memory of my late, indomitable father Phineas Khozaphi Sibuyi, and to my dear mother Qabiya Kufamuni Sibuyi.

My father, your immense counselling has remained a catalytic source of inspiration. Your posture of adopting a consistent position, under the banner of truth, has instilled in me truth-speaking in grasp, power and dominion to become part of a higher spiritual life. You inculcated in me unyielding discipline, patience, resilience, respect, consistency, dexterity, humility, vigour and humanistic values.

Although you have departed unto the celestial world, I am able to report to you, that in accordance with your wise counsel, I still strive to act as a testament of the values of love, truth-speaking, solidarity and respectability. I furthermore beseech you to respectfully inform your father Simon Sibuyi, your mother Nwa-Muhlavane Madumelana Qhayisa Shabangu, and the Mthunzimuhle ancestors such as Sidlekwana, Nwahenyane, Nkomalwandle and Vukeya that your son Murijo Lucas Nkosana Sibuyi is upholding the value system of the clan through this dissertation. Indeed, Murijo, as you used to call me!!

I thank you, my mother, for instilling in me the values of humility, integrity, focus, faith, and pursuit of excellence, for your invaluable encouragement and your incisive conversations within the context of the Achilles heel with which the family had to contend amidst adversity. My father buttressed the importance of *praat die waarheid* to us all at home, but you complemented this by imploring us to safeguard our humility, family values, and to accept the paltry we have and to understand how it defines us in

how we relate to, and shape, humanity. This study is the product of your motivation, compassion and care for me, the family and the Mthunzimuhle clan.

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ACRONYMS

4IR	Fourth Industrial Revolution
AAAM	African Automobile Association Manufacturing
ACMs	Automotive Component Manufacturers
AIAG	Automotive Industry Action Group
AIS	Automated Investment Scheme
ANC	African National Congress
AP	Afrikaner Party
APDP	Automotive Production and Development Programme
ASGISA	Accelerated and Shared Growth Initiative for South Africa
BEE	Black Economic Empowerment
BTT	Board of Tariffs and Trade
CDE	Centre for Development and Enterprise
COSATU	Congress of South African Trade Unions
CRIC	Community Resource and Information Centre
CTFBC	Clothing, Textile and Footwear Bargaining Council
CSIR	Council for Scientific and Industrial Research
DFIs	Development Finance Institutions
DoE	Department of Energy
DPE	Department of Public Enterprises
DTI	Department of Trade and Industry
ECB	Electricity Control Board
EE	ESKOM Enterprises SoC Ltd
EFC	ESKOM Finance Company SOC Ltd
EFS	Export Facilitation Scheme
ERI	ESKOM Rotek Industries SoC Ltd
ESCOM/ESKOM	Electricity Supply Commission
ESOPs	Employee Share Ownership Schemes
EUFTA	European Union free trade agreements
EV	Electric Vehicles
FBE	Free Basic Electricity
FDI	Foreign Direct Investment

FEDUSA	Federation of Unions of South Africa
GATT	General Agreement on Trade and Tariffs
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution strategy
GNP	Gross National Product
IDC	Industrial Development Corporation
IEA	International Energy Agency
IFIs	International Financial Institutions
IMF	International Monetary Fund
INEP	Integrated National Electrification Programme
IPAP	Industrial Policy Action Plan
IPESTEL	Industrial, Political, Economic, Social, Technological, Environmental and Legal
IPID	Independent Police Investigative Directorate
IPPs	Independent Power Producers
IRP	Integrated Resource Plan
ISCOR	Iron and Steel Industrial Corporation
ISEP	Integrated Strategic Electricity Plan
ISI	import-substitution-industrialisation
ISP	Industrial Strategy Project
ITAC	International Trade Administration Commission of South Africa
JCPS	Justice, Crime Prevention and Security
LCP	Local Content Programme
MEC	Minerals-Energy Complex
MERG	Macro-Economic Research Group
MFP	Multifactor Productivity
MIDC	Motor Industry Development Council
MIDP	Motor Industry Development Programme
MISTRA	Mapungubwe Institute for Strategic Reflection
MITG	Motor Industry Task Group
MYPD	Multi Year Price Determination
NAACAM	National Association of Automotive Component and Allied Manufacturers

NAAMSA	National Association of Automobile Manufacturers of South Africa
NALEDI	National Labour and Economic Development Institute
NRCS	National Regulator of Compulsory Specifications
NDP	National Development Plan
NDS	National Democratic Society
NEDLAC	National Economic Development and Labour Council
NEPAD	New Partnership for Africa's Development
NERSA	National Electricity Regulator of South Africa
NFA	National Framework Agreement
NGDS	National Growth and Development Strategy
NGP	New Growth Path
NIC	Newly Industrialised Countries
NIPF	National Industrial Policy Framework
NP	National Party
NPA	National Prosecution Authority
NPC	National Planning Commission
NUMSA	National Union of Metalworkers of South Africa
OECD	Organisation for Economic Co-operation and Development
OEMs	Original Equipment Manufacturers
PARI	Public Affairs Research Institute
PI	Production Incentive
PRC	Presidential Review Commission
RDP	Reconstruction and Development Programme
RED	Regional Electricity Distributors
RTS	Return to Service (of three power stations)
SAA	South African Airways
SAAM	South African Automotive Master Plan
SABS	South African Bureau of Standards
SACP	South African Communist Party
Samcor	South African Motor Corporation
SAIRR	South African Institute of Race Relations
SARS	South African Revenue Services
SASOL	South African Coal, Oil and Gas Corporation (from *Suid-*

	Afrikaanse Steenkool-, Olie- en Gasmaatskappy)
SATS	South African Transport Service
SEZ	Special Economic Zones
SOEs	State-Owned Enterprises
TFI	Total Factor Input
TFPG	Total Factor Productivity Growth
TIA	Technology Innovation Agency
VAA	Vehicle Assembly Allowance
VFPC	Victoria Falls Power Company
WTO	World Trade Organisation

CHAPTER 1
BACKGROUND TO THE STUDY

The art of Society, besides being more important than any other, supplies the only logical and scientific link by which all our varied observations of phenomena can be brought into one consistent whole ... To form a satisfactory synthesis of all human conceptions is the most urgent of our social wants: and it is needed equally for the sake of Order and Progress (Comte 1865:1-2).

1.1. INTRODUCTION

Modern South African capitalism emerged from a mining revolution in the late 19th century, which saw massive inflows of foreign direct investment (FDI) into diamonds, then gold and coal. By the early 20th century, it had become one of the “focal points of capitalistic activity in the world economy” (Bransky, 1974:1, quoted in Lucien van der Walt’s (2004) journal article on Bakunin’s heirs in South Africa: Race and revolutionary syndicalism from the IWW to the International Socialist League, 1910-21). While the initial industrial revolution centred on extractive industries, producing raw materials for export within the framework of the British Empire, the adoption of systematic import substitution industrialisation (ISI) policies from the 1920s led to a profound transformation.

By the mid-1940s, manufacturing had overtaken mining and farming as a contributor to gross domestic product (GDP). By the late 1960s, the economy was booming and attracting large amounts of FDI, with an average GDP growth rate of 4.5% from 1948-1991, growing four-and-a-half times larger from 1948-1994 and entering the top 30 economies worldwide (Giliomee, 2010:537, 666). Manufacturing had been key to the country's economic expansion, accounting for 24% of GDP in 1988, while mining (and quarrying) and agriculture was only 13% and 6% respectively (Joffe, Maller & Webster, 1993: 11-12). Massive state-owned electricity, steel and chemical corporations contributed to the industrialisation of the country. Notable examples were the state electricity corporation ESKOM (initially Escom) founded in 1923, the South African Iron and Steel Industrial Corporation (Iscor) founded in 1928, and the South African Coal, Oil and Gas Company (Sasol, from *Suid-Afrikaanse Steenkool-, Olie- en Gasmaatskappy*), which was established in 1950.

The economy, however, was wracked with problems by the mid-1980s, which combined with the political turmoil contributed to the country's transition from apartheid rule to a parliamentary democratic system in 1994. Running alongside this political transition was a deep change in economic policy. ISI was steadily abandoned from 1970 under the ruling National Party (NP), including the privatisation of Sasol from 1979 to 1982 and Iscor from 1987 to 1989. ESKOM was restructured from 1985 and corporatised in 1987. The neoliberal framework adopted by the NP in its last years was exemplified by the party's 1993 *Restructuring of South African Economy: A Normative Model Approach* (the NEM; Republic of South Africa, 1993).

Surprising for many, the ANC's ideological paradigm came to include the view that capitalism and the free-market mechanism were essential for economic growth in South Africa. The 1996 *Growth, Employment and Redistribution: A Macro-Economic Strategy* (GEAR; Republic of South Africa, 1996) stressed the role of the state as providing infrastructure and support for free markets, while also forcing firms to become globally competitive. Southall (2010: 18-19) posited that "the path followed by South Africa since 1994 has been unashamedly capitalist … followed international neoliberal trends."

These strategies have been associated with the near collapse of traditional manufacturing sectors such as footwear, garments and textiles, and an associated decline in incomes and employment (Mosoetsa, 2005). Post-apartheid "South Africa's export performance is dismal" outside of mining (Hausmann, 2014).

The striking exception has been the automotive industry. A "low-volume motor-vehicle-producing" country in the late 1980s (Bell, 1989: 103), South Africa grew its automotive exports from R668 million in 1990 to R45 billion in 2005, and the local industry "has weathered import liberalisation rather well" (Black, 2007: 2). The automotive industry grew to become the leading manufacturing sector in the economy, contributing 6.2% to the country's GDP in 2010, including retail, and directly employing 93 100 people (Automotive Industry Export Council, 2011), and many more indirectly. South Africa was responsible for approximately 73% of Africa's vehicle output and produced 0.61% of the world's vehicles in 2009 (*Organisation Internationale des Constructeurs d'Automobiles*, International Organisation of Motor Vehicle Manufacturers, OICA, 2010). In 2010, the automotive industry accounted for 11.9% of total exports, mainly to China, Germany, Japan, the United Kingdom and the United States of America (AIEC, 2011).

There is substantial literature examining the core measures that the South African state adopted to facilitate the transition towards more open markets. Close attention has been paid to two major policy frameworks, the Motor Industry Development Programme (MIDP) introduced in 1995, and the Automotive Production and Development Programme (APDP) that followed in 2013. The APDP, extended in 2018 with amendments, is the foundation of the South African Automotive Master Plan 2035. The aims are to achieve 1% of global vehicle production by 2035, increasing local content from 39% to 60%, doubling employment and promoting black economic empowerment (BEE) (Davies, 2018). These policies combine tariff cuts with measures intended to modernise and rationalise the automotive industry and reward an export focus. They have been driven by the Department of Trade and Industry (DTI), the hub of industrial policy in post-apartheid South Africa.

Much less attention has been paid to how the sector has weathered another set of state policies that govern the restructuring of ESKOM, and their effects on industry. ESKOM's historical role in South Africa's industrialisation has been that of provider of cheap reliable bulk power to South African mining and manufacturing (Gentle, 2009).

ESKOM was corporatised in the late 1980s, and the neoliberal restructuring of the utility that began under the NP continued post-apartheid under the ANC, although with many delays. It is part of the same raft of post-apartheid neoliberal reforms as the liberalisation of manufacturing. ESKOM was never privatised like Sasol or Iscor, but it was commercialised and corporatised. Making profits was part of its mandate, and with the 2001 ESKOM Conversion Act, the utility was formally a profit-making tax-paying company with shareholders. It was owned by the Department of Public Enterprises (DPE), but run by a Board of Directors; it was also regulated by the Department of Mineral Resources and Energy (DMRE), which deals with energy policy, and the National Electricity Regulator of South Africa (NERSA), which issues licences in the electricity sector and approves tariffs.

By some measure, ESKOM's restructuring was successful: In 2005, ESKOM's after-tax profits were nearly double that of the median of 23 electricity utilities listed in the *Fortune 500* top global companies (Greenberg, 2006: 39; Sizovuka & Van der Walt, 2013). In 2007, about 45% of the utility's electricity was used by the manufacturing sector, 20% by the mining sector, 10% by the commercial sector, 5% by other sectors, and 20% by residential users (ESKOM Annual Report, 2008).

The neoliberal restructuring of ESKOM, which today is the largest South African state corporation by a big margin (Crompton, 2019) and the fourth-biggest African company (Van der Walt, Helliker & Klerck: in press), had a darker side. Throughout the 1990s and until the present, these processes saw ESKOM systematically increase tariffs above the inflation rate. For example, there were annual average price increases of 27%, 31%, 25% and 25% in the years 2008 to 2011, and further increases of 25% a year from 2012 to 2015, increasing prices fivefold in eight years (Yelland, 2011). More increases took place over the years that followed. These are averages, and there are significant variations in tariffs between categories of users – for example, as seen above, residential users pay more for a unit of power than industrial concerns, while several special deals exist with large investors (Yelland, 2011). ESKOM's reported average revenue per kilowatt-hour grew from 14.98 cents in 2002 to 90.01 cents in 2019, a fivefold increase in revenue per unit (Rossouw, 2019).

At the same time, employment was gutted, maintenance declined, and plants aged (Gentle, 2009; Greenberg, 2006, 2009). Although ESKOM has continued to hike prices sharply, it has failed to add significant new capacity from the mid-1970s, with the exception of the Koeberg nuclear power station, which came online in 1984. It had been hoped that the private sector would provide new investments and ESKOM's monopoly would be broken up (Shangase, 2007), but this did not happen. Instead, ageing and often poorly maintained facilities have become increasingly unreliable, with an average of 20% of generation down for maintenance at a given time by the late 2010s, compared to a historic rate of 3% (Roussow, 2019).
There were rolling blackouts from the 2000s, as ESKOM generation and transmission capacity failed to meet demand. This was managed through a system of regular, scheduled outages called "load shedding". By 2015, complaints from private industry

that load shedding was crippling operations and undermining employment and investment were commonplace (Allix, 2015).

In response to shortages, ESKOM authorised significant expansion plans in 2007, including two huge new coal-fired power stations, Medupi and Kusile, which were meant for completion in 2015 (Burkhardt & Cohen, 2019). The utility had already decided to bring the mothballed Camden, Grootveli and Komati stations back online in 2004. The two new projects have been plagued by massive cost overruns (from R163.2 billion to R451 billion) and neither station is yet fully operational, with major technical flaws in the basic design and a pattern of lawsuits, poor planning and oversight, and delays (Burkhardt & Cohen, 2019). The disastrous mismanagement of these two power station projects contributed directly to a massive debt crisis at ESKOM, which in turn has driven up state debt, as gigantic bailouts have become necessary (Crompton, 2019; Roussow, 2019).

The neoliberal restructuring of manufacturing and automotives, the latter shaped by the DTI, and of ESKOM, housed in the DPE, were part of the same move away from ISI, but contradicted each other. ESKOM's restructuring challenges the manufacturing industry in three ways: First, steadily rising prices; second, the system of annual price revisions; and third, the unreliable power supply.

The current pricing system provides some protection for consumers, including manufacturers, as ESKOM is not purely under the control of the DPE, but also regulated by other state bodies. For example, all licensed electricity suppliers have to apply to NERSA when raising prices. ESKOM directly distributes and retails 60% of electricity, with the remaining 40% sold to licensed municipalities and a small number of private distributors, who then sell it onwards (NERSA, 2018). All these distributors are licensed by NERSA and require its permission to change tariffs. ESKOM applies to NERSA for multi-year changes for revenue and annual changes for retail tariffs, and the final tariffs are set by NERSA after inputs from all stakeholders (including unions and the public) and in line with national policy (NERSA, 2018-2019: 4). Prices must enable cost recovery plus "reasonable return" (NERSA, 2018-2019: 1).

The problem is that this system leads to significant uncertainty for investors, as it cannot be predicted what NERSA would approve and what the prices could be in future. NERSA can reject or amend proposed increases, and significant disagreement could result in litigation between ESKOM and NERSA. For instance, ESKOM launched an urgent court application to review an aspect of NERSA's revenue determination made for Multi-Year Price Determination (MYPD) 4 for the financial years 2020 to 2022, and won. Some manufacturers receive power through municipalities and tariffs can change year-on-year, while others get power directly from ESKOM. These manufacturers, as well as the municipalities that supply the other manufacturers, are obviously affected by the moving target of multi-year ESKOM tariff changes.

Load shedding is obviously a serious problem and can make rising prices more distasteful. At the time of writing, regular blackouts continue as ESKOM fails to meet demand, particularly as stations are taken offline in an already strained number system. It is serious when we recall that ESKOM generated 92% of the country's power and owned the only national transmitter and system operator (NERSA, 2018).

Currently, much of the blame is placed on the effects of corruption through "state capture" under the presidency of Jacob Zuma (2009-2018). The notion of state capture was widely publicised in a 2016 report by then Public Protector Thuli Madonsela (2016). The report argued that a network of senior politicians (most notably Zuma) and private capitalists misallocated state resources through corrupt and inappropriate contracts, over-invoicing and kickbacks. The South African Communist Party (SACP) labelled the same processes as "corporate capture", highlighting that the systematic looting of state resources involved small cabals of politicians and private businesspeople. The impact of state capture on the electricity supply are undeniable, including the awarding of inflated ESKOM contracts to suppliers of substandard goods as well as major delays in expansion projects because of litigation against unfair tender awards, compounded by corruption in the SOEs reaching "tragicomic proportions" (Swilling, 2017: 30, 32-33, 47-48, 54-55; Jonas, 2019: 71).

It is certainly the case that the process dubbed "state capture" reveals a fundamental disinterest in statecraft, effective governance, constitutional democracy and long-term development among a significant section of the economic and political elite. In the

Zuma era, for all intents and purposes, the leadership actively tried to corral the independence and autonomy of some state institutions to the benefit of the few connected acolytes and minions. This can be contrasted with the leadership style that Ndebele (2007: 234) described thus:

> Leadership is not only what we do when we have been put in a position of power to steer an organisation or some institution. Leadership is what all of us do when we express sincerely our deepest feelings and thoughts; when we do our work, whatever it is, with passion and integrity; when we recall that all that mattered when you were doing your work was not the promise of a reward but the overwhelming sense of appropriateness that it had to be done. The awareness of consequence always follows after the act, and then the decision to proceed.

Though these explanations help us to understand the current situation of ESKOM, which is reliant on government bailouts to function, they are not adequate to fully understand the problem. The appointment of politically connected individuals affiliated with the ruling party to the management of ESKOM and other parastatals started on a large scale in the 1950s under the NP. The ANC did not depart from the NP practice in this regard. Using state-owned corporations to foster elites also did not start with the ANC, as it was central to the NP promotion of an Afrikaner bourgeoisie. ESKOM was part of this process. For example, Prime Minister Hendrik Verwoed helped Afrikaner-dominated mining house Federale Mynbou take control of General Mining (Wilkins & Strydom, 1978). Meanwhile, ESKOM's growing need for coal was redirected into supplier contracts for emerging Afrikaner firms like Gencor (Hattingh, 2018: 7). The use of state resources to sponsor local capitalists and industrialists is common worldwide.

Political appointments and the use of state funds to promote specific groups may be controversial, but not corrupt if they follow the stated procedures (Sizovuka & Van der Walt: in press; Hyslop, 2005). They do, however, create new arenas for corruption to flourish as well as major benefits for successful corruption agents (Sizovuka & Van der Walt: in press). State corruption did not start with the Zuma-era state capture or even the post-apartheid government, but has been a recurrent problem for more than a century (Hyslop, 2005). It was notable in the late apartheid years and pervasive in the homelands, and the pattern for Zuma-era state capture was already evident in the

1990s, with a major controversy over a post-apartheid strategic arms procurement package. The Strategic Arms Procurement Package or Strategic Defence Acquisition, now widely known as the “arms deal”, was a military upgrade deal, but the processes involved significant corruption and implicated Zuma (then deputy president), leading to his dismissal by then President Thabo Mbeki. Holden (2008: 231) noted 10 years ago that “the sad reality is that there are still damning allegations and questions that hover and buzz over the corpse of the arms deal”. To date, the scandal has not been successfully resolved by the police.

Warning of corruption’s insidious effect on the integrity of the new South Africa’s democratic principles, ANC insider and then parliamentarian Andrew Feinstein (2007) revealed details of the procurement process and stated that the ANC had quashed investigations. The events led to his resignation as a Member of Parliament, marking the end of his political career. Feinstein (2007: 206-207) narrated:

> I have been saddened by the manner in which government and the ANC in parliament have handled the controversial armaments deal and the subsequent investigation thereof. The manner in which this issue has been handled has, and will continue to, detract from many of the excellent things the ANC government has undertaken: from national reconciliation to sound economic management to delivery on key social needs.

The arms deal set some of the pattern for later scandals, showing maladministration, financial mismanagement, tender irregularities, irregular and wasteful expenditure, and a lack of consequences for perpetrators as defining features of public administration in South Africa (Feinstein, 2007). Sadly, the arms deal and, later, the state capture confirmed Fanon’s (1967) pessimistic commentary on the tendency to moral decline by nationalist leaders once in office, affirming their liberation credentials yet practising a self-interested leadership largely devoid of honour and integrity, and a breach of trust with the people.

This means corruption is not enough to explain the problems at ESKOM. Furthermore, not all problems at ESKOM are due to corruption. It must also be stated that ESKOM’s supply shortfalls preceded Zuma by years, reflecting cuts in operations from the 1980s onwards. ESKOM had cut maintenance, staff numbers had been falling steadily for 20 years, from 65 000 in 1985 to 30 000 in 2003 (Greenberg, 2006), the utility had failed to build new stations, and its profits were built in part on these failures, i.e. ESKOM's profitability was largely due to cutting maintenance, staff and investment, without becoming more efficient (Fig, 2010: 121). While much has been made of ESKOM's growing staff costs (Bloomberg, 2018) and delinquent residential debt (Rossouw, 2019), it must be noted that despite staff increases in the 2010s, ESKOM employed less people in 2018 than in 1985, notwithstanding the overall economy growing two-and-a-half times larger in the same period and residential users using less than 20% of ESKOM power (Sizovuka & Van der Walt: in press).

The utility was also exceedingly mismanaged before the onset of the Zuma-era state capture, not just in terms of scope for corruption, but also with coal reserves reduced and badly stored (Fig, 2013). Furthermore, there is a link between neoliberalism and corruption. Many state-capture schemes are built on neoliberalism, which had encouraged the contracting out of functions from the state (Van der Walt et al.: in press). This is because at the heart of the Zuma-era state capture is corrupted procurement and supply chain management involving private suppliers (Sizovuka & Van der Walt: in press). Procurement spend gets redirected to cliques of well-connected families, regardless of legality, competence or pricing (Swilling, 2017: 3). This is worsened when political appointments are made not on the basis of party loyalty, but loyalty to corrupt cabals that appoint insiders to facilitate looting (Swilling, 2017).

These problems all came together at ESKOM. Bad management of coal supplies, for example, was made worse as the utility started using sub-standard coal from politically connected Gupta-linked suppliers, and issued tenders for Medubi and Kusile work to unqualified firms (Swilling, 2017: 30, 32-33, 47-48, 54-55). Growing, unmanageable ESKOM debt meant that the huge jumps in revenue due to rapid price increases in a monopoly situation were wiped out by debt servicing – in fact, the revenue is not enough to manage existing debts and it seems unlikely that the mess at Medupi and Kusile could be fixed without massive additional spending (Crompton, 2019; Rossouw, 2019; Sizovuka & Van der Walt: in press).

This financial mess is made worse by short-term ESKOM solutions to power shortfalls, like running diesel-based turbines, and the large-scale failure of many municipalities (and residential users) to pay for ESKOM services (Cameron, 2020). The problem is that ESKOM struggles to service debts, cannot fund any major new projects (Cameron, 2020), and could enter a “death spiral” as continually raising prices allows it to ignore internal problems and threatens to drive consumers out of business (Rossouw, 2019).

The ESKOM crisis indicates how neoliberal reforms, successful in one way, can have huge, unintended consequences in other areas (Sizovuka & Van der Walt: in press). This contradictory situation is at the heart of this thesis. The researcher posits that the automotive sector has thrived under the neoliberal measures of one state department, the DTI, which drove the MIDP and APDP, but faced challenges from the neoliberal measures of another department, the DPE, which drove ESKOM restructuring, and to a lesser extent the DoE and NERSA, which helped to set policy for ESKOM. How has it coped, and with what effects, and what does this situation tell us about the nature of the post-apartheid state? To be more focused, this thesis pays attention to three interrelated issues.

First, it tries to understand how the manufacturing sector – specifically the automotive industry – has coped with the challenges of the neoliberal period, with reference to its strategies for dealing with the problems arising from an increasingly unreliable electricity supply. A substantial body of literature exists that examines the effects of changing state policies within the sector, from the ISI period to the MIDP and APDP. Much of this is concerned with questions around industrial policy in a changing global context (Barnes & Black, 2004; Bell, 1989; Black, 2007; Flattery, 2002). The researcher’s interest is in the responses of OEMs, the vehicle manufacturers present in South Africa (BMW, Ford, General Motors, Mercedes Benz/Daimler, Nissan, Toyota and Volkswagen), and ESKOM’s actions (see Chapters 2 and 4 on the OEMs, their relative market share, the local content programme and the rise of the MIDP).

Second, it seeks to understand and map out the contradictions in state policy laid out by the impact of the ESKOM situation on the larger economy. There is evidently a major misalignment of economic policies within the post-apartheid South African state – between how the electricity supply is managed, and how the state seeks to foster an expansion of manufacturing industries such as export-led automotive production –

despite these being framed by the same broader neoliberal framework, exemplified by GEAR, and both the automotive sector and ESKOM restructuring being profoundly shaped by neoliberal modes. ESKOM's failings cannot be understood as anything but a major external shock on the manufacturing industry, generated by part of the national state itself, and framed by neoliberalism, just as is the DTI's projects like the MIDP, yet with the two sets of neoliberal reforms having contradictory effects. ESKOM's supply shortfalls reflect cuts in expansion, maintenance and employment starting in the 1980s, and corruption enabled by contracts to the private sector. These ESKOM measures were justified by the exact same neoliberal framework that led the DTI to phase out ISI and introduce the MIDP and APDP – yet they also undermined both the efforts of the DTI to boost manufacturing and manufacturing exports, and GEAR commitments to a new growth path based on export-led growth. This thesis seeks to understand the situation from the view of industry, ESKOM and the state.

Third, the thesis seeks to use this material to reflect more broadly on the character of the South African state itself and proffer analysis thereof. Formed in 1910, a unitary South African state has played a key role in determining the trajectory of economic development in the country. There is a substantial literature debating the extent to which state intervention in the past fostered industrialisation, or retarded it, much of which focused on the strengths and weaknesses of South African ISI (Wilkins & Strydom, 1978; Bell, 1989, 1995; Bell & Farrell, 1997; Fine & Rustomjee, 1996; Joffe, Kaplan, Kaplinsky & Lewis, 1995; Giliomee, 2010) and subsequent industrial policies, especially for automotives and textile (Freund, 2019; Black, 2007; Black & Mitchell, 2002: 6; Flatters, 2002; Mosoetsa, 2005: 323). The researcher is more interested, however, in the question of policy implementation, and follows an international and South African literature that pays attention to the independent effects of state form on policy implementation (Chipkin & Meny-Gibert, 2012; Chipkin, Tshimomola & Brunette, 2014; Evans, 1989; Masilela & Mthiyane, 2014; Picard, 2005; Van der Walt et al.: in press; Von Holdt & Maserumule, 2005; Von Holdt, 2010). What is the significance of the policy incoherence we see playing out in the MIDP/APDP/DTI versus ESKOM/DPE problem for manufacturing to how we understand the character of the South African state itself?

The purpose of this PhD is then to analyse competing policy imperatives in post-apartheid South Africa, through an analysis of the effects and significance of ESKOM restructuring on the South African automotive industry, focusing on 2005-2014.

1.2. BEYOND STATE CAPTURE: ESKOM AND AUTOMOTIVES IN CONTEXT

Attention to history confirms that it is a mistake to reduce the problems at ESKOM to the recent corruption or morality of individuals. First, corruption is enabled and fostered by larger social and historical contexts and, second, a focus on corruption can lead to the assumption that a situation was ideal and only marred by misbehaviour.

A focus on the impact of state capture and mismanagement in ESKOM can divert attention from the deeper changes at the utility that form the background to the current problems. ESKOM was integral to ISI from the 1920s, including massive state corporations, and contributed to the industrialisation of South Africa. Soon after the formation of the Union of South Africa on 31 May 1910, the railway and harbour systems of the constituent states – almost all of which were state-owned – were merged into the giant South African Railways and Harbours (SAR&H) department, and later, in 1981, with the airlines and other bulk transport services into the South African Transport Services (SATS, which is today's Transnet) (Freund, 2019; Van der Walt et al.: in press). This was joined in the years to follow by giants such as ESKOM, Iscor and Sasol. In addition to these major state corporations, the Big Four, there were dozens of smaller state corporations, as well as a number of state banks, including the Land Bank established in 1912 and the Industrial Development Corporation (IDC) in 1940 (Van der Walt et al.: in press).

ESKOM was established in 1923 as Escom (the Electricity Supply Commission), with a mandate to ensure reliable electricity for the newly industrialising country. The focus was on the supply of bulk electricity to mines, manufacturing and agriculture – residential users used and continue to use only a small fraction of ESKOM's output. From the 1920s to the 1970s, when segregationist and then apartheid South African governments implemented a system of ISI, ESKOM provided the cheap electricity that underpinned the system (Gentle, 2009).

By the 1970s, ESKOM had effectively driven off or taken over almost all alternative power suppliers, including those of municipalities and mines, and established itself as a vertically integrated state monopoly in generation, transmission and distribution. This remains the case, and perforce a discussion of the electricity supply is a discussion of ESKOM and the state that owns and runs ESKOM. By 2009, ESKOM was the leading energy utility in the South African electricity market, supplying approximately 95% of electricity used in South Africa and more than 60% used in Africa (Greenberg, 2009).

A major feature of ISI in South Africa was its racist character: The state project promoted white supremacy and rested on cheap black labour and underspending on blacks (Kemp, 1991). Makgetla (2004) contended that the state played a significant role in industrialisation and ISI by providing migrant labour, low-cost bulk inputs like energy (via ESKOM), steel (via Iscor) and chemicals (via Sasol), and a cheap transport grid (via SAR&H/SATS) resting on an extensive system of parastatals. It is clear that not only were mines still important, but also the key state corporations were linked to mining: ESKOM, Iscor and Sasol. A report by the progressive anti-apartheid think tank, the Macro-Economic Research Group (1993: 214), showed that these three firms made a major direct contribution to industrial output and were central to the promotion of large-scale manufacturing by the private sector, especially around heavy industry. By the early 1970s, “South Africa's manufacturing sector was far more diversified than Korea's” (Bell & Farrell, 1997: 611).

The 1970s, however, experienced the onset of a serious economic and political crisis and the state shifted towards a more neoliberal approach, including trade liberalisation and plans for the promotion of manufactured exports. Nattrass (1988: 27) argued that 1924 was a defining moment for South Africa, with the start of ISI under the first NP-led government – the “Pact” government of the NP and the South African Labour Party – but in the 1970s, the NP appointed the De Kock, Riekert and Wiehahn commissions to investigate monetary policy, manpower and labour legislation respectively (Saul &

Gelb, 1986), marking the beginning of the end for ISI and a larger process of political reforms (Van der Walt et al.: in press).

The Wiehahn Commission, occasioned by the 1973 Durban strikes and the 1976 Soweto youth uprisings, recommended amendments to labour relations legislation to grant black African trade unions legal recognition, on the same terms as the other races; the creation of a National Manpower Commission to address labour policy; and reforms that would increase the political rights and participation of black Africans (Emery, 1999; Alden, 1996). These proposals were adopted, and were a step in labour market reforms that removed the strict segregation of jobs and rights established in the early years of the mining revolution of the 1800s, and codified by the 1924 Pact government.

The Riekert Commission observed that large numbers of black African people were permanently living and working in urban areas, contradictory to the claims of apartheid. Duncan (1979) noted that it recommended amendments to influx control that would recognise and seek means to include the permanent black township population. Until then, apartheid policy had insisted that all blacks in “white” South Africa were basically visitors from the homelands and could never be citizens. These commissions were later complemented with political proposals in Prime Minister PW Botha’s 12-Point Plan for some division of power among blacks, whites, coloureds and South African Indians within a reformed apartheid framework (Alden, 1996: 292).

The 1977 De Kock Commission of Inquiry into the Monetary System and Monetary Policy in South Africa revealed several deficiencies in the foreign exchange policy, and recommended the need to develop a more active and competitive spot and forward exchange market in South Africa (Bhana, 1985: 205; Gidlow, 1995). It was followed by a series of reforms in trade policy, with early steps towards liberalisation and reforms in state-owned corporations, of which the privatisation of Sasol and Iscor and the restructuring of ESKOM were part.

ESKOM’s neoliberal restructuring began in 1987, putting in place a 15-year process of corporatising and commercialising the utility, the essentials of which were concluded around 2002 (Gentle, 2009; Greenberg, 2009; Sizovuka & Van der Walt, 2013).

ESKOM's founding mandate to produce electricity for the public good, even at a loss, was replaced in the late 1980s by a mandate to minimise costs and seek profit, the end consequence of which was a business model that might operate at the expense of national development. Systematic efforts were made to liberalise and commercialise the electricity sector, although it was assumed that ESKOM could both make profits and underpin further industrialisation. By 2002, the ANC under former President Thabo Mbeki had formally changed ESKOM's legal mandate, and registered it as a corporation with profit-making obligations, shareholders and tax liabilities in accordance with the ESKOM Conversion Act, No. 13 of 2001.

Obviously, the automotive sector was deeply affected by these developments. The foundation of Iscor enabled growth in the basic metals subsector, and complemented FDI. Ford and General Motors established plants in Port Elizabeth from 1924 to 1926, and were joined by Firestone rubber in 1936 (Bell & Farrell, 1997: 601). Starting from modest origins as a body assisting the country to secure a stable power supply, ESKOM grew into a national electricity monopoly, supplying local industry with cheap reliable power (Gentle, 2009). By the 1970s, Sasol's plants provided not only synthetic fuel, but also industrial chemicals on a large scale, including in partnership with private industry.

Protected by the trade system, with tariffs in excess of 100% (Flatters, 2002: 2), the automotive industry was also subject to local content measures from 1962 that were intended to ensure more business for local suppliers (Black, 2007). The aim of the multi-decade Local Content Programme (LCP) was to have 66% of vehicles' mass based on local content by the end of 1976 (Southall, 1985: 309). South Africa did not – and still does not – have its own automobile brand, and its automotive industry centres on the production and assembly of American, European and Japanese brands – with Chinese and Indian investment a recent development – but these make substantial use of local suppliers.

From the 1980s, as South Africa moved towards neoliberalism, Iscor moved from providing cheap steel to local producers to import parity pricing, meaning that it matched its prices to those charged by importers. Then, according to GEAR (1996), infrastructural programmes would be funded from "fiscal transfers, concessional finance from multilateral institutions and other international sources, development finance channelled through development finance institutions, and loans raised on commercial terms". Protectionism and subsidies would be phased out. Trade was liberalised, placing the automotive sector under considerable pressure (Black, 2007), as it was often inefficient, expensive and produced at low scales by a large number of firms (Flatters, 2002: 2).

To help the automotive industry adapt, the post-apartheid state introduced the MIDP followed by the APDP. The MIDP was introduced in 1995 after the work of the Motor Industry Task Group (MITG), which had been appointed to re-examine Phase VI of the old ISI automotive programme and advise government on a future development policy for the industry (Black & Bhanisi, 2007). The objectives of the MIDP were to provide high-quality, affordable and sustainable employment, and to contribute to economic growth through increased production (DTI, 1997).

It was clearly believed that ESKOM could be relied on. ESKOM entered the 1990s with significant overcapacity (Gandar, 1991) and by the early 2000s was widely regarded as an SOE success story: The utility exceeded targets for connecting township households – historically ignored by ESKOM – to the grid, implemented a successful merit-based employment equity programme, and regularly made large profits (Shangase, 2007*).* Additional ambitious neoliberal SOE restructuring policies were agreed, intending to break up the ESKOM monopoly and introduce IPPs, competing regional electricity distributors (REDs) and separate out transmission (Shangase, 2007). ESKOM's prices rose, maintenance and staff were cut, and no new power stations were built. The expectation was that IPPs would meet future shortfalls. Plans to bring in IPPs encouraged the argument that ESKOM should not build more stations as this would crowd out new entrants, and some stations were mothballed (Shangase, 2007). ESKOM chose not to build; in fact, it was instructed not to build more stations, despite projections of supply running out in the 2000s.

The MIDP involved cutting tariffs on light vehicles and components as well as the removal of local content requirements, but provided aid in the form of allowing duty-free imports of components up to 27% of the wholesale value of the vehicle, and duty rebate credits on exports of vehicles and components for the import of vehicles and components (Black & Mitchell, 2002: 6). The idea was to reward the rationalisation of production into a smaller range of products and achieve economies of scale through exports (Flatters, 2002: 2). The APDP seeks to raise volumes to 1.2-million vehicles produced per annum by 2020, and assist component manufactures to provide cost-competitive components to the OEMs and international markets via exports. The APDP has policy instruments of import duty rebates, incentives for productivity, and a Vehicle Assembly Allowance and Automated Investment Scheme (AIS). The latter reportedly resulted in planned investments by automotive assemblers and component supplier companies of R12 billion (Deloittee, 2012: 7). The table below provides a useful summary of the MIDP and APDP.

naamsa

MIDP (1995 – 2012) vs APDP (2013 – 2020)

Support	MIDP	APDP
Tariffs	Tariff protection reduced progressively from 65% and 49% for CBUs and CKDs, respectively, in 1995, to 25% and 20% in 2012.	Tariff protection remains constant at 25% and 20% for CBUs and CKDs, respectively, from 2013 to 2020.
OEM Vehicle Allowance	*DFA (Duty Free Allowance):* 27% of the local assembled vehicle's wholesale price rebated against duty payable on imported components that are used in the production of vehicles.	*VAA (Volume Assembly Allowance):* 20-18% of local assembled vehicle's wholesale price rebated against the duty payable on imported components that are used in the production of vehicles (irrespective of where the production is sold) provided the annual units per plant exceed 50,000. The threshold was relaxed with effect from 2016.
Industry incentives	*Export linked duty credits earned:* • Benefits calculated on local content/value achieved	*Production Incentives:* • Benefits calculated on local production value. • Vulnerable industries receive higher benefits.
Investment assistance	*PAA (Productive Asset Allowance):* • Only benefits OEM and 1st tier suppliers whose investment is linked to a local OEM. • 20% benefit (duty rebate) over 5 years (4% per year).	*AIS (Automotive Investment Scheme):* • Benefits OEM and auto component suppliers, provided investment is auto focused. • 20-35% benefit, payable over 3 years (6.67% per year).

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Table 1.2: MIDP and APDP comparative analysis
Source: NAAMSA, 2019

Black (2007: 59) argued that the MIDP was strongly influenced by the Australian experience and, in particular, the Australian Passenger Motor Vehicle Manufacturing Plan, which was introduced in 1985 and also known as the “Button Car Plan”. The objective of the Button Plan was to encourage major structural changes in the industry and address incentive issues by broadening the Export Facilitation Scheme (EFS) to allow firms to accumulate export credits and use them to offset import duties (Sanidas

& Jayanthakumaran, 2003; Emmery, 1999; Bamber & Lansbury, n.d.). The studies undertaken on the transformation of the automotive industry compelled Womack, Jones and Roos (1990) to coin the phrase “lean production” to describe the manufacturing principles directed at improving quality, cost and cycle time reduction that Australia followed for rapid integration into the global industry.

Flatters (2005) argued that the MIDP is regarded as a major achievement in South Africa’s trade and industrial policies. The programme was introduced in 1995, has been modified and/or extended several times, and continued until 2012. It was followed by its replacement, the APDP, which was also considered to be a success. South Africa’s automotive industry has thrived. Automotive exports of components and vehicles increased from R668 million in 1990 to R45 billion in 2005 (Black, 2007: 2). The sector attracted considerable FDI and a rapid increase in productivity, quality and efficiency. Not only has the automotive industry “weathered import liberalisation rather well”, but relative to the rest of the manufacturing sector its share of sales, value added and investment all increased (Black, 2007: 2).

1.3. DPE, THE DTI AND POLICY (MIS-)ALIGNMENT

By the mid-2000s, however, the two big neoliberal successes – ESKOM and the MIDP – were on a collision course. Load shedding arrived, with stunning effect and no easy solutions. The IPPs did not arrive, so no new power came from the private sector. ESKOM had frozen expansion, cut spending, and stations were mothballed and neglected. ESKOM only commissioned new power stations from 2007, but these were not yet properly online. On top of these basic failings, the utility was wracked by looting and management failure in the Zuma era.

State capture aside, the utility was already unable to provide power, had no back-up plan when IPPs did not arrive, and had been measured as a great success simply because it delivered profits. In fact, as argued above, the profits were made by running down existing capacity (staff cuts, less maintenance, mothballing) and freezing investment. Positing narrow profit criteria, the utility was deemed successful, but according to development criteria it was a disaster – and these two criteria contradicted each other, rather than amounting to the same thing as neoliberal models suggested (Sizovuka & Van der Walt: in press).

What happened here was that ESKOM's neoliberal restructuring, based in the DPE, started to undermine the neoliberal reforms of South African manufacturing driven by the DTI. The DTI was trying to expand South African manufacturing and relied on ESKOM (and the DPE and DMRE) to underpin its efforts. The throttling of the electricity supply by neoliberal measures at ESKOM – later worsened by state capture and mismanagement – is obviously at odds with the state's formal goal of growing the economy through export-led manufacturing.

The post-apartheid state inherited significant socio-economic problems, and new issues also emerged. There is pervasive inequality; high levels of unemployment and poverty; limited and low-quality services in the townships, including access to water and quality education; health problems, including high HIV rates; and entrenched patterns of class, gender and race inequality (Marais, 2010: 287-289; Naidoo, 2010: 172-176; Ngwane, 2010: 384; Motala, Vally & Spreen, 2010: 243-246).

South African governments have consistently viewed massive job creation as the key to reducing poverty, on the grounds that unemployment is a major cause of poverty (Republic of South Africa, 1996). The social security system would cover people who cannot be employed, with the state providing comprehensive social security services programmes, health facilities and education. The private sector would drive economic growth, with a large role for FDI and enabled by the liberal framework (Nattrass, 1996). The plans proposed that manufacturing exports would become central, rather than South Africa's traditional primary product exports from agriculture and mining. In many cases, this meant a focus on high productivity through boosting skills and capital intensity (Nattrass, 2001).

Many studies argued the notion that manufacturing growth was key to propelling the country to a higher growth trajectory. Deloitte (2013), in partnership with a group of local industrialists known as the Manufacturing Circle, released a report entitled *Enhancing Manufacturing Competitiveness in South Africa.* This argued that manufacturing is a significant catalyst in job creation, value addition and export earnings, with a higher revenue generation for every R1 invested than the alternatives. The Manufacturing Circle introduced three goals to grow manufacturing and “Buy Back SA” within the context of industrial policy. As the Manufacturing Circle’s former Executive Director for the period January 2012 to September 2015, Coenraad Bezuidenhout (2019: email), put it:

> The objective was to drive the message that the health and growth of manufacturing was important in ensuring an economy that provided upward socio-economic mobility for South Africa’s people, and that in order to do so, a conducive policy environment that provided certainty and predictability to manufacturing and important upstream sectors (electricity provision, water provision, agriculture and mining) and policies that would ensure improved off-take for South African-manufactured goods (buy local, better access to export markets…). Inclusive of this was also conducive policy to promote efficiency (incentives to promote investment in competitiveness) and innovation (IP protection, education etc.).

A second Deloitte report (2013: 9) commissioned by ESKOM found that manufacturing remained the second-largest individual sector contributor at 17% of GDP, and that the direct contribution of the relatively energy-intensive primary and secondary activities (manufacturing, mining, electricity and agriculture) was 28% of GDP. This was down from about 25% of GDP share in 1990 (Bell & Farrell, 1997: 594), but absolute volume is certainly much larger given the overall expansion of GDP size. As we will see, the automotive industry is currently at the heart of the manufacturing sector in South Africa.

ISI played a decisive role in South Africa’s transition from a mining-centred (Bell & Farrell, 1997) to manufacturing-centred economy, and automotives emerged as the crown jewel in the local manufacturing industry. South Africa’s automotive industry, the largest on the African continent, has grasped the neoliberal nettle period remarkably well. The MIDP, followed by the APDP, has helped to generate increased investment in the sector and grow export volumes. Support, including incentives provided by the APDP, resulted in planned investments by automotive assemblers and component supplier companies of R12 billion by 2012 (Deloitte, 2012: 7). The success of automotive needs to be seen in a context where generally, as Hausmann (2014) noted, “South Africa's export performance is dismal” and, as Nowak (2005: 5-6) said, liberalisation has taken hold, but the tariff regime penalises many export activities while aiding non-viable sectors like clothing.

By contrast, industries such as apparel (clothing), textiles and footwear – like motor vehicles and consumer goods, but non-durable rather than durable – entered sustained crisis. Clothing and textiles grew significantly in the ISI period (Bell & Farrell, 1997: 601), but the clothing industry “had underinvested and lapsed into inefficiency whilst protected behind tariff barriers under apartheid” (Nattrass & Seekings, 2015: 90-91). Reports suggested clothing could only survive trade liberalisation if productivity jumped, and that this required state support for training and investment, but while ESKOM’s failings were generated in large part by the national state itself and framed state-removed protections, it did not provide the requested subsidies until the late 2000s (Nattrass & Seekings, 2015: 91-92).

Employment “plummeted” as export and local markets were lost to Chinese firms, while the industry that remained is dependent on state aid, which allows it to survive by focusing on the small top end of the market (Nattrass & Seekings, 2015: 92-93). Mosoetsa (2005: 323) examined the impact on formal employment levels of similar processes in footwear, and the devastating effects on families and lower wage small towns. Firms surviving in the low-end markets rely on abnormal working hours, casualisation and violation of wage agreements. Mosoetsa (2005) calls this the “Manchester Road”, the low road to survival, referencing the harsh conditions of Britain’s industrial revolution. Decline is inevitable in open markets, given the unequal competition between South African companies and low wage Asian producers.

In the case of automotives, state assistance has been crucial for enabling the transition to open markets, although there is debate over how long aid should continue and what it should cost. While successful, the local automotive sector as a relatively energy-intensive industry is vulnerable to problems in the national electricity grid and rising power prices.

ESKOM’s neoliberal reforms were initially viewed as a success story in terms of increased electric access, successful administration and management change (Shangase, 2007), and profitability (Sizovuka & Van der Walt: in press), but major problems were evident by the mid-2000s. South Africa contended with major electricity supply shortages and power outages in 2005, 2006, 2007, 2008 and 2014. Electricity costs have been raised by more than 170% in South Africa, and this is predicted to continue to escalate at more than double the forecasted inflation rate (Deloitte, 2013: 2; Joffe et al., 1995). Kohler (2006) noted that energy prices constitute a key factor in the growth of the South African economy, and that price increases have a negative effect on the energy-intensive industries that constitute ESKOM's key clientele. Erratic supply and increased tariffs create a precarious environment for key industries to maintain profit levels (Cameron & Rossouw, 2012).

ESKOM's failings cannot be understood as anything but a major external shock to the manufacturing industry, generated by part of the national state itself, centred on the DPE, which undercuts programmes like the MIDP and APDP of another part of the national state, centred on the DTI. Since ESKOM's failings are significantly due to neoliberalism, and since the DTI measures in automotive and other industries follow from the same framework and mandate, this is an example of policy coherence that cannot be reduced to problems of corruption, including state capture. In theory, late apartheid and post-apartheid electricity sector restructuring was to be geared towards benefiting large-scale foreign industrial investment (Bond & Ndlovu, 2010), but in reality problems in ESKOM have been key to falling FDI, negative perceptions and declining growth in South Africa.

1.4. DEVELOPMENTAL STATE: RHETORIC AND REALITY

While state capture undeniably played a major role in the problems in ESKOM, the utility's supply shortfalls preceded Zuma by years, reflecting cuts in expansion, maintenance and employment starting in the 1980s (Sizovuka & Van der Walt, 2013), justified by the same neoliberal framework that led the DTI to liberalise trade. While measures such as cutting jobs and maintenance, and halting expansion were key to the success of ESKOM in becoming profitable and aligned with GEAR, they also contradicted part of GEAR that emphasised the creation of optimal conditions to attract local investment and FDI, and boost manufacturing exports and jobs, as well as the more specific DTI project of setting up automotives for mass export. The same incoherence can be seen at the DTI itself, a department largely free from corruption: Notable is the failure to aid apparel, textile and clothing until 2009, when it was largely too late, and despite the successes shown by support of the MIDP/APDP. A full study of this problem falls outside this thesis, but the researcher will use it to reflect more broadly on the nature of the post-apartheid state.

An examination of the causes and character of competing policy imperatives, and understanding the problems this creates, requires a close look at the South African state itself. The ushering in of a democratic epoch in South Africa witnessed immense changes in the architecture of the state. These included a liberal constitution, Chapter Nine institutions supporting democracy, legitimate democratic elections, robust judiciary, the development of a comprehensive social security programme, a dramatic expansion of access to higher education, efforts at national and racial reconciliation, and attempts to develop sound economic management through policy design and restructuring of the state structure. There were substantial reforms, including the removal of racially and ethnically segregated institutions and demilitarisation of the police.

There is a lot of emphasis in South African state policy on a “developmental state”. Such texts tend to veer between the claim that South Africa is a “developmental state” able to drive change and growth, and that it should be. There is, however, a growing sense that the “developmental state” is more an aim than a reality. For example, the National Planning Commission’s (NPC) 2012 *National Development Plan: Vision for 2030* argued that South Africa would need to move towards a state that is more capable and recognised that “enterprises must deliver a quality and reliable service at a cost that enables South Africa to be globally competitive” (NPC, 2012: 393-399). Meanwhile, Freund (2019: 6) complemented the developmental notion of a social compact aim when he posited that the developmental state is conceptualised as one where close relations exist between a significant part of the capitalist class, sections of the state apparatus and key political figures.

Despite the progress made in the democratic breakthrough, there are major problems in state capacity. Public awareness of the erosion of the integrity of public institutions, nepotism, maladministration, patronage and corruption, and their impact on health, general living conditions, security, unemployment, competitiveness, infrastructure constraints and problems facing industry became widespread in the 2010s (Borraine, 2014; Mapungubwe Institute for Strategic Reflection, MISTRA, 2013). Ineffective implementation of welfare and related protections also pointed to capacity and coordination problems in the state. As Sibuyi (2008: 13) noted:

> South Africa has acceded to a number of international instruments to protect and promote the rights of vulnerable groups, including refugees, people with disabilities and older people, and supported these through national legislation for example Social Security Agency Act (no. 9 of 2004), Social Assistance Act (no. 13 of 2004) and Refugees Act (no. 130 of 1998). The government has taken some measures to sustain progress, including programmes to expedite backlogs for refugee determinations and promoting public awareness of the rights of asylum-seekers and refugees. However, refugees and asylum-seekers continue to face abuse, discrimination and xenophobia, and lack of access to services. People with disabilities also face discrimination, are under-represented in the government and the workplace, and often have limited access to public services and facilities.

The South African statecraft has for some time had to contend with a trust deficit among and within its constituency. In 2016, influential religious leader Thabo Makgoba, the Anglican Archbishop of Cape Town (2016), stated openly:

> Our nation is experiencing an unprecedented and historic crisis of distrust. Industry doesn't trust government. Labour doesn't trust government. Civil society doesn't trust government. Traditional leaders and religious leaders don't trust government. International banks and markets don't trust government. And in response, government says, it doesn't trust anyone either. In fact, I believe the most endangered species in South Africa is not what you think it is. It is trust. Each of you here could enumerate other challenges. Suffice it to say that we have lost the sense of success and promise for the future that we shared during the early years of our democracy.

Another sign was the declining investor confidence in South Africa's political leadership, with an associated reduction in all areas of domestic economic activity and ratings downgrades (South African Institute of Race Relations, SAIRR, 2016). In 2016, the SAIRR *National Growth Strategy* (2016: 3) asserted that "South Africa is in considerable economic trouble" and "downgrades to sub-investment rankings are likely", but the country lacked an "effective economic turnaround strategy". State capture played a major role in the erosion of the country's international image, however, policy uncertainty and mixed messages to business over a wide range of issues had direct and immediate effects.

It is important not to treat serious problems in an ahistorical way or reduce them to recent state capture, or the Zuma era, as they have deep roots (Sizovuka & Van der Walt, 2013). As noted by Sparks (2003: 220):

> Two factors in particular are making foreign investors sceptical about locating in South Africa. One is apartheid's legacy of poor education for the majority of the population and the way the job reservation laws favouring whites truncated the skills base of our working class. The other, also a legacy of the past, is South Africa's high crime rate. Foreign investors are reluctant to send management staff and their families to dangerous places where they may come to harm; and while the poor education system is slowing the production of new skills, the crime wave is hastening the departure of old skills as it drives the brain drain.

These problems are palpable, widespread and threaten to become endemic, as noted in the words of Bam (2015: 209), who observed:

> … the increasing service delivery protests, on-going corruption and many other social ills, reflect the painful reality that societies, if left unchecked, can move backwards in trying to find ways to cope with pressures and complexities. The struggle against apartheid taught us that various forms of protests become apparent in sustained physical, social and ideological attacks against what the poor regard as the injustices of the rich and the politically powerful.

These elements reflect a bitter inheritance, which arguably is the penultimate crisis that negotiated its way into a post-apartheid epoch. Suttner (2015) contended that the question is:

> … how we move from where we are towards restoring constitutionalism and ethical leadership. The issue that has come to the fore most definitely in this episode is a loss of trust in a leadership that has been willing to act with contempt for the constitution, the electorate and even the very ANC to whom the President and MPs are affiliated….A crucial feature of an emancipatory leadership is that of a connectedness between the leadership and the ground, the membership of an organisation and the grassroots more generally. Good leaders listen. If one looks at the giants of South African liberation history they were all distinguished by their willingness to listen…

Overall, the study will argue three main points. First, since the ushering in of a democratic epoch between 1995 and 2012, the South African automotive manufacturing industry has advanced phenomenally towards improved international competitiveness, investment and export promotion in accordance with the underpinning objectives of the MIDP. It is clear that despite an adverse environment, the sun has not set on South African manufacturing, and that well-designed and effectively implemented measures, such as those of the DTI's APDP and MIDP, could make a major difference. Furthermore, despite the limitations of South Africa's historic ISI programme, which was shut down from the 1980s, state intervention in markets could have many beneficial outcomes. It is unlikely that South Africa would ever have industrialised on a free market basis, and this remains true today. The issue is not whether states should intervene, but that they should do so with well-designed and effectively implemented measures.

Second, it is argued that despite these successes there is a notable tendency towards policy coherence and misalignment, including mismatch in the implementation of government policies. This effectively means that the South African state has contradictory policy imperatives. Notably, ESKOM is accountable to the South African government through direct reporting to the DPE as the shareholder, but shaped by the DMRE, which deals with energy policy and NERSA, while the DTI deals with industrial policy, including the APDP and MIDP. These operations are not effectively coordinated, such that ESKOM's cost-cutting and freezes on plant expansion by the late 2000s – and subsequent failure to add significant new capacity to the national grid – literally threatens the feasibility of both the DTI and manufacturing (and mining) in South Africa.

Putting aside the effects of state capture, the actions of both ESKOM and the DTI were mandated by the same raft of neoliberal reforms set out in GEAR. The fact that they were not coordinated, at even a basic level, cannot just be explained by maladministration or state capture corruption, but reflects a long-term problem in the South African state that predates post-apartheid rule. The state is fractured and poorly coordinated, with substantial variations in basic capacity across the different parts. There is marked "ambitious rhetoric", along with policy drift and incoherence, and poor implementation of many decisions (Kaplan, 2012). Using the categories of Peter Evans (1989), the South African state is not a meritocratic "developmental" state able to carry out sustained economic transformation, but is also not a kleptocratic “predatory” state that destroys development. Rather, it is a mixture of both, or in other words an “intermediate” state.

Third, there is a need for a national and broad public policy response that could be considered to strengthen ESKOM’s contribution to the automotive industry and South Africa's post-apartheid industrial policy. This will require major reforms in the state apparatus itself, which go beyond personnel changes or uprooting corruption. The state needs a super-ministry to coordinate economic activities, as part of a larger meritocratic state apparatus in which the bureaucracy is insulated from political interference and state capture, and in which top positions are based on demonstrated education and relevant experience. The state must be streamlined, with fewer ministerial portfolios and senior management roles in the civil service, the centralisation of tenders and accounting, better integration of related departments, and an end to consequence-free corruption and maladministration. Serious maladministration should be a criminal matter, rather than left to the discretion of party leaders to address, as developmental failures by their nature result in human rights abuses and suffering by the majority of the population.

1.5. RESEARCH OBJECTIVES

In undertaking this research, it was necessary to discuss:

(i) South Africa's current industrial policy framework for the automotive industry manufacturing sector
(ii) The restructuring of ESKOM, and the issue of load shedding
(iii) The automotive sector’s response to the ESKOM crisis
(iv) The nature of the South African state

The study used a qualitative research design, which enabled rich data to be generated, including a triangulated research strategy that enabled data to be drawn from multiple sources (Tellis, 1997). Neuman (2006) explained that qualitative research focuses on the richness, texture and feeling of raw data as the basis for developing insights and larger claims. Triangulation increases the reliability of data and the process of gathering it, corroborates data gathered from different sources, enriches the data, and checks assumptions.

Two main methods were used: Documentary analysis and semi-structured interviews with key informants. The researcher made extensive use of primary documents, namely official policy documents and news reports from the automotive and electricity sectors.

For the interviews, the sampling method was purposive sampling, where key informants are chosen from a population well-versed in the subject of the study (Du Plooy, 2001). Given the content of the study, the researcher was interested in industry leaders from the eight South African-based OEMs.

To keep numbers manageable, while also controlling for regional variations, the researcher focused on automotive manufacturers in each of the main provinces: Mercedes-Benz South Africa, BMW South Africa and the South African Motor Corporation (Samcor), which manufactures Ford and Mazda, in Gauteng; Toyota in KwaZulu-Natal; and Volkswagen in the Eastern Cape. Even though electricity supply is national, provincial variations are possible and so dealing with three different provinces allowed the researcher to identify effects related to provincial factors, and effects that were general and a result of ESKOM. Snowball sampling was used where necessary, meaning the researcher requested and used leads provided by key informants in order to access other key informants.

In the interests of triangulation and richer data, the researcher contacted key informants from other stakeholders, namely government, including ESKOM, major unions, employer associations and think tanks. Forty-seven respondents were contacted, 29 of which responded and were interviewed. Fourteen were interviewed face-to-face or via Skype, while the remainder self-completed and submitted questionnaires via email. The research questions are attached in Annexure 1. The questionnaire was pre-tested on three respondents, with the aim of ascertaining the time taken to complete the survey, and the clarity and sequence of the questions. The interviews began on Friday 15 March 2019 and ran until 12 November 2019. Care was taken to explain the reasons for the interview, to seek informed consent, and assure informants of their confidentiality, if requested.

The research data from documents and interviews were captured and coded thematically, with a view to comparing and contrasting responses from all respondents, namely informants from OEMs, government, organised business, organised labour and energy sector analysts.

1.5.1 Limitations

Some people contacted were not able to make themselves available due to company policies that disallowed discussion of matters deemed confidential. One of the OEMs (Mercedes-Benz South Africa) neither agreed nor responded to the research questions posed because of compliance with “anti-trust policies prescribed by the parent company, owing to the confidential and competitive nature of some of the information requested”. Volkswagen South Africa responded to some research questions, but excluded financial information in accordance with company policy. Others were part of the ESKOM restructuring task team that was appointed by Cyril Ramaphosa, current president of South Africa (2018). These are Professor Anton Ebehard, Dr Tsakani Mthombeni (member of the Presidential restructuring task team who works for Goldfields Mine and Chairperson of Energy Intensive Users Group – EIUG), and ESKOM Board member Professor Roderick Crompton.

In terms of ethical considerations, the researcher works for ESKOM and his employer recognises that this is purely a scholarly research that cannot be sanitised at any level regardless of the findings. According to Babbie (1990), the following ethical issues have to be considered when conducting empirical research: Voluntary participation and the right to withdraw from the study; copyright, plagiarism and fabrication; confidentiality and anonymity; researcher’s objectivity; integrity; and false reporting of research findings.

Arising from the abovementioned research questions, hypotheses and limitations, the next section will outline the framework and organisation of the study.

1.6. STRUCTURE OF THE STUDY

The chapter division of this study is as follows:

CHAPTER 1

BACKGROUND TO THE STUDY

This chapter laid the foundation by outlining the background of the study, problem statement, purpose statement, research questions and conceptual framework. This chapter also provides the research design and methodology to be used in this study. The reasons that inform this research design and methodology are explained in detail.

CHAPTER 2

SOUTH AFRICA, 1867-1979: MINING, IMPORT-SUBSTITUTION AND ELECTRICITY

This chapter provides (a) a brief overview of how South Africa fits into the global economy, including the fact there is a global shift to neoliberalism; and (b) a brief overview of the South African economy, with the rise of ISI from the 1920s and its decline in the 1970s, including the crisis of South Africa's apartheid economy from the 1970s and post-apartheid challenges.

It is also in the interest of this chapter to (c) investigate ESKOM's contribution towards South Africa's socio-economic development in the context of policy imperatives in post-apartheid South Africa, in respect of security of electricity supply to the automotive manufacturing industry from 2005 to 2014. This chapter will (d) outline ESKOM's history and restructuring in the 1990s, with a revelation to the effect that the picture is more complex than imagined and bears reflection.

CHAPTER 3

FROM IMPORT SUBSTITUTION TO NEOLIBERALISM

This chapter reflects on the current nature of South African state policy, outlining debates on the structure of the state (with questions of whether it is developmental, fragmented, corrupt or capitalist), linking into larger theoretical positions (Liberal, Marxist, Weberian etc.), and then tying this to the automotive industry, ESKOM and the challenges that automotives faces, including the apparent policy incoherence. This chapter provides a theoretical approach to the study and the major trends of the South African automotive manufacturing industry.

CHAPTER 4

REMAKING THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY: THE DTI AND INDUSTRIAL POLICY

This chapter provides a brief description of the DTI and the restructuring of the South African automotive industry, and situates it in an international context. The chapter will examine lessons drawn from the Australian experience through the Button Plan, which largely shaped the reconfiguration of the South African automotive industry. In summary, this chapter locates the MIDP, introduced in 1995, and the APDP, introduced in 2012, in larger industrial policy, fitting into the National Industrial Policy Framework (NIPF) and the Industrial Policy Action Plan (IPAP) as part of South Africa's industrialisation trajectory. The chapter will also outline the "current" positions of the state and current challenges, including the problems caused by ESKOM.

CHAPTER 5

CHALLENGING THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY: ESKOM AND ENERGY POLICY

This chapter examines the neoliberal restructuring of ESKOM, which began under the NP in the 1980s and continued under the ANC from the 1990s, and its effects on the automotive industry. This chapter analyses the contradictions challenging the South African automotive industry under the DTI, energy policy under the DMRE, and the overall impact on the restructuring of ESKOM.

CHAPTER 6

UNDERSTANDING THE PROBLEM OF POLICY CONTRADICTIONS: THEORETICAL IMPLICATIONS

This chapter presents the research data collected through primary and secondary literature sources, and quantitative data and qualitative interviews with knowledgeable people on ESKOM's developmental role in South Africa, as well as a discussion and interpretation of the findings. In addition, this chapter presents two major sets of theoretical issues raised by the study, and on which the data has significant bearing. The first is the question of the appropriate role of the state in development, and the second is the question of constraints on development arising from South Africa's historical trajectory.

CHAPTER 7

MAIN FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter outlines the main findings. In addition, the chapter outlines the recommendations and makes broad public policy proposals that could be considered to enhance the security of electricity supply to build a solid industrial policy for the automotive sector in South Africa.

CHAPTER 2
SOUTH AFRICA, 1867-1979:
MINING, IMPORT SUBSTITUTION AND ELECTRICITY

From the fundamental ethical concepts which are treated first, the moralist proceeds to the derived ideas of family, country, responsibility, charity, and justice; and it is always with ideas that his reflection is concerned. In political economy the same situation exists. Its subject matter, says John Stuart Mill, consists of those social facts the goal of which, principally or exclusively, is the acquisition of wealth (Emile Durkheim, 1938: 23).

2.1. INTRODUCTION

This chapter locates current debates over economic and industrial issues as well as current ESKOM and automotive sector policy issues in their historic context, by examining how South Africa was forged in the crucible of capitalism and imperialism. It reflects on how South Africa, originally so marginal to the global economy, was rapidly integrated from the 1860s by a massive expansion of the diamond and gold mining industries. Funded by foreign capital, mainly British and German, this sparked an agrarian and industrial revolution, as well as a series of wars that, by 1902, saw the region under British imperial rule.

Until the 1920s, South Africa was positioned in the global economy as a producer of raw materials and an importer of manufactured goods. From 1924 onwards, a series of white-ruled South African governments, mainly Afrikaner nationalists, tried to move the country away from dependence through ISI policies. The period 1924 to 1979 was economically marked by growing efforts from the state to foster local industrialisation and move away from dependence on British manufacturing imports, as part of a larger political project driven by Afrikaner nationalists to weaken the British link. Industrial policy emerged with the promotion of an indigenous steel industry during the 1920s, and ISI was built around “heavy tariffs, generally escalating with the degree of value added … preferential purchasing and the occasional picking of ‘winners’, and the promotion of selected industries” (Barnes, Kaplinsky & Morris, 2003: 3).

South African ISI included the use of cheap and repressed black labour, protectionism, state subsidies, and the creation of large state banks and industries. ESKOM, which provided subsidised electricity, and the development of a local automotive sector, including a multi-decade LCP from 1961, were part of the ISI period, and cannot be understood outside of these processes.

An outline on the rise and development of ISI from the 1920s, and its character before its decline from the 1970s, set the context for the shift to neoliberalism, which is the backdrop for post-apartheid challenges and policy debates. One theme that is carried through is the contribution of electricity to the South African manufacturing industry, including the automotive manufacturing sector. A second consideration is how the character of the state has deeply affected the form and impact of economic and industrial policy in South Africa.

The argument presented here is in line with Marxist scholars such as Kemp (1991), Legassick (1974, 1975) and Magubane (1996), who argued against a narrow focus on racial attitudes, and the crudest racist policies of the NP-led Pact coalition government (1924-1933) or the NP apartheid regime of 1948-1994. Understanding policies around race and class, for example, as the product of primordial Afrikaner attitudes or at odds with rational economic activity is a mistake. Magubane (1996) argued that such approaches ignore the fact that many of the racist policies of apartheid were established decades before, most notably when, in 1910, Britain brought together the different states into one Union (now Republic) of South Africa, and that this basic framework did not change with elections. Such approaches also ignore how these policies were rooted, before and during ISI, in the needs of capitalism – local and foreign (Kemp, 1991; Legassick, 1974, 1975; Magubane, 1996). Racist policies enabled cheap, unfree labour, and were adopted in the larger context of British imperialism, while the evolution of capitalism in South Africa and South African government economic policies cannot be understood outside of the context of an evolving global economy, including global shifts like neoliberalism (Gentle, 2009; Rich, 1984; Robertson, 1971). Wolpe (1995: 64-65) argued that since the establishment of the Union of South Africa in 1910, the state developed the capitalist mode of production within a racist framework. As Turok stressed, this was deeply linked to a racist system:

> The pre-capitalist subsistence economy was almost totally undermined by white colonisation. Industrialisation created important urban centres which increasingly sucked in migrant black labour, but apartheid laws and practices reinforced social and economic dualism. In consequence, the peasantry was almost totally transformed into a reserve army of labour which stood ready to supply the needs of mining, industry and agriculture, and kept wages low… (Turok, 2008: 183-184).

2.2. BEFORE THE MINING REVOLUTION

Meredith (2007) noted that when Britain took possession of the Cape Colony in 1806 during the course of Napoleonic Wars, it secured a small territory (much smaller than what became South Africa), based on slave-owning and unfree labour, and on the brink of bankruptcy for years. Kane-Berman (2017: 6) pointed out that prior to the development of commercial mining from the 1860s, what is now South Africa was largely a farming country and its main exports were wool, wine and other agricultural products – and exports were a small part of the economy.

The key role in the global economy of the area that became South Africa was for many decades servicing ships en route to India and elsewhere that called in at the Cape to replenish supplies. By the 1850s, the country was without a rail network or any major industries. Kemp (1991) asserted that Afrikaners and black Africans depended on subsistence farming and flocks. Under British rule, there was a growing commercial farming sector in Natal and the Cape, now including sugar. South Africa as we know it today did not exist. There were many states and polities, and the area had little to attract investors and immigrants.

2.3. THE MINING REVOLUTION

The opening of commercial diamond mining in Kimberley on the borderlands of the Cape Colony in 1867, followed by a gold rush in the Transvaal (an independent Afrikaner republic in the interior) in 1887 ushered in a new era (Leatt, Kneifel & Nurnberger, 1986: 18-19). Stadler (1987: 36) posited that, until the discovery of diamonds in Kimberley during the 1870s and gold in the Witwatersrand in the 1880s, European settlement in South Africa was comparable in size, social structure and economic activity to colonial settlements elsewhere in Southern Africa. That is to say, it was marginal, agrarian and isolated; its main link to the world economy through small ports.

The discovery of minerals laid the basis for an industrial capitalist society. Massive FDI poured into the country, and the mining industries were soon modelled on the pattern of “monopoly” capitalism emerging in Western Europe at the time (Cooper, 1991: 4). This spurred the commercialisation of local farming, intended not for export but for growing cities like Johannesburg. Mining was the driving force behind the establishment of a railway grid and expansion of ports, which it helped to fund.

The developments in South Africa were integrally linked to transformations in Europe from the 1880s: The Second Industrial Revolution, based on new “forces of production” such as electricity, chemicals and steel, was associated with new capitalist “relations of production” of large share-holding corporations that were replacing family owned firms (Cooper, 1991). The era of the 1870s-1910s has been described as one of capitalist globalisation, anticipating and in some respects exceeding the globalisation of the 1970s onwards: International trade, FDI and global flows of labour took place on a larger scale than seen in the 1990s (Van der Walt, 2007: 225). This was the world that shaped South Africa’s capitalist revolution, by enabling its mining revolution from the 1860s.

The opening of diamond mining, first on the banks of the Orange River and then in the ground at Kimberley, sparked many things, including the establishment of the first stock exchange in Africa in Kimberley in 1881 (Meredith, 2007). This was prompted by the formation of a host of joint-stock companies and possibilities for investors and entrepreneurs: The new stock exchange was established to accommodate the huge increase in business. The new industry also helped to drive other developments. For example, Jaglin and Dubresson (2016: 10) explained that in 1882, Kimberley became the first city in South Africa to have electric street lights. The electrification of South Africa started then, before the Union of South Africa in 1910, and was closely tied to the rise of mining. The installation in Kimberley in 1882 was followed by Johannesburg (the hub of gold mining) in 1891; Pretoria (the capital of the Transvaal and later a capital in the Union) in 1892; Cape Town and Durban in 1893; Pietermaritzburg (the capital of Natal) in 1895; East London in 1899; Bloemfontein (the capital of the Orange Free State) in 1900; and Port Elizabeth in 1906. A large part of electricity generation was privately run by the mines through firms such as the Rand Mines Power Supply Company and the Victoria Falls Power Company (VFPC), while many municipalities generated their own power (Clark, 1994).

On the mines, a pattern emerged where entrepreneurs invested everything in a single company to boost their share prices, thereby securing quick profits and reinvesting in new ventures. It became clear that some claim holders colluded to force prices higher (Meredith, 2007). The man who consolidated thousands of small diamond diggings in Kimberley to fund one giant monopoly – De Beers Consolidated Mines – was Englishman Cecil John Rhodes, later a prominent Cape politician, and a keen British imperialist. Effectively, he took control of key mines, bought up the others, and was eventually able to control diamond prices (Meredith, 2007: 110).

The opening of commercial gold mining in the Transvaal saw similar developments, although Rhodes himself did not manage to gain the same influence as in Kimberley. By the early 1900s, gold mining was dominated by five big firms, the largest of which was the British-based Wernher, Beit and Eckstein, called the “Corner House” (Van der Walt, 2009). Linked through a tight-knit Chamber of Mines, these huge firms repeated the “monopoly capitalism” model. Like Rhodes, they favoured British imperialism.

A massive new working class was created in the cities. The mines employoed skilled white labour and unskilled black African labour. The former came from Europe, particularly Britain, and the latter from South Africa’s “homelands” (then called “native reserves”) and neighbouring territories such as Lesotho and Mozambique (Van der Wlat, 2007). There were also many Afrikaner workers (mostly unskilled), and some coloureds and Indians on the mines (Indians were mainly employed in the growing collieries in Natal).

The majority of black African miners were migrant labour. In essence, they came from areas of subsistence agriculture, working in the mines for part of the year and living in compounds, and then returning to their homes for the remainder of the time. At their homes, their families supported themselves by farming. This migrant system allowed for extremely cheap labour, reinforced by strict racist laws over movement, strikes and housing. The employment conditions of most black African workers was governed by legislation dealing with the labour relationship as one between master and servant, not two free parties (Barret, 1936: 41). Inside South Africa, a significant layer of black African farmers in the homelands avoided wage labour by becoming peasants who could sell to urban markets. Restricting black land ownership to the homelands, and enforcing communal tenure, helped squash this class, while repressive laws, such as those employed at the mines and defined in terms of the Native Labour Regulation Act, No. 15 of 1911, ensured that migrant labour remained cheap.

Wolpe (1995: 67) argued that the “homelands” were not separate from the massive capitalist sector that emerged around the mines – this is the old idea of a “dual economy” – but actually underpinned the mines by acting as a massive source of cheap male migrant African labour. These were areas of indirect rule through African authorities, and often retained traditional ownership systems. Wolpe (1995) argued that the South African state recognised much of African law and custom by granting powers to chiefs, aimed at preserving tribal communities as a source of cheap migrant labour (also see Legassick, 1974, 1975; Magubane, 1996).

The homeland economy provided a major subsidy to the mines because the families of male migrants remained in the homelands and engaged in subsistence farming. This allowed for the payment of wages below the level needed to sustain families, and also allowed the state to avoid issues like pensions (Wolpe, 1995: 83).

It is, however, important not to reduce black miners to migrants from South Africa’s homelands. Into the 1920s, a high proportion of skilled white miners and other skilled artisans were foreign-born, and before the mid-1970s, up to 50% of black miners on the Witwatersrand were migrant workers with homesteads in neighbouring colonies, especially Mozambique (Van der Walt, 2007: 226-227). As in South Africa, chiefs played a major role in making labour available to the mines. The mines centralised recruitment into two main bodies: the Native Recruiting Corporation (NRC) and the Witwatersrand Native Labour Association (WNLA).

Clearly, we must proffer that the mining industry needed a large supply of cheap labour to become viable (Yudelman, 1975: 92). Barret (1936: 41-42) added that the black African labour supply for the mines was primarily supplied by the native authorities as male migrant labour from the homelands and neighbouring countries, and regulated by the NRC and WNLA. Crush (1987: 285) observed that:

> For the mines, the advantages of a more stable pattern of labour migration are obvious. Without having to spend the vast sums required to house the workforce permanently on the mines, the industry can lower costs of recruiting and training new workers. It can impose new standards of work organization and discipline and further the formal and informal skilling of black workers. It can be confident of reducing drainage of skills and experience from the mines and controlling the flow of labour.

The dominance of African labour in the mining industry during the period from 1910 to 1940 recruited through the Chamber of Mines, as compared to other major sectors, is illustrated by Wolpe (1995: 74) in Table 2.3.1, and shows how mining remained the largest non-farming employer in the 1910s and into the 1940s.

YEAR	MINING	PRIVATE INDUSTRY	SOUTH AFRICAN RAILWAYS AND HARBOURS
1910	255,594	?	24,631*
1915	240,397	35,065	29,130*
1918	255,897	51,870	37,218*
1919	250,953	?	29,286
1920	265,540	?	32,104
1925	266,912	71,858	34,620
1930	312,123	69,895	25,415
1935	355,563	89,613	16,497
1940	444,242	130,597	45,413

Table 2.3.1 African employment in mining, private industry and the South African Railways and Harbours

*These figures include coloured and Indian workers, numbering about 6,000 in each year shown.

Source: Wolpe (1995: 74)

What is also clear is that state employment was a growing sector. The South African Railways and Harbours (SAR&H) parastatal alone employed almost as many black

Africans in the 1910s as private-sector manufacturing, and almost a third as many as late as 1940.

The discovery of gold and diamonds had created a single political economy, spanning South Africa and neighbouring countries, which supplied large labour forces, notably Lesotho and Mozambique (Legassick, 1975; Van der Walt, 2009). Netshitenzhe (2013: 10) observed:

> South Africa's endowment of mineral resources is legend. While mining, refining and export are in themselves important, the significance of these endowments lies in building a mature industrial cluster that combines extraction, manufacturing of machinery and value-added products, and development of engineering services-all of which can be used domestically and for export.

By the end of the 1800s, there were several main economic sectors in the country: The mining sector, which dominated and was then largely run by foreign capitalists; a growing commercial farming sector that was (outside Natal) dominated by wealthier Afrikaners (the old ostrich, wine, wool and sugar farming for export was now joined by a massive farming of foodstuffs for the mines and the cities around them); a small manufacturing sector, mainly serving the mines; and small-scale farming in the so-called African reserves or "homelands" (however, this layer as indicated earlier was suppressed from the 1910s, and blocked from accessing the new urban markets). Some white farms used wage labour, while others relied on labour tenancy and crop sharing (Walker, 1936).

The massive rise of mining – diamonds, then gold and, from the late 1800s, large collieries in Natal and the Transvaal and growing iron ore extraction – prompted British imperialist interest and FDI in the region (Kemp, 1991; Legassick, 1974, 1975; Magubane, 1996). Wars from the 1870s onwards saw Britain expand its power from the Cape and Natal over all of what is now South Africa, as well as neighbouring areas up to the equator, with the exception of Angola, Mozambique and Namibia.

There were fierce contradictions between the British and Afrikaner elites. Meredith (2007: 9) argued that two men personified this struggle in the late 1800s. One was

Paul Kruger, who ruled the independent republic of the Transvaal, which included the Witwatersrand where the main gold mines were found. The other was Rhodes, who used his huge fortune from his control of diamond mining to promote the expansion of the British Empire and his own business, and became Prime Minister of Britain's Cape Colony. This rivalry, in the world of the larger British expansionism and the Scramble for Africa, led to the Anglo-Boer War of 1899-1902. The guerilla warfare by the Afrikaners, and the harsh methods used by the British to defeat the Transvaal and its ally, the Orange Free State (a second independent Afrikaner republic), included concentration camps and scorched earth campaigns, and produced a legacy of malice, vilification and bitterness among whites that endured for generations.

The titanic contest was settled in Britain's favour, and Britain forged the two republics, the Cape Colony and the British colony of Natal, plus the black African polities, into a single state, with the white-ruled states as "provinces" and the black polities as "the homelands" (Van der Walt, 2007).

The situation of massive British investment in an independent Transvaal was removed. The Transvaal was now a province of a larger British colonial state, the single Union of South Africa created in 1909. The Union was launched in 1910 with an all-white Parliament, a shared railway network unified as SAR&H, a single state bureaucracy, and a racist system of cheap black labour (Cooper, 1991; Magubane, 1996) The Afrikaner/British conflict shaped the nature of the state, in that it divided the white electorate, and the ruling class linked together mines (most British-owned) and farms (many of them Afrikaner-owned) and politicians from both sides (including former Afrikaner generals from the Anglo-Boer War like Jan Smuts) (Weiss, 2010). There was now a closer match between the political economy and the state territory, with South Africa the dominant state in the region and able to make significant use of the labour resources of its neighbours (Van der Walt, 2007).

2.4. THE RISE OF IMPORT SUBSTITUTION INDUSTRIALISATION

Kemp (1991: 179) argued that the 1910 Act of Union brought into existence modern South Africa, with a centralised state with self-government representing only the white minority. The 1899-1902 Anglo-Boer War paved the way for a single market with coordinated transport arrangements in which internal tariff barriers were abolished. The new capitalist state was based on white supremacy, reflecting processes of conquest by both the British and Afrikaners. The Land Act of 1913 was simply tying up with a little pink ribbon a racial distribution of land that saw (at the time) less than 10% of land reserved for black Africans (Clark, 1999: 78-80). The new Union involved almost universal suffrage for white men (there were exceptions in the Cape) and created space for the rise of countrywide black African and Afrikaner nationalism, leading to the South African Native National Congress on January 8 1912 (named the ANC from 1923), and the (Afrikaner-based) NP on 1 July 1914.

British and other foreign firms controlled the key mining industry in the 1910s, while wealthier Afrikaner farmers controlled a large part of commercial agriculture – which largely serviced the cities that grew up around the mines – but little manufacturing industry. This period (1870s-1920s) is often seen as one in which (British) “gold” and (Afrikaner) “maize” were the dominant productive sectors of the capitalist class (Kemp, 1991). While South Africa was now dominated by capitalism, it was centred on raw materials and reliant on the export of a raw material for its survival. Lumby (1983: 196) asserted that under British rule, the colonies were used to supply mother country with raw materials for the manufacturing required, and this was also the case for the newly established South Africa.

Kemp (1991: 180) further noted the limits of industrialisation at this time: Before the 1920s, railways were born out of the response to mining, and served mining. The bulk of commercial white farming was dominated by the mines, in the sense that it existed largely to supply the mines and cities around them. Other by-products of the discovery of diamonds were the universities of the Witwatersrand and Pretoria, which had their origins in a school of mines set up in Kimberley in 1896. Mining also led to a major expansion of Cape Town and Durban, the two ports that had direct rail to the mines, though two other key ports, East London and Port Elizabeth, were sidelined.

The NP’s nationalist programme was antagonistic to British control of South Africa, which was a Dominion-type colony (like Australia) with self-government (Cooper, 1991; Stadler, 1987). Led by General JBM Hertzog, it rejected the more conciliatory politics of Generals Louis Botha and Jan Smuts (prime ministers from 1910-1919, and 1919-1924/1933-1948 respectively) of the South African Party. The NP, however, endorsed most of the racist framework Britain created with the Union (Magubane, 1996). Besides symbolic changes (a new flag, language reform securing official status for Afrikaans, a second anthem *Die Stem*, and more status for dominions within the Empire), the NP pushed for further economic independence, and this drove the adoption of ISI from 1924, when the NP formed a coalition government (the "Pact" government) with the small South African Labour Party, which was backed by white trade unions and British-born immigrant workers (Cooper, 1991; Kemp, 1991; Nattrass, 1988; Stadler, 1987).

The Pact was elected in the wake of the defeat of the 1922 Rand Revolt by white workers. Ousting the government of Smuts, seen as too close to the big mine owners, the South African Labour Party (allied to English-speaking white workers and unions) and the NP (representing Afrikaner farmers, middle classes and workers, including poor whites) signified a political alliance to promote capitalist accumulation in a white-dominated economy, using ISI to weaken the hold of the mines and foreign investors, building local industry, and protecting white workers through racial discrimination.

The NP and the Labour Party presented the Pact as unity against the creatures of imperialist capitalist interests (British mining houses and the parties they backed, like Smuts) in favour of local (white) capitalists (mainly Afrikaners), white workers and the poor (Sieler & Sieler, 1998). The NP, led by Hertzog, raised up an image of an overwhelming black African mass of cheap labour invading urban South Africa, and supported by foreign capitalists, to displace the white man. Hertzog's manifesto pledged to an all-out economic defence of white South Africa against undercutting by a work-starved black African influx and exploitation by profit-hungry financial powers (Davenport, 1998: 35). The profit-hungry financial powers were the British imperial players whose preference for black workers spurred the Rand Revolt, and whose links to British imperialism had spurred the Anglo-Boer War.

Nattrass (1988) argued that the Pact would play a key role in South Africa's industrialisation. Until 1924, the new capitalist economy in the country and region was centred on British ownership (for example, De Beers and Corner House), and South

Africa was basically exporting raw materials (from farms and mines) to Britain and then importing the manufactured goods. Essentially, much of the plant and equipment was imported, as well as many consumer goods. There were some small industries, but these largely mainly served the mines and worked only because imports could not compete, e.g. dynamite manufacturing and ropes for mines. The mining industry laid the basis for building infrastructure such as railways, ports, steel and transport – although a rider must be added that all of these depended on the exploitation of lowly paid African black labourers. Local manufacturing, however, was tiny.

Kemp (1991: 181) noted that the First World War created an impetus for import substitution when normal sources of overseas supply were curtailed. It was under the NP-led Pact government, however, that the South African state deliberately adopted the approach to industrialisation known as ISI. Bezuidenhout (2002: 383) defined ISI as a "state-driven strategy to improve a country's balance of payments situation by substituting imported goods with locally produced alternatives. This can contribute to developing domestic manufacturing sector but may exact a heavy price in terms of the long-term competitiveness thereof." ISI can take a wide range of forms, with different sequences of substitution and varying roles for the state, making it perilous to provide too narrow a definition (Bell & Farrell, 1997).

From the 1920s, governments everywhere tended to play an interventionist role, and ISI was not a very controversial approach. ISI was adopted in South Africa at roughly the same time as in Latin America, and was similar in form, but the bluntly racist character of South African capitalism was quite different to the capitalism of Latin America (Cooper, 1991). While ISI started with the Pact in South Africa, it was not unique to the country as it was being adopted at the time in many countries with colonial histories that sought economic independence, such as Argentina (Cooper, 1991). Cooper (1991: 1-3) argued that historical developments in South Africa follow more closely the patterns of the semi-industrialised countries of South America, such as Chile, Brazil and Argentina, than those of tropical Africa. These included early industrialisation of the late 1800s, the beginning of ISI between the wars, and the centrality of manufacturing to the economy from the 1940s.

The country's massive mineral endowments shaped ISI, with major state industries built on this foundation: ESKOM (based on coal-fired stations), Iscor (coal and iron ore), Sasol (chemicals from coal) and SAR&H/SATS (coal and then ESKOM) (Bell & Farrell, 1997; Clarke, 1994). Another distinctive feature of ISI in South Africa was the racist character of the state and the massive reliance on cheap black labour. Marxist scholars (Legassick, 1974, 1975; Magubane, 1996; Wolpe, 1996) argued that state racism in South Africa should not be seen as something created by NP ideologues. It was not even a goal in itself. Instead, it was basically a method used to generate cheap labour in the age of imperialism that was perfectly suited to South Africa's conditions.

With the Pact, tariffs were raised and intentionally targeted at encouraging investment in the manufacturing industry, which helped to create more jobs for the unskilled "poor whites" and the whites laid off from the mines (Kemp, 1991). The poor (largely landless and jobless) whites moving from rural areas to the cities, plus the whites pushed out of the mines after the Rand Revolt failed (and the white workforce was slashed), were found jobs in the expanding manufacturing and state sectors. ISI policies were linked to incentives for firms that hired "civilised" (white and sometimes coloured) labour to uphold white supremacy (Kemp, 1991: 181).

Lumby (1983: 220) stated that the manufacturing sector only developed properly in South Africa owing to increased government intervention from the 1920s, and that it was only during the Second World War, almost 60 years after the mining revolution, that it came to the fore as the dominant growth sector in the South African economy. Lumby (1983) stressed the importance of active trade and industrial policy as a precondition for this development, adding that massive state investment into state enterprises such as ESKOM and Iscor provided essential aid for local manufacturing. Stadler (1987: 54) argued that despite low tariffs and preferential treatment for imported British goods until the 1920s, manufacturing industries rapidly developed following the establishment of mines.

Despite its "black peril" rhetoric, the Pact never ended reliance on the mass of black African cheap labour, but actually increased black urbanisation by promoting new manufacturing industries in the cities. Yudelman (1975: 87-88) added that the Pact government accommodated the mines, in that it did not overturn the massive job losses of 1922, by enforcing the earlier levels of job reservation for whites on the mines. In fact, the Pact government freed the mines from the problem of being the main employer of a militant white working class by promoting manufacturing through ISI, including reserving jobs for whites in certain occupations and large-scale job creation in the parastatals (Crundy, 2001: 45; Yudelman, 1975: 87). Under ISI, manufacturing firms were given special subsidies for employing "civilised" (mainly white, sometimes coloured) labour. SAR&H, ESKOM and Iscor all employed large white workforces, as did the civil service bureaucracy.

The idea was to use taxes on the mines to help fund ISI, and so break with ongoing imperial domination, and build economic and political independence. For the Pact, ISI was economic nationalism against Britain, which controlled the mines that controlled the South African economy. Decisively, ISI was needed to end the dominance of mining and British capital. Kemp (1991) stressed that it shared with the mines (and the old Smuts government) a commitment to labour control through a racist apparatus, the deliberate promotion of divisions between workers by race, and relatively better treatment for coloured and white workers.

So far we have seen that ISI involved a range of tariffs and subsidies to local firms. Besides "civilised labour" subsidies, local firms were increasingly able to obtain loans and grants from the state. In addition, many inputs for manufacturing were provided cheaply. Besides cheap labour, interventionism was carried further with large state corporations or parastatals.

The SAR&H provided bulk transport, and ESKOM was set up in 1923 as Escom under Smuts, mainly to aid the railways and help regulate electricity prices (Clarke, 1994), but it grew into a massive state monopoly that provided cheap power to mines and industries (Gentle, 2009). The 1922 Electricity Act put in place two institutions: The Electricity Control Board (ECB) and Escom (later renamed ESKOM). As the energy regulator, the ECB controlled and licensed the supply of electricity, and enforced the sharing of surplus profits with customers in the case of private power companies, while Escom's task was to render the provision of power without profit to the development of South Africa and the welfare of her people (Gentle, 2009: 57).

Escom was formally established on 6 March 1923 and has since been at the epicentre of industrialisation and development in South Africa (Gentle, 2009: 57). In 1928, the Pact established Iscor. The three large parastatals were complemented in later years by state industrial corporations such as Sasol (1950) and a number of state banks, including the Land Bank established in 1912 and the IDC in 1947 (Van der Walt et al.: in press).

The Land Bank provided subsidies and grants to white farmers, and the IDC to manufacturers. This capitalism, however, rested on the base of cheap black labour, something shared by ISI and mining, Afrikaner commercial farmers and emerging industrial capitalists, as well as British and local mining firms. These parastatals under state auspices aided ISI, and tended to enter sectors that had a low level of investment, but were deemed strategic for local industry.

An immediate effect of ISI was that Johannesburg and Cape Town became centres for industries of light consumer goods (for example, clothing) and a market for their output. Industrial production rose steadily. Spooner (1936: 44) noted that from 1927 to 1930 the average annual value of manufacturing production amounted to approximately 111 million pounds, while estimates of the national income ranged from $220 million to $240 million per annum. The Great Depression was disruptive and caused a political crisis, but ISI continued. The Pact government was replaced by the Fusion government in 1934 (a coalition that merged Hertzog‘s NP and Smuts' South African Party into the United Party, and made Smuts prime minister again). ISI continued throughout: The United Party did not reverse but deepened ISI and when the NP regrouped outside the United Party as a new purified NP breakaway, going on to beat it in the 1948 election, it maintained ISI into the late 1970s.

The Second World War promoted further growth of metals and engineering, especially in fulfilment of military orders, while more import substitution was encouraged by the cutting off of normal sources of supply (Morris & Padayachee, 1988: 22). By this time, gold and maize had been joined by a third capitalist sector, iron (manufacturing), which by the end of the war had overtaken the other two as a contributor to GDP (although not in terms of numbers employed). A serious crisis in South Africa, however, led to the re-establishment of the NP, which won in 1948 and would stay in office until 1994.

From 1948, the NP was identified with apartheid, which continued many of the racist policies of the past (Magubane, 1996). It also continued with ISI until 1979.

Leatt et al. (1986: 67) asserted that "institutionalised racism pervades South Africa's history and policies" and goes back "a long way", but the 1948 government undertook a "legislative blitzkrieg" that entrenched "apartheid – Afrikaner nationalism's policy of separation based on race". Legassick (1974, 1975), Magubane (1996) and Kemp (1991), however, draw attention to the fact that most of the core legal features of apartheid existed before 1948, and were built into the state that was created by Britain in the South Africa Act of 1909. The homelands were retained as a source of cheap labour (despite all the apartheid talk about keeping black people out), but now also served a duty as an ideological base for the apartheid notion of separate development.

From 1948, the state accelerated ISI. New parastatals were established and older ones expanded, and there was major infrastructure development – roads, bridges, transport, electric power, hospitals, oil pipelines, housing etc. The IDC financed a series of industrial projects. New parastatals included Sasol, formed in 1950 and concerned with oil refining and the making of petrol from coal; the Armaments Development and Production Corporation (Armscor) established in 1968; and numerous others in the different homelands (Van der Walt et al.: in press). The pattern remained that the state intervened where private capital was unable or unwilling, and also directly assisted the private sector (Kemp, 1991: 187-188). In the 1960s, 1970s and 1980s, the state promoted industries that it viewed as economically or politically strategic, as international sanctions were applied against the apartheid regime, and the "protective regime" became so "extraordinarily complex" that a "large number of protective tariffs and non-tariff barriers" effectively became firm-specific (Barnes et al., 2003: 3).

By this stage, the majority of the secondary industry and financial sector were in the hands of local white capital (including the main mining houses), but closely tied to state aid. The overall structure of the economy continued to follow the pattern established a century earlier by the mining houses: A private sector centralised into large conglomerates, five of which dominated the Johannesburg Stock Exchange, and a state sector with massive parastatals, with ESKOM and SAR&H larger than four of the five giant private conglomerates (Van der Walt et al.: in press). All these processes of restructuring South Africa from a colonial outpost to a semi- industrialised country were underpinned by cheap labour, cheap energy and cheap steel (Gentle, 2009: 59).

2.5. APARTHEID IDEOLOGY AND ‘SEPARATE DEVELOPMENT’

From 1948, the second NP government was armed with the new apartheid ideology, which impacted on the economy, nation-building, the shape of the state, and the politics of the opposition. As Olivier (1986: 16) observed, it involved an ideological setting that “gave rise to the concept of two separate South Africas: A ‘white’ South Africa in which the interests, rights and privileges of the whites will reign supreme, with the blacks in a subsidiary position and tolerated mainly as temporary ‘sojourners’, particularly in the urban complexes; and a ‘black’ South Africa where black interests were supposed to be regarded as paramount, and in which black political and economic development was to take place.”

The two main races were also seen as divided into different nations (Moodie, 2017). While the nations of the white race would govern jointly over the greatest part of the country, i.e. “white” South Africa, the black African “nations” (main tribes) would each govern their own separate homelands. Supposedly, black Africans were to have self-determination in the small part of South Africa allocated to their homelands. The homelands (old “native reserves”) constituted the territorial basis of the separate development ideology of apartheid, where land was demarcated in terms of the Native Land Act of 1913 and the Bantu Land and Trust Act of 1936. The formal reasoning was that if the Afrikaners as a nation had a right to self-determination from Britain and other outsiders, and that this was a Christian principle, then the same applied to other nations (Moodie, 2017). The formulation generated its own problems, including the reality that “white” South Africa had a large, permanent black workforce and population.

Unlike earlier governments, the NP viewed the homelands as potentially separate independent states. The Bantu Authorities Act of 1951, which Stadler (1987: 133) described as the most important instrument of the NP in establishing the basis for the apartheid homeland system, set the basis for 10 homelands for specific ethnic groups. Four would be granted formal “independence”, i.e. the Transkei, Bophutatswana, Venda, and Ciskei (the TBVC states), while the others would be put on the same road, namely Gazankulu, KwaNdebele, Kwazulu, Lebowa, QwaQwa and KaNgwane. The 1951 Act completed the process of incorporating the chieftaincies into a bureaucratic hierarchy. The chiefs became key elements in the apartheid political system in the homelands, and each homeland was to be run not by elections, but under customary ethnic laws and chiefs, each with a set of laws distinct from the others and from those of “white” South Africa. Black Africans would no longer be citizens of South Africa, but foreigners who supposedly entered the country to work for short periods of time. Even those blacks who had been living for generations in urban townships in South Africa were now citizens of the homelands.

In the apartheid system of governance, the homelands were an example of “separate development” that allowed everyone rights. One problem was that the homelands constituted about 13% of the country, yet were allocated to 75% of the population. They were not economically viable, so their main income came from workers in “white” South Africa. McCarthy (1990: 47) argued that the policy of separate development, with its ethnic homelands and governments, sought to balance economic inclusion and political exclusion. Economic exclusion was not seriously considered, and the majority of people in “white” South Africa were in fact black Africans. As seen earlier, and as Yudelman (1975: 92) noted, the mining industry (and manufacturing) needed the large supply of cheap labour provided by the homeland system in order to be viable.

Cohen (1986: 8) added that there were four pillars of apartheid. The first was the restriction of the franchise and the virtual monopolisation by Afrikaners of centralised state power – especially senior and core positions in the repressive and regulatory apparatuses such as the army, secret services, police and bureaucracy. The second pillar of apartheid was the enforced coincidence between spatial and racial relations. The third pillar was the regime’s capacity to enforce social control in the most vulnerable points of the structure, namely the urban areas. The fourth pillar of apartheid was the enforced regulation of the supply of labour to the mines, factories, farms and white domestic households. An important point here is that the state actively managed labour markets primarily along racial lines, controlling where people could reside and work, and in what occupations. Methods included influx control using an internal passport system (“passes”, “pass laws”, statutory job reservations, a battery of racially discriminatory labour laws, and the education system). State intervention in apartheid was therefore much more than just ISI: Given the extensive level of state interference in welfare, educational, health, leisure and employment opportunities for black people, it was a total system of social control, a womb-to-tomb exercise in social engineering.

2.6. ISI AND AFRIKANER ECONOMIC ADVANCEMENT

The ISI project was not simply about creating more autonomy for (white) South Africa, but aimed increasingly at specifically promoting Afrikaners. This reflected the English/Afrikaner division, and the NP’s strident nationalism, and was especially obvious under the NP government established in 1948. Terreblanche and Nattrass (1990: 12) argued that Afrikaner nationalism had a clear economic interventionist thrust based on the mobilisation of ethnic forces to foster Afrikaner accumulation. It was an assertion against the hitherto dominant English-speaking establishment (Kemp, 1991: 186).

With the Pact and then Fusion, the NP was still careful to win over some English-speaking white voters, but from 1948 there was a strong assertion of an exclusionary Afrikaner nationalism. Until the late 1930s, there were few Afrikaners in prominent positions in business, the civil service and even some parastatals. From the 1930s, there was a push to build Afrikaner business like Volkskas bank and, from 1948, a strong state policy of advancing the interests of the nascent Afrikaner bourgeoisie, and of Afrikanerising the state (Hyslop, 2005). Leadership in parastatals, top military roles, and a large part of the senior civil service were allocated to NP deployees, and the state’s bank accounts were moved to Volkskas.

In addition, there was pressure to create Afrikaner mining houses, and generous subsidies such as grants, welfare, education and state housing for poorer whites who were mainly Afrikaans (Cohen, 1986: 36; Hyslop, 2005). For example, from the 1940s, Escom’s growing need for coal had been directed into supplier contracts with emerging Afrikaner firms like Gencor (Hattingh, 2018: 7). Division between the NP and state apparatus blurred. This can be viewed in parallel to the later policies of the black African nationalist African National Congress (ANC), which promoted a black bourgeoisie with the deployment of political loyalists, state purchasing power, the parastatals and government pressure (Hattingh, 2018; Hyslop, 2005); and state capture under the Zuma-era ANC.

Unsurprisingly, as Leatt et al. (1986: 74-75) noted, the post-1948 period saw a dramatic improvement in Afrikaner economic status. Afrikaners increasingly dominated the civil service, played an important role in skilled jobs and expanded in the professions, while parastatal corporations were used to promote Afrikaner economic progress. The state sector’s share of the economy and employment in the state grew sharply. A new breed of Afrikaner entrepreneur in the establishment of diverse industries played a key role in the Afrikaner economic advancement, such as Andreas Wassenaar (Sanlam), Jan Marais (Trust Bank), and Anton Rupert (Rembrandt) with links to Federale Mynbou/General Mining. Afrikaner economic advancement and empowerment has been achieved by a combination of ethnic mobilisation, accession to political power, and the use of the state to intervene on behalf of white and particularly Afrikaner interests to drive ISI.

A variety of economic paths were consistently available to white South Africans, and these were configured in a manner that directly benefitted white Afrikaners. As a result of these structural changes, black people were purely an appendix to Afrikaner economic empowerment as repositories of cheap labour for the mining, agricultural and manufacturing industries. The deliberate empowerment of the Afrikaner, which was accompanied by massive state financial support, witnessed the emergence of Federale Mynbou, General Mining, Gencor (later BHP Billiton), Sanlam, Anglo-American, Old Mutual, Rembrandt, South African Breweries (SAB) and Liberty Life, among others. Afrikaner-owned mining corporation Federale Mynbou received massive support from the apartheid state and became the main supplier of ESKOM’s coal for power stations. In 1980, the merger of three mining entities – General Mining Corporation, Union Corporation and Federale Mynbou – contributed to the establishment of Gencor Ltd. These multinational companies have had a long history of functioning and expanding their investment portfolios, with the express focus to advance the neoliberal economic paradigm nationally and on the global landscape that was imminent in the apartheid and post-apartheid state (Verhoef, 1992, 1999; Marais, 1998; Hattingh, 2007; Alden, 1996; Wilkins & Strydom, 1978).

Hattingh (2007: 12) argued that at various stages in their history, these companies used several strategies to expand internationally, including transfer pricing and establishing international arms and holdings in countries such as the Netherlands, Luxembourg, Switzerland and Britain. In the context of mineral resources, General Mining and Finance Corporation and the Union Corporation were founded in the 19th century. General Mining was founded on 30 December 1895 by Germans George and Leopold Albu, who controlled a number of gold mines. The corporation focused primarily on gold, developing new mines and managing existing ones. In 1910, General Mining had seven mines under its management, including such well-known ones as Meyer and Charlton, Van Ryn Gold Mines Estate, and West Rand Consolidated Mines, and was developing another two. Meanwhile, Union Corporation was established in 1908 with the assistance of British capital, and later diversified into other sectors of the economy when it formed Sappi in 1936 to serve South African consumers with locally produced paper (Verhoef, 1992, 1999; Marais, 1998).

South African business corporations were generally cunning, and manoeuvred their way to serve both the apartheid state and post-apartheid epoch after the ushering in of democracy. For instance, Cyril Matamela Ramaphosa (now South Africa’s president) was a Board member of SABMiller, for which the post-apartheid state waivered the Competition Act, which was aimed at reducing the monopolies that exist in the South African economy. When he was finance minister Trevor Manuel permitted large South African companies such as Anglo-American, Old Mutual, Billiton and SAB to shift their primary listings to the London Stock Exchange (LSE) (Hattingh, 2007: 16). Manuel is now the chairperson of Old Mutual (Pty) Ltd and the researcher argues that his passionate support of the listing of South African companies on the LSE is a case of “javelin throwing”. The ANC-allied Congress of South African Trade Unions (Cosatu) defined “javelin throwing” as the practice of civil servants resigning to join private companies that benefitted from the state policies those same civil servants had promoted. Effectively, people in senior positions of leadership prepare themselves for long-term financial gain by developing policies and plans that ultimately benefit them when they are no longer in positions of political power. In a sense, this is a clear conflict of interest.

The social structure of accumulation that underlay the apartheid state was one in which policies were predominantly protective of the white Afrikaner interests through a well-designed and executed complex system known as pyramiding. Hattingh (2007) explained that pyramiding was an immensely protective crossholding system that made it both cumbersome and impossible for hostile takeovers of individual mines by competitors. The metamorphoses of Federale Mynbou, General Mining, Union Corporation, Gencor, BHP Billiton and SAB into true multinational corporations indicate how the neoliberalism of the late apartheid state continued post-apartheid and enabled a local globalisation of capital. It was through GEAR that the democratic state benefited the same corporations that supported the "apartheid regime's homeland policy for financial gain" (Hattingh, 2007: 4).

2.7. WAGES AND WORKERS UNDER APARTHEID

Before 1924 there was little in the way of an industrial relations system, meaning even white workers had no real union rights. The 1918 Factories Act and other Acts made provision for the protection of the health, welfare and safety of workers, their hours of work and employment conditions, and allowed for some consultation with workers. The 1922 Apprenticeship Act made provision for the training of South Africa's youth in skilled occupations, which made it easier to end reliance on importing skilled workers from overseas. Ivan Walker, a Pact minister from the Labour Party (1936: 30-31), contended that the 1922 Apprenticeship Act was to ensure the efficient training of young workers in occupations that require a fair degree of skills, knowledge and capacity applicable to the following industries: Leather working; boot making; mechanical engineering; building; printing; carriage building; motor and electrical engineering; hairdressing; food (baking); dental mechanics; and furniture. This was, however, linked to race, with a focus on white youth.

The game-changing laws came with the Pact, under which the South African state became more actively involved in labour relations. Among the key measures of the

Pact were the 1924 Industrial Conciliation Act and 1925 Wage Act. These measures were a direct result of the armed insurrection by white workers in 1922 (Walker, 1936: 29; Yudelman, 1987).

As discussed earlier, black African workers were subject to a range of controls that generated cheap labour. Big mining houses preferred to employ black African workers rather than white workers because they were so cheap, leading to the rebellion of 1922, when white workers protested against proposed retrenchments and, following their defeat by the military, threw votes behind the Pact to unseat Smuts.

The 1924 Industrial Conciliation Act set up a complicated process of negotiations intended to prevent strikes, establishing industrial councils and labour courts, although for the first time it also gave union rights to coloureds, Indians and whites. The 1925 Wage Act allowed the state to determine minimum wages for all workers, which gave some coverage to workers without unions, or at least effective unions.

These measures, however, indicated that the Pact favoured the creation of a state-managed industrial relations system that could manage labour through a mixture of containment and concessions (Yudelman, 1987), and maintain the use of cheap black labour. The complicated system set out in the Industrial Conciliation Act applied to coloureds, Indians and whites, and was intended to channel unions into state-managed processes and block wildcat strikes (Yudelman, 1987). The Act effectively excluded black Africans because it excluded those who carried passes[1]. In addition, it excluded large sectors of the economy, such as agriculture and state rail. From the 1950s, the Industrial Conciliation Act segregated coloured, Indian and white unions. Blakc African unions were not illegal, but they had no legal rights. Most black Africans fell under specific legislation and employment contracts that criminalised strike action or, from the 1950s, promoted alternatives to unions like liaison committees in workplaces.

[1] A tiny, educated minority could sometimes get pass exemptions, and the application of passes to black African women was very uneven.

The Apprenticeship Act involved the appointment of industry apprenticeship committees by organisations of representatives of employers and (white) employees. There were numerous barriers to the training (and employment) of skilled people of colour. Apprenticeships were generally restricted to whites (with some exceptions for coloureds). Kemp (1991: 182) argued that labour laws from 1924 were influenced by the British model of dealing with industrial disputes, yet located in a very different context. The Wage Act could sometimes be accessed by black African workers, but could also be used to effectively reserve jobs by setting wages for some occupations. The Wages Act was largely biased in favour of whites, where certain occupations were possibly reserved for them. The 1926 Mines and Works Act allowed a number of occupations to be formally restricted to whites, and in some cases coloureds. ISI policies gave additional rewards to firms that employed a significantly white workforce, while parastatals, as noted above, applied affirmative action for whites.

Part of the impetus here was to enforce a divide between black Africans and whites in particular, which was undermined by class conflicts between whites, as well as the fact that many whites were as poor as many blacks and that there were overlaps between coloureds and whites. Grosskopf (1932: 17) noted in the 1930s, in response to the first Carnegie Commission into poverty in South Africa, that:

> The term poor white could only originate in a country where white and dark-skinned people live together in relatively close intercourse. And the name itself indicates that poverty among the whites is felt to be something more or less exceptional…But unfortunately a certain portion of the better educated and more favourably situated Dutch-speaking population are also beginning to feel ashamed of this group of their people and to treat them with some contempt and little sympathy.

There was a fairly widespread fear of poor whites mingling with blacks, and the state was increasingly compassionate, responsive and sincere towards poor whites with the aim to construct a society that reflects prosperity, hope, growth and development for their continual benefit.

No such compassion was shown to others. A racial hierarchy in state spending and wages emerged, with black Africans at the bottom, followed by coloureds, Indians and whites. For example, spending on education was vastly unequal between the races, while state-run social security paid out different amounts for pensioner, child support and disability grants according to race (in many cases, black Africans were entirely excluded before the 1970s), and wage discrimination in the workplace was accepted and legislated. Wilson and Ramphele (1989: 57) revealed the pattern of racial income inequality in the manufacturing sector in the 1980s:

> The overall picture, then, is that in the modern industrial, urban sector of the economy African wages, despite some real gains over the period 1970-85, remain low. For the vast majority of African workers (plus some who are coloured or Indian) earnings are below the SLL (supplementary living level) and tens of thousands are paid less than the MLL (minimum living level). Elsewhere in the economy, whether in commercial agriculture, domestic service, subsistence, agriculture or other informal-sector jobs both urban and rural, wages are generally even lower.

This was evident at the Second Carnegie Inquiry in the 1980s (in which Wilson and Ramphele were involved), where it was clear that massive racial inequality drove racial conflict (Mary Marshall Clark's interview in 1999 with Professor Francis Wilson). The antithesis of this racial and class discrimination was the call for democratic governance in the creation of an equal society.

2.8. CONTRIBUTION OF ELECTRICITY TO THE MANUFACTURING SECTOR

This was the context in which parastatals such as ESKOM, Iscor and Sasol were forged. Escom was created by the Smuts government and, even though it preceded the Pact government, fitted well with the Pact programme. The Electricity Act allowed Escom to exercise its powers in three ways, namely to (i) establish its generating capacity; (ii) enter into cooperation agreements with existing private companies to encourage investment; and (iii) together with the ECB, regulate private companies and municipalities by issuing licences with certain conditions and ensuring that surplus profits were conscribed (Gentle, 2009: 57).

The initial role of ESKOM was a mixture of regulatory functions and power generation, seen as operating alongside private sector and municipal operations, rather than replacing bodies such as the Rand Mines Power Supply Company or Victoria Falls and Transvaal Power Company (VFPC). A large part of its role was to regulate private power supplies and assist the railways, which were state-owned (Greenberg 2006: 7).

Writing on the power supply industry in South Africa, Dr Hendrik Johannes van der Bijl (1936: 87), who was then the chairperson of both Escom and Iscor, argued that the advance of the electricity power supply industry in the country was marked by two distinct steps. First, the VFPC and Rand Mines Power Supply Company were established to supply power to the gold mines of the Witwatersrand. Second, the 1922 legislation allowed the state to guide and control future developments in power supply, by setting up the ECB and Escom, and also providing for an extensive policy of railway electrification directed at SAR&H, whuch became an inducement for the establishment of industries. Escom's mandate was non-profit; it was funded by tax and loans, not profits. Van der Bijl elaborated:

> To build up a power supply industry along the right lines and prevent haphazard growth requires guidance and control to a more than ordinary extent. This is a public utility of great importance. Legislation has been brought into force in South Africa, which has provided very effective control, and guidance ensuring in large measures that future developments of the power supply industry will be in the best interests of the public (cited in Morgan, 2000: 75-76).

Before the 1940s, however, electrification was mainly undertaken through private and municipal provision, with Escom playing the role of regulator and subordinate supplier (Gentle, 2009: 51-52). Escom commissioned the new Witbank, Colenso and Salt River Power Stations between 1923 and 1929. Even so, by the mid-1930s, as Van der Bijl (1936: 93) stated, Escom's assets were significant: It owned coal steam power stations at Colenso, Witbank, Durban and Cape Town, and a hydroelectric power station at Sabie in the Eastern Transvaal. Escom sold power to the mines, using this to cross-subsidise other electrification projects (Clarke, 1994),

Van der Bijl (1936: 87) noted that nearly all the towns situated within the VFPC and Rand Mines Power Supply Company area enjoyed cheap electricity supply for the benefit of industrial growth. The Rand-Witbank System (partly owned by VFTPC and Escom), the Natal System and Cape Peninsula System contributed further. In addition, pressure from large farmers, or agricultural capital, led to amendments to the Electricity Act that enabled the state to subsidise ESKOM for rural development projects (Masondo, 2001: 43-44). Van der Bijl (1936: 94) added that electrification largely supported various “farming schemes and farmers, reticulation schemes in towns and villages, and consumers engaged in the production of carbide, bricks, rubber, wines, explosives and leather goods” to drive local manufacturing. Masondo (2001:45) explained that the state played a key role in enabling capital accumulation by providing cheap electricity for production, and the reproduction of labour power.

The shift to ISI, which started in the mid-1920s under the Pact government, continued under the United Party (or Fusion) government of 1933-1948. In the 1940s, ESKOM took over the VFPC – a major step towards state monopolisation of electricity distribution, generation and transmission. The takeover was praised by the then prime minister Smuts because it was a move towards monopoly:

> Electricity in South Africa was … as cheap as anywhere in the world, because wasteful competition has been eliminated ...There will always be a very large field for private capital to operate in, but there are certain industries which experience has taught us can be driven better by government without loss through wasteful competition (Smuts, cited in Eberhard 2003:4).

According to Clarke (1994), ESKOM’s growing role as a monopoly facilitated its funding and income, enabling it to cross-subsidise a range of projects. By the 1940s, ESKOM was one of three major state pillars for ISI, alongside Iscor and the IDC, formed on 1 October 1940, also under Smuts. These fostered industrialisation, developing existing skills and boosting demand in capital investment programmes.

Problems in the supply of coal and power led to severe power shortages in the 1948-1953 period (Gentle, 2009: 62). As a result, there was a major expansion of ESKOM facilities in the 1950s, and again in the 1970s in the wake of oil price shocks. By the 1970s, ESKOM had aggressively displaced almost all private and municipal-owned supplies through its ongoing expansion and lower prices.

The second NP government in 1948, elected on the apartheid platform, reinforced the ISI and ESKOM expansion, but now closely linked it to an Afrikanerisation of parastatals including Escom. The Union government, from 1910-1948, was relatively efficient, and saw key figures like Van der Bijl insulated from party pressure (Hyslop, 2005). The first NP-led government, the Pact of 1924-1933, was constrained by its nature as a coalition, and followed by the 1934-1948 Fusion period (Hyslop, 2005). From 1948, opening the era when the NP would dominate the state until 1994, the ruling party was far less constrained; this was enabled by the fact that it remained in office for nearly 50 years, with a clear majority from 1953 (Ellis & Sechaba, 1992: 23).

From 1948, the NP deployed supporters, regardless of merit, to all key state institutions and used state employment as a patronage for Afrikaner supporters. The pattern of technocrats heading Escom, such as Van der Bijl, Albertus Jacobs (1949-1952) and Johannes Hattingh (1952-1962), ended in 1962 with the appointment of Professor Reinhardt Straszacker as chairperson. He hailed from the University of Stellenbosch and was part of the secretive Broederbond society. The Broederbond connected the NP, the parastatals, core figures in the state bureaucracy, education, the Afrikaans church and media (Jaglin & Dubresson, 2016: 17).

From the 1940s, ESKOM's growing need for coal had been directed into supplier contracts with emerging Afrikaner firms like Gencor (Hattingh, 2018: 7). Pre-1994, Escom's support for ISI was integrally linked to the racist form that ISI assumed. It focused on fostering the local capitalist economy (including ISI) and less on households, however, when it did serve households, it did so in a racist way, with services spatial planning linked to race. Household supply was a secondary consideration, and delivery to households was deeply shaped by the racist order of the towns. Masondo (2001: 44) noted that the "black working class and rural poor used mainly coal, wood, paraffin for energy and were thus deprived of an opportunity to enjoy the benefits of electrification that boosted ISI".

Although there is a widespread view associated with neo-classical economics that countries develop best through free markets, there is no doubt that secondary industrialisation in South Africa rested on state intervention. Throughout its existence, ESKOM's role in providing electricity has been an "essential ingredient of government's industrialisation strategy" (Ebehard, 2004). Gentle (2009: 51) explained:

> Escom has been at the centre of, and epitomised the trajectory of, the South African form of capitalism; a trajectory that saw a distant outpost of the British empire in the 19th century transmogrify into a semi-industrialised power with a strong national bourgeoisie between the World Wars, and into a continental power with imperialist ambitions in the early 21st century…

The "introduction of import substitution industrialisation and the provision of cheap electricity by government led to the establishment of manufacturing industries, which relied more on electricity" (Masondo, 2001: 43-44). Jaglin and Dubresson (2016: 4) argued that ESKOM's establishment in the 20th century had the objectives of nurturing the economy through the provision of low-cost, reliable, non-profit electricity that would enable industrial diversification and boost Afrikaner economic and political power. Maharaj (2011) observed that ESKOM was profoundly shaped by its Afrikanerisation and its role as a tool for racial discrimination, biased in favour of restricting benefits to the white population, companies, customers and households. The next section shall examine the rise of the South African automobile industry.

2.9. THE RISE OF THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY

The genesis of the of the South African automotive industry was emboldened by South African ISI, local content, employment, utilisation of cheap labour, trade unions and the 1922 General Strike, during which two months of production were lost in the mines. It is worth noting that the mining houses played a pivotal role before and after the formation of the Union of South Africa on 31 May 1910, following the unification of the Cape Colony, the Natal Colony, the Transvaal and the Orange River Colony. The mining houses were equally hard hit by the First World War (also known as World War I or the Great War) from 28 July 1914 to 11 November 1918, and the Second World War (often abbreviated to World War II, WWII or WW2) from 1 September 1939 to 2 September 1945. Gencor Ltd's company profile, history and background information reveal that the two world wars resulted in shortages of all forms of labour, a lack of machinery, and delays in plant and machinery delivery (Yudelman, 1975; Walker, 1936; Reference for Business, n.d.).

A key development in the period of ISI was the rise of a local automobile industry. This centred on large-scale FDI, assembly plants and efforts by the South African state to increase local content requirements. The automotive industry started in South Africa in the 1920s, with the first motor plants established in the country (Kaplan, 2003: 15). These were branches of foreign firms, starting with Ford in 1924, and centred initially on the ports of Port Elizabeth in the Eastern Cape (see below for employment, joint ventures with OEMs and intersection among ESKOM, Iscor, Sasol and the IDC).

Port Elizabeth had been a significant rival to Cape Town in the 1800s, building on a growing wool industry, but was marginalised by the mining revolution (Mabin, 1986). ISI threw the declining city a lifeline, and the automotive sector was its salvation. The industry expanded from Port Elizabeth into other areas, notably East London, Pretoria and Richards Bay. Freund (2019) argued that the expansion witnessed a rise in employment in the clothing and textile industries, and raw materials such as timber, wool and cotton were produced in abundance. Despite the industrial expansion that occurred, the contradictory reality of local content seemed to reassert its contemporary relevance in the South African automobile, chemical and textile sectors.

Freund (2019) asserted that the entry of German and Japanese firms in the 1960s and 1970s resulted in tremendous expansion in the manufacture of automobiles, with employment skyrocketing and an increase in parts and service activity. The link between the 1920s and the move towards local content was best expressed by Freund (2019), who argued that a programme was introduced in 1964 to boost local content in stages, with the IDC helping to create partnerships for the manufacture of rubber tyre and artificial rubber. Although this was a highly protected industry, local content saw major benefactors such as Albert Wessels holding the Toyota contract, together with Anton Rupert’s Rembrandt Tobacco Corporation, in a more cosmopolitan atmosphere with extensive foreign links. This was earlier noted by Wilkins and Strydom (1978).

Apart from Albert Wessels holding the Toyota contract, “Sanlam became heavily involved in Nissan Motors; Nissan being, of course, a Japanese mother company” (Freund, 2019: 93). In the 1960s, Sanlam widened and complemented its special vocation as a financier for Afrikaners with a variety of joint ventures with numerous businesses owned by non-Afrikaners, such as Imperial Cold Storage, Tiger Oats, De Beers Industrial, OK Bazaars and Dorman Long (Freund, 2019). Afrikaner business people dominated the modern economy through joint ventures and collaboration with non-Afrikaner businessmen, the majority local white English speakers and foreigners. One of the major purchases in the machine tools sector in 1964 was Scaw.

This increasingly obvious model, whereby state corporations were stimuli and partners to multinational corporations, was explained in Chapter 1 and examined in 2.6 when exploring ISI and Afrikaner economic advancement, collaboration and partnerships among Federale Mynbou, General Mining, Gencor Ltd Finance Corporation and Union Corporation. One of the overriding objectives of ISI and Afrikaner economic advancement was to dominate the commanding heights of the economy such as education, sports, agriculture, clothing, textile, manufacturing, insurance, mining, plastic and paper development. Crompton affirmed that a hybrid case of “mining and agricultural products have dominated South African chemical markets”, with Sasol setting the price for ethylene as the sole producer (Crompton, 1994: 148).

Although the chief menace facing the South African automotive industry was the absence of local content, these examples demonstrated that everything possible was done to flatten the industrial manufacturing curve for the benefit of South Africa. For example, Swiss immigrant Max Kirchhofer and the British doyen of South African planning at the University of the Witwatersrand, Edwin Mallows, believed that a town is an entity, whole living organisation through a model beyond ideas that came from their native Switzerland and Britain for the construction of Sasolburg in South Africa (Freund, 2020: 87-88). Wilkins and Strydom (1978) noted that the formation of the Afrikaner Broederbond in 1918, after the South African war that traumatised the Afrikaner community, played a catalytic role in upsetting the apple cart in the state apparatus of the Pact government.

The Afrikaner Broederbond was covertly visible during the establishment of ESKOM in 1923, Iscor in 1928, the IDC in 1940, the Council for Scientific and Industrial Research (CSIR) in 1945, Sasol in 1950, and the Human Sciences Research Council (HSRC) in 1968, which boosted ISI in a multiplicity of ways. With ESKOM and Iscor under the guidance of Dr H.J. Van der Bijl, South Africa operated an unparalleled industrial economy that boosted the steel manufacturing, mining, railway, automotive and agricultural industries. In terms of economic governance and political leadership, industrialisation was impelled by the mining revolution and gold mining, arguably a secondary industry that grew substantially between the time of the Union and the advent of the United Party coalition with Labour, which came to power in 1939. Industrialisation, however, had to contend with the First World War isolation from its main trading partner, Britain; the 1929 Great Depression; and the Second World War; and the character was not one expected of a “new nation” (Freund, 2019: 45).

The evolution of parastatals such as ESKOM, Iscor, Sasol, the IDC, the CSIR and the HSRC marked a radical path in the affirmation of South Africa’s neoliberal and capitalist mode of accumulation. Gentle (2009: 51-52) argued that SOEs provided an opportunity to retrace and re-engage with the nature, form and character of the state with the previous century of segregation (1910-1948), grand apartheid (1948-1972) and reformed apartheid (mid-1970s-1994). It is an undeniable historical fact that the systemic racial engineering, segregation, political oppression and exclusion of black people was affirmed in such laws as the Population Registration Act, No. 30 of 1950 and the Group Areas Act No. 41 of 1950, as well as other state-legislated stratagems designed to confine them to homelands and self-governing states.

Freund (2019: 45) noted that ESKOM, Sasol and Iscor were created by Smuts to promote manufacturing in South Africa, partly turning the country into a significant industrial producer notorious for its cheap labour force, especially in the mines. The ISI and its link with the automotive industry was boosted by the sharp growth in the mining industry, which had engendered a relatively capital-rich sector from the 1930s to the 1970s, with the Sharpeville Crisis in the 1960s coinciding with a major recession in global economic conditions, and the 1976 crisis characterised by poor market conditions that made steel difficult to sell internationally (Freund, 2019). In summary, the emergence of the mass resistance movement against racist discrimination and white privilege was bolstered by the rapid growth during the Second World War of the black urban proletariat working class and black trade unions (Zalk, 2017).

Significantly, South Africa was not able to develop its own automotive brands, designs or firms. Rather, it acted as a site of vehicle assembly by foreign manufacturers for the local and regional markets, mainly subsidiaries of American, German and Japanese companies: BMW, General Motors, Mercedes-Benz (Daimler), Nissan, Toyota, Volkswagen, Ford and Mazda (the latter two combined as the South African Motor Corporation, or Samcor). Other major brands imported are European (Peugeot/Citroen), Japanese (Daihatsu, Honda, Subaru, Suzuki), Korean (Hyundai, Kia) and Indian (Tata, Mahindra), with Chinese brands also entering the market (Chery, Chana, GWM and others) (Pitot, 2011). These OEMs operate in South Africa as branches of foreign-owned firms, primarily guided by the regulations or prescripts of the MIDP and APDP to boost employment, local content programme, exports and international competitiveness.

Table 2.9.1 reveals the technical parameters of the MIDP in respect of the tariff phase-down of the duty structures, the eligible qualifying values derived from exports versus imports under the MIDP, as well as investment benefits in terms of the productive asset allowance.

				Value of export performance			Ratio of exports vs imports			
Year	**CBU duty %**	**CKD duty %**	**DFA %**	**CBUs %**	**Components %**	**Qualifying PGM value %**	**HCV and tooling and components vs CBU LV**	**Vehicle and tooling and components vs HCV and tooling and components**	**CBU LV vs CBU LV, HCV and Tooling and components**	**PAA %**
1995	65	49	27	100	100	100	100:75	100:100		-
1996	61	46	27	100	100	100	100:75	100:100		-
1997	57,5	43	27	100	100	100	100:75	100:100		-
1998	54	40	27	100	100	100	100:75	100:100		-
1999	50,5	37,5	27	100	100	90	100:75	100:100		-
2000	47	35	27	100	100	80	100:70	100:100		20
2001	43,5	32,5	27	100	100	60	100:70	100:100		20
2002	40	30	27	100	100	50	100:65	100:100		20

				Value of export performance			Ratio of exports vs imports			
Year	CBU duty %	CKD duty %	DFA %	CBUs %	Components %	Qualifying PGM value %	HCV and tooling and components vs CBU LV	Vehicle and tooling and components vs HCV and tooling and components	CBU LV vs CBU LV, HCV and Tooling and components	PAA %
2003	38	29	27	94	94	40	100:60	100:100		20
2004	36	28	27	90	90	40	100:60	100:100		20
2005	34	27	27	86	86	40	100:60	100:100		20
2006	32	26	27	82	82	40	100:60	100:100		20
2007	30	25	27	78	78	40	100:60	100:100		20
2008	29	24	27	74	74	40	100:60	100:100		20
2009	28	23	27	70	70	40	100:60	100:100		20
2010	27	22	27	70	70	40	100:60	100:100		To be reviewed
2011	26	21	27	70	70	40	100:60	100:100		
2012	25	20	27	70	70	40	100:60	100:100		

Table 2.9.1: Technical parameters of the MIDP (1995–2012)

*LVs – passenger cars and light commercial vehicles, MCV/HCVs – medium and heavy commercial vehicles, CKD – completely knocked-down kits also defined as original equipment components

Source: International Trade Administration Commission Report No 3625, 1995; Department of Trade and Industry Motor Industry Development Report, 2003a

The South African new vehicle market adapted to changing customer needs with a wide variety of tailor-made offerings and solutions, including the following passenger car models manufactured in 2018: Ford Ranger, Isuzu Motors KB and D-Max, Nissan NP200, Nissan NP300 Hardbody, Toyota Hilux and Quantum, Volkswagen Polo new and previous series (designated Vivo), Toyota Corolla four-door new and previous series (designated Quest) and Fortuner, Mercedez-Benz C-Class four-door, Ford Everest and BMW 3-series four-door and X3 (launched in 2018). The popularity of the Toyota Hilux was unparalleled with sales of 40 022 units, followed by the Ford Ranger with 30 155 units, and the top-selling passenger car, the Volkswagen Polo Vivo, with 26 514 units, while electric vehicle sales declined from 68 units in 2017 to 58 units in 2018, comprising only 1,5% to 2% of the global vehicle sales (Automotive Export

Manual, 2019[2]). Capital equipment used in production was largely imported, and there was also significant import of intermediate goods for vehicle assembly, that is, components for the vehicles.

According to the Automotive Export Manual (2019), global vehicle production in 2019 declined by 1.1 % to reach 95,6-million vehicles, down from the 96,7-million units produced in 2017. Globalisation saw South Africa export vehicles in accordance with trade agreements in the tripartite free trade area (TFTA) – consisting of the South African Development Community (SADC), which comprises Namibia, Botswana, Lesotho and Eswatini, the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA) – amounting to R1 001,6 million in 2018, up from R725,2 million in 2017. South Africa's trade negotiations are also conducted through the preferential trade agreement (PTA) with Mercosur, comprising Argentina, Brazil, Paraguay, Uruguay and Venezuela. South Africa is a member of the 164-member World Trade Organisation (WTO). Exports in Euro terms increased by 17.9% year-on-year, reflecting an increase in real terms (Automotive Export Manual, 2019).

By 1960, according to Black and Mitchell (2002), foreign exchange shortages constrained the South African automotive manufacturing industry, and the local content of locally assembled vehicles amounted to 20%. The state then introduced a LCP, which developed into a multi-decade set of measures divided into distinct phases. The aim was to have 66% of vehicles' mass based on local content by the end of 1976 (Southall, 1985: 309), and ran from 1962 to 1995, when it was replaced by the MIDP. This alteration of industrial policy, matching similar moves in "several other low-volume motor vehicle producing countries" (Bell, 1989: 103), meant that manufacturers and assemblers could be penalised for failing to meet the local content requirements (Black & Bhanisi, 2007; Black & Mitchell, 2002). Damoense and Simon (2004:252) explained:

> Since the early 1960s, the industry developed within a general framework of import substitution strongly influenced by protectionism, namely local content policy. The

[2] This report is produced and compiled on behalf of the Automotive Industry Export Council using various official sources of domestic and international data and information provided by NAAMSA, NAACAM, SARS and other industry stakeholders.

> introduction of local content programme (LCP) in 1961 was intended to increase the utilisation of domestic components in the production of motor vehicles and ultimately to develop it into a full-scale manufacturing sector. The main theme of the local content programme was that the local industry evolved through a series of local content phases, phases I-V, which lasted from June 1961 until February 1989. Phases I-V were weight based, with local content levels ranging from a low 15 percent in 1961 to 66 percent in 1980. Up to this point, the local content programme had been ineffective in reducing the proliferation of vehicle models, saving foreign exchange, and developing local automotive industry with jobs, skills and established capacity…

From 1989, the state amended the formula used in the LCP, changing the required minimum domestic content ratio from a physical measure (by weight) to one based on value of local content added (Bell, 1989:103). It was held by some economists that the enforced use of local sources could drive up prices (on the assumption that local items were more expensive) and reward inefficient design (for example, using steel parts rather than aluminium to maximise weight) (Bell, 1989: 103-104). This would make local vehicles uncompetitive. The evidence, however, suggests that local items were less expensive than believed, that their costs fell over time and that imported inputs were often provided at inflated prices (Bell, 1989:107-108, 116).

As can be seen in the following table, used by Black (1994), on the production and assembly of cars in developing countries for the period 1960 to 1990 (000 units), the LCP had significant effects on the use of local sources.

	1960	1970	1980	1990	LOCAL CONTENT% 1988
LATIN AMERICA					
Brazil	62.2	343.7	977.7	682.1	>90
Argentina	30.3	163.4	204.4	81.1	>90
Mexico	24.8	136.7	303.0	598.1	60
Venezuela	6.5	48.0	94.0	21.5	26
Chile	-	20.7	29.0	3.1	na
Colombia	-	7.7	43.0	31.5	45
ASIA					
India	19.1	37.4	30.5	218.5	62
South Korea	-	14.5	57.2	986.8	95
Philippines	2.9	7.6	26.6	na	na
Taiwan	0.4	na	132.0	277.4	50-60
Malaysia	-	7.5	81.0	44.5	18-22
Iran	2.5	31.8	80.0	na	na
Indonesia	2.0	2.0	41.0	33.8*	na
Thailand	-	6.6	25.0	28.8*	54
China	-	-	-	15.9*	12.5
AFRICA					
South Africa	**87.4**	**195.0**	**277.0**	**209.6**	**55**
Nigeria	-	7.1	151.0	na	15-30

Notes: na indicates date not available

*indicates 1987 figures

Source: Jones and Womack, 1985; O'Brien, 1990; SMMT, 1990; VDA, 1990

Table 2.9.2: These figures in the table depict the production and assembly of cars in developing countries, 1960-1990 (000 units)
Source: Black (1994: 15)

2.10. CONCLUSION

This chapter explained that state intervention drove industrial development in South Africa by catapulting local manufacturing to replace unavailable imports (Lumby, 1983: 195). The state played a key role with systematic protection and aid. Kemp (1991) observed that while the First World War gave a certain stimulus to the import substitution industry, it was only with systematic state assistance that manufacturing outstripped gold mining as the leading sector of the eocnomy by the end of the Second World War. Kemp (1991: 182) argued that during and after the Second Word War, South Africa promoted the growth of metals and engineering in the fulfilment of military orders, and manufacturing made an immense contribution to the gross national product (GNP). The automotives industry, for example, emerged under the ISI regime and, from the 1960s, the LCP programme compelled a growing, substantial part of its products to use local sources, which meant it had significant larger effects on local manufacturing. Giliomee (2010: 537) averred that by the late 1960s South Africa enjoyed good foreign exchange earnings, a good technological base, a relatively sound financial system and an established place in the world trading system.

State corporations like ESKOM were integral to this process, and South Africa was far from a free market economy. The Nedbank Group (1983: 173-174) noted that in the early 1980s, the state was directly involved in basic iron and steel, petroleum refining and electricity generation, all of which were core to local manufacturing. By the 1980s, ESKOM was responsible for the generation, transmission and distribution of electricity and supplied 93% of the country's needs by means of a national grid; Iscor was responsible for about 75% of total steel production; and Sasol produced oil from coal as well as numerous chemical products, and stimulated the development of the petrochemical industry.

The next chapter, from import substitution to neoliberalism, will describe and explore the transition to neoliberalism, which starts at the end of the 1970s and continued post apartheid.

CHAPTER 3
FROM IMPORT SUBSTITUTION TO NEOLIBERALISM

I am equally certain that all of us understand very well that our policies must respond to objective reality and not perceptions of reality. This is particularly important in a situation in which many of our opponents regularly resort to the falsification of reality as part of their armoury in the continuing political and ideological struggle. These falsifications are communicated to the public, and ourselves, as objective reality. It is also necessary because for us to succeed, we have to respect the truth and not be informed in our actions either by delusions or falsehoods (Thabo Mbeki, 2002).

3.1. INTRODUCTION

As seen in the previous chapter, contrary to the widespread view associated with neo-classical economics that countries develop best through free markets, there is no doubt that secondary industrialisation in South Africa rested on extensive state intervention. Due to sate intervention from the 1920s, South Africa moved from supplying the West with raw materials for manufacturing into developing an economy centred on a local manufacturing sector (Lumby, 1983: 196, 220). It was only during the Second World War, almost 60 years after the mining revolution, that manufacturing became the dominant sector in the South African economy. Active trade and industrial policy was a precondition for this development, and massive state investment into parastatals such as ESKOM and Iscor provided essential aid for local manufacturing. By the end of the 1970s, the state was directly involved in iron and steel production, petroleum refining and electricity generation – all catalysts of manufacturing. ESKOM was responsible for 93% of the country's electricity and Iscor for 75% of total steel production, while Sasol was a world leader in produced oil and other chemical products from coal (Nedbank Group, 1983: 173-174).

The move from light industry, mainly serving the mines, or local consumer goods with natural protection (bricks, some food, paint etc.) involved ISI (Kemp, 1991). The ISI path South Africa followed was similar to that in other parts of the colonial and former colonial world, such as Latin America, although it was deeply shaped by the racist form of South African capitalism (Cooper, 1991). Import substitution mainly involved consumer goods, such as clothing, fabricated metal products including inputs for automotive and white goods, and other items (Joffe & Ngoasheng, 1992: 479).

As elsewhere, however, the ISI model was increasingly abandoned from the 1970s, which saw a profound shift in South African economic and industrial policy and a major restructuring of parastatals such as ESKOM, Iscor and Sasol. This chapter examines these developments, how they played out in the late apartheid and post-apartheid periods, and their impact on ESKOM and the automotive sector. The remaining part of this chapter is structured as follows. Section 3.2 gives a brief overview of the decline of the ISI economy, while section 3.3 examines the mutation in the 1970s from the economic crisis in South Africa that became tied with a political crisis. Section 3.4 evaluates the late apartheid move towards neoliberalism and analyses the neoliberal shape of post-apartheid economic policy. Overall, this chapter explains the restructuring of ESKOM, with an examination of state capacity, revisiting state capture, and section 3. 5 concludes the chapter.

3.2. DECLINE OF THE ISI ECONOMY

By the late 1960s, the South African economy was booming and attracting large amounts of FDI, with an average GDP growth rate of 4,5 % from 1948-1991, growing four-and-a-half times larger from 1948-1994 and entering the top 30 economies worldwide (Giliomee, 2010: 537, 666). Giliomee (2010: 537) argued that by the late 1960s South Africa enjoyed good foreign exchange earnings, a fairly competent and stable administration, a good technological base, a sound financial system and an established place in the world trading system. By the late 1980s, manufacturing had been the key stimulus to the country's expansion, accounting in 1988 for 24% of GDP, while mining (and quarrying) and agriculture were only 13% and 6% respectively (Joffe et al., 1993: 11-12).

Economic growth, however, plummeted in the 1970s, unemployment soared, inflation rose and political instability became the quintessential norm: 73.6% of new entrants in the labour market got formal sector jobs in 1965, but only 43.4% in 1998 (Giliomee, 2010: 541). Munch (1994: 205) observed that the country’s growth rate in terms of real

GNP declined from 5.8% in the 1960s to 3.4% in the 1970s and 1.5% in the 1980s. Black (1993: 208) noted that South Africa's share of world manufactured exports fell from 0.8% in 1955 to 0.3% in 1985.

The reasons for the decline have been subject to intensive scrutiny. A 1995 report on the performance of South African manufacturing by the Industrial Strategy Project (ISP) (Joffe et al., 1995: 5) – a think tank linked to Cosatu – observed:

> As with many Latin American economies, ISI in South Africa was initially accompanied by significant new investment and industrial diversification. New investment and output increases facilitated increases in productivity. Overall, our industrial performance, particularly during the 1960s and early 1970s, was strong-output, employment, investment and productivity all rose rapidly. However, since then, as with Latin American economies, our manufacturing performance has been very inadequate. Poor manufacturing performance is manifest in low output and low employment growth, as well as low rates of export growth.

The ISP report was very influential. It was described as "unprecedented" in "the sheer scale of the research" undertaken "for a single project on the problems of South African manufacturing" (Bell, 1995: 1). The report stressed problems internal to manufacturing, arguing that poor manufacturing performance was largely due to low and declining productivity (Joffe et al., 1995). By the 1990s investment had declined in manufacturing to the extent that "the amount of investment has been insufficient to replace even plant and equipment as it wore out" (Joffe et al., 1995:10). This caused "the weak performance of South African manufacturers in international markets", and "extremely poor export performance across the range of manufactured commodities" (Joffe et al., 1995: 48).

The ISP argued that manufacturing performance from 1970 to 1992 was poor partly because export performance was dismal. Its authors measured productivity through relative efficiency by means of an index called "total factor productivity growth" (TFPG). TFPG measures can provide some indication of the efficiency with which resources are employed. South Africa's TFPG was poor in the 1970s, declining by 1.02% per annum between 1972 and 1990, while the size of aggregate capital stock in the industrial sector fell to 10% between 1984 and 1990 (Joffe et al., 1995: 54).

Besides issues around education and skills, the ISP blamed management and the state: Import controls limited the pressure of competition on new investment and manufacturing performance (Joffe et al., 1995: 53-54). Furthermore, unlike countries with similar per capita incomes, South Africa's informal manufacturing sector was poorly developed (Joffe et al., 1995: 55). As Innes (1983: 174) argued, there was extension and consolidation of monopoly capitalist power in the 1960s and 1970s, including in manufacturing. This removed space for smaller firms. There were mergers of mining, manufacturing and banking capital, in the form of huge conglomerates, of which the largest was the Anglo-American Corporation.

In other work, the ISP authors argued that poor performance in manufacturing was associated with an inability to develop local capital goods, but that imported capital goods had to be financed by traditional raw material exports as manufacturing export performance was so poor (Joffe & Ngoasheng, 1992: 479). A key reason for the reliance on mining revenue for imports was that South Africa had limited capacity in the area of producing capital goods, so while its ISI mainly ended its dependence on imported consumer goods, it maintained its dependence on imported capital goods (Joffe et al., 1995: 53-54).

Locally manufactured goods were mostly non-competitive and exports were limited, with the result that the sector did not earn much foreign exchange to pay for its imports (Joffe & Ngoasheng, 1992: 479), relying instead on foreign exchange from mining exports. It is important to note that the 1970s onwards was a time of intense global competition as a result of the world economic crisis and the introduction of the Newly Industrialising Countries (NICs) in East Asia, including South Korea and Taiwan, which saw growing protectionist barriers in key large economies (Joffe et al., 1995: 53-54).

Some have called this manufacturing built on raw material exports a changing form of dependence, because the role of the mines remained crucial to the ISI project (Joffe & Ngoasheng, 1992: 479). ISI remained, so to speak, dependent on raw materials, which somehow defeated its aims. South Africa's core exports remained raw materials, mainly from mining, despite the large manufacturing sector (Joffe et al., 1995: 5; Joffe et al., 1993: 17-21). Kemp (1991: 184) argued that this actually increased dependence on gold production, and reduced pressure for economic diversification, industrialisation and efficiency, since exporting manufactured goods was not required for foreign exchange. In automotive production, this resulted in a pattern where South Africa did not design its own cars or have its own car companies, but assembled cars to designs using imported equipment from abroad, where import substitution basically meant increasing the proportion of locally manufactured components for plants owned by large multinationals.

The shocking failure to develop a significant export capacity in manufacturing contributed to South Africa being the worst performer, after Brazil, of any upper-middle income country (Giliomee, 2010: 537, 598). The ISP seems to have explained the problems mainly with reference to manufacturing inefficiencies, arising from protection through ISI; the monopolistic and oligopolistic structure of many South African manufacturing sectors, which further limited competition; and the nature of the apartheid workplace (Joffe et al., 1995: 23, 251; Bell, 1995: 5-6). The ISP basically rejected ISI as a big failure, since it averred that South Africa's industrial deficiencies were brought about by the sustained regime of ISI (Bezuidenhout, 2002: 385-388).

Furthermore, Fine and Rustomjee (1996) suggested that manufacturing remained locked to mining, rather than transcending it, and spoke of a "minerals-energy complex" (MEC). The MEC was not simply about manufacturing depending on mining exports for foreign exchange, or the state using mining taxes for ISI, but also about production based on mining itself: for example, ESKOM, Iscor and Sasol all relied on coal and in turn provided the key inputs for manufacturing in the form of chemicals, metals and power.

Moll (1991: 283-284) held similar positions, although he stressed low productivity as the key problem of an "inefficient import-substitution industrial model in the 1950s and 1960s, with local touches due to the apartheid system" under which manufacturing became "plump and inefficient". He was critical of claims, made by Marxist scholars wanting to show the link between apartheid and capitalism, that the apartheid economy was a high performer. Although the apartheid economy clearly grew rapidly until the 1970s, and underwent significant industrialisation, it performed worse than comparable late developing economies, with its TFPG lagging behind many. Moll argued that there was poor productivity growth and output, manufacturing exports fell steadily from 1955 to 1985, economic growth itself was lower than comparable economies, and short-sighted and ill-directed state economic and education policies were to blame.

The ISP also emphasised the problems caused for ISI by apartheid, with its low skill, authoritarian and racist workplace (Joffe & Ngoasheng, 1992: 489; Joffe et al., 1995: xi), and high inequality, which caused low aggregate demand and saturated markets (Joffe et al., 1995: 4-5). This is similar to Kemp (1991), who emphasised the skills problems caused by the racist education and job reservations systems that co-existed with ISI, and the low demand built into a low-wage economy. Weak manufacturing exports were linked to low productivity and a racist education system that failed black children and was simply unable to generate enough skilled labour for an economy increasingly reliant on black workers at all levels (Giliomee, 2010: 598-599; Kemp, 1991). Although real black, coloured and Indian wages rose in the 1960s, and rapidly in the 1970s, at a higher rate than for whites, there was still an enormous gap between these wages and those of whites (Gliomee, 2010: 540-541, 599).

Similarly, the Macro-Economic Research Group (1993:214) argued that the problem was partly due to the fact that trade policy used to stimulate manufacturing sectors was shaped more by political pressures than rational economic calculation. These included the needs of the apartheid policy, which included projects such as “border industries” near the homelands as well as direct investment in homeland industrial development for “separate development” purposes. Apartheid spatial planning stressed industrial decentralisation in or near homelands as a means to make these viable and reduce black job seekers in “white” South Africa (Rogerson, 2006: 227).

The ISP’s emphasis on issues internal to manufacturing suggested that the solutions lay in a mixture of deregulating trade, breaking up monopolies and promoting manufacturing exports, combined with better education and more democratic workplaces (Bell, 1995:18, 23-24). It was somewhat quiet on the issue of demand, which was a question of choice between improving local incomes (to create more consumers) or exporting more consumer goods, but the state only started to consider the first option in the late 1970s and did little to achieve it (Saul & Gelb, 1986). Some semi-industrialised countries managed to break out of the ISI trap – reliant on cheap labour, they had small local markets – by exporting manufactured goods from the 1970s, but South Africa failed to do so (Joffe et al., 1993: 9).

The ISP analysis and its supply side solutions were criticised by others. Bell (1995) argued that the ISP exaggerated the productivity problems in South African manufacturing, which were not notably worse than similar economies. Declining productivity reflected declining use of existing facilities, i.e. capacity under-utilisation and falling investment rather than inefficiency (Bell, 1995: 7-8). The same pattern could be seen internationally, meaning that the decline was part of world economic turbulence, such as a global economic recession and oil price shocks, and could not be reduced to South Africa-specific factors like skills and wages (Bell, 1995: 8-12). This led to major foreign exchange constraints and derailed ISI – the economic problems were not caused by ISI, but rather damaged ISI. While the country's "self-sufficiency is especially low in capital goods" (Bell, 1995: 32), there was significant development in this sector from the 1940s (Bell & Farrell, 1997: 597).

Bell's analysis was supported by Valodia (1996: 61), who questioned the ISP's calculations and proposals, and noted high innovation firms under South Africa's ISI. Bell (1995) further argued that there was no reason to suppose economic liberalisation would solve the problems, and that high productivity and export-focused manufacturing would likely lead to major job losses (Valodia 1996: 61-63). Giliomee (2010: 597) emphasised the impact of the 1970s global economic crisis, which hit all middle-income countries and was beyond state control. In addition, the 1970s and 1980s saw a sharp rise in energy prices, weaker gold and diamond prices, and a slowdown of South African trading partners between 1973 and 1985 (Giliomee, 2010; Nattrass, 2014).

But it was the analyses seen in the ISP and the MEC theory that were most influential. Problems were seen in terms of capitalism being too monopolistic, too protected and too uncompetitive, and so the solution was a more open economy, less tariffs and more competition (Lehulere, 2005). ISI was seen in both the ISP and MEC arguments as a failure, which Bell (1995) thought was deeply inaccurate. In fact, ISI was no longer considered an option by Cosatu itself (Lehulere, 2005). In this way, there was a straight road from these types of analyses to the continuation of the neoliberal policies of the late apartheid government, the NP's NEM being followed by the ANC's GEAR – a clear case of "policy slippage" underpinned by the seismic shift away from the macro-economic policy of the Reconstruction and Development Programme, the Growth through Redistribution doctrine and the Reconstruction Accord (Kraak, 2004: 264).

The ISP's "supply-side" set of solutions was adopted by the post-apartheid state, as with the MIDP's "phase-down of tariffs; a removal of local content requirements; duty-free imports of components up to 27 per cent of the wholesale value of the vehicle; and duty rebate credits to be earned on exports" (Kaplan, 2004: 266). Arguments like Bells (1995), which favoured boosting exports on the basis of continuing ISI rather than promoting exports through trade liberalisation, were lost as the country continued the shift towards neoliberalism, which started in the late 1970s.

It can be said years later, as manufacturing keeps shrinking post-apartheid and is now well below its peak under ISI, that the rush to free markets and the dismissal of import substitution was a mistake (Lehulere, 2002). Having a more balanced view of what ISI achieved, and what is problematic with the idea of open markets and neoliberalism, however, does not mean that ISI was perfect or could have continued in the old ways.

ISI's achievements should not blind us to the failings in the manufacturing sector, some linked directly to apartheid (Giliomee, 2010: 450, 537; Nattrass, 2014: 21). This requires a qualification of traditional Marxist views that apartheid benefited capitalism. The situation was more contradictory. While the benefits of apartheid to farming, mining and manufacturing in the form of a large, cheap, rightless workforce had to be balanced against its "contradictory" effects in blocking the further advance of manufacturing by limiting skills and markets (Saul & Gelb, 1986: 63). The "racial dualism" and extreme income, asset and wealth inequalities in South Africa (Du Toit & Van Tonder, 2009: 38) inhibited black advancement (Bundy, 1992: 33), but also hurt the economy by limiting skills and consumer demand.

Kemp (1991: 184) asserted that there were also negative economic consequences of white supremacy as ISI moved the economy away from exporting raw materials (which did not need large local markets) to manufacturing (which was trapped in the small, mostly white domestic market as result of cheap labour with spending limits). In this way, the capitalism that developed involved "racial Fordism", which was based on mass production but minority consumption, unlike Western Fordism, which had mass production plus mass consumption (Joffe et al., 1993: 7-8).

It also generated high levels of conflict by creating a large, concentrated black working class under abject conditions. The 1970s economic crisis in South Africa became indissolubly tied up with a political crisis. Rising prices and unemployment fed into unrest, seen in a new wave of unions from 1973, student protests from 1976, and township rebellions, especially from 1984. Analysts have noted that a wide-ranging crisis coalesced within South African society by the late 1970s (Saul & Gelb, 1986).

Kemp (1991: 188) argued that the successes of ISI itself created conditions for unmatched revolt, while its failings fed revolt:

> By 1970 manufacturing had become the largest employer and there was a large and growing black presence in towns…. Apartheid had assumed a static society; it could not accommodate the upheavals associated with industrialisation and the profound changes which had taken place since 1948. There was now a large, self-confident African nationalist movement and powerful trade unions. Import-substitution industrialisation, although not entirely exhausted had shown its inadequacies.

For Joffe et al. (1993), the rise of a militant, radical union movement was a direct response to the racist systems used in the economy and politics, in the context of a much larger working-class facing conditions of economic decline. Monopoly capital dominated the economy and, along with the state, the huge firms formed a visible target for protests and faced numerous pressures that challenged the old (openly racist) cheap (black) labour system (Innes, 1983: 174).

The racial form of capitalism, including its ISI period, generated debilitating racial or ethnic tensions, including repressive and racist government, poor conditions for the reproduction of black labour power (education, housing etc.) and low-wage, labour-intensive jobs (Giliomee, 2010: 450, 537; Nattrass, 2014: 21). Although the racial dynamic was unique to South Africa, it shared with ISI countries elsewhere a deep crisis in the 1970s and 1980s, and the rise of powerful politicised trade union and social movements fiercely opposed to the bureaucratic authoritarian regime (Cooper, 1991: 3; Joffe et al., 1993; Southall, 1985: 306).

Morris and Padayachee (1988) argued that the period involved a variety of conflicts and contradictions between the state and the popular classes, which seemed unsolvable and were "organic" (Saul & Gelb, 1986) in the sense that only radical changes would suffice. For example, economic crisis led to an upsurge of unions and protests, but efforts at reform (for unions) and repression (for students) failed to fix the situation. The labour laws of the 1920s remained in place, but were deracialised from 1979 to 1982, with union rights extended across racial lines (the old exclusions of specific sectors like agriculture would remain until 1995). This was part of a set of reforms that were intended to pacify and incorporate the black working class, but backfired (Saul & Gelb, 1986). The unions thrown up from 1973 proved adroit at using the new legal space, and in numbers and radicalism.

The unrest sapped business confidence and adversely affected South Africa's ability to attract FDI and local investment, which led to fewer jobs and less state funding. The mid-1980s saw the economy performing at its worst in decades, although there is some debate over whether the global economy, sanctions or local unrest was the main cause (Bell, 1995). Economic crisis and political turbulence forced ruling circles to increasingly realise that apartheid policy could no longer provide the basis for social stability and sustained accumulation (Hindson, 1987: 82-3). The choice was seen, increasingly, as one between classic apartheid and future economic growth (Kemp, 1991: 188).

3.3. THE LATE APARTHEID MOVES TOWARDS NEOLIBERALISM

The state launched a series of commissions in the 1970s and 1980s to evaluate current policies and propose future options (Saul & Gelb, 1986). In addition, there was a fierce battle within the NP between the traditionalists (*verkramptes*) and a reform wing (*verligtes*). This led to a split in 1982, as the breakaway Conservative Party/*Konserwatiewe Party* rejected political reforms and took some of the NP base.

Early commissions (elaborated on in Chapter 1) in the 1970s debated ISI and favoured its continuation, as with the Reynders Commission (Lumby 1983), but the 1980s saw major shifts. Lumby (1983) deconstructed the prospects and risks of the commissions by noting that although South Africa largely became self-sufficient in the production of goods and services for agriculture, transport, mining and construction, these sectors continued to import raw materials. Both mining and agriculture boosted GDP, however, this industrial growth was short-lived as the industries were not self-supporting and independent to safeguard and uphold the overall economic growth path. The arguments and recommendations of the De Kock, Riekert and Wiehahn commissions were elaborated on in Chapter 1, section 1.2 entitled “Beyond State Capture: ESKOM in Context’ (see below for further reflections).

The Kleu Commission’s Report of the Study Group on Industrial Development Strategy, commissioned in 1977, recommended in 1983 an emphasis on export-led growth (Saul & Gelb, 1986). The De Kock Commission of Inquiry into the Monetary System and Monetary Policy in South Africa reported in 1985, and argued for an orthodox monetarist policy of limiting inflation with the state facing a crisis of legitimacy. Saul and Gelb (1986) characterised the 1980s as an era of “organic crisis” underpinned by repression, mass unemployment, and a low wage, low intensive and low productivity economic system, which was preceded by the Sharpeville Massacre in the 1960s, the 1974 economic crisis, and the 1976 Soweto revolt. Between 1983 and 1985 South Africa largely removed quantitative restrictions, a type of trade protection that limited the quantities of designated goods that could be imported (Bell, 1995: 17).

The 1979 Riekert Commission proposed far-reaching reforms in influx control affecting black Africans, and laid the basis for the phasing out of the system in the late 1980s. That same year, the Wiehahn Commission recommended the deracialisation of labour laws and union rights, which led to major reforms, as noted above. In 1983, the state set up a Tricameral Parliament with distinct Houses for coloureds, Indians and whites, and began to phase out traditional influx control and petty apartheid. The economic and political reforms were closely linked in the minds of policymakers and NP reformers. The Riekert and Wiehahn proposals were linked to the idea that a stable black middle class could be created, not only for political stability, but also as the basis of an expanding urban market (Saul & Gelb, 1986). Hindson (1987: 82-3) argued that the manufacturing industry wanted a permanent, easily available and more skilled black urban working class as workers and consumers, instead of the old migrant labour system:

> Pressure on the state to reform the pass system increased substantially during the 1970s. Organised industry and commerce called for the relaxation of influx control to expand the settled urban population and the liberalization of urban labour markets to increase mobility within the urban areas … With pressure from unions, employers faced demands for higher wages to cover the full costs of reproduction of migrant labour. Migrant labour, once a source of cheap labour power, now imposed added burden on profitability.

Morris and Padayachee (1988: 10) suggested that state political interventions such as the 1986 abolition of pass laws and related influx controls, like the Illegal Squatting Act (No. 52 of 1951), accompanied a shift towards privatisation and deregulation. The state's reform initiatives were meant to depoliticise "collective consumption" in the townships by moving away from classical apartheid controls to reformed local government, such as elected Black Local Authorities (BLAs) and greater use of private providers.

The reforms of the 1980s failed to stem the multiple crises in South Africa. In some cases, they deepened them. Nattrass (2014: 13) stated that political opposition to and protests against apartheid mounted during the 1980s, peaking in the second half. This is after most of the reforms began. Morris and Padayachee (1988: 9) argued that the state's reform initiatives produced the massive politicisation of struggles. For example, with regard to reforms in township governance, elected BLAs rapidly raised rates and rents to fund improvements, but the increases generated massive resistance. BLAs became targets of massive protest, unifying rather than quieting the people.

Economic reforms did not manage to create more growth. Reforms gave black unions more rights, and unions fought neoliberal reforms, campaigning against privatisation. Some argued that they worsened productivity and export problems in manufacturing (Joffe et al., 1993: 10). Efforts to curb union power by amending the labour laws in 1987 led to a massive two-year campaign by unions – now led by the pro-ANC Cosatu, which has grown into the largest union federation in African history – that defeated most of the proposals and laid the basis in 1990 for tripartite arrangements that would give unions a say in policy and law (Baskin, 1991; Joffe et al., 1993: 17-21). Sanctions led to a withdrawal of International Monetary Fund (IMF) and World Bank aid as well as outflows of money, making it harder to access foreign markets (Joffe et al., 1993:10). Falling and unpredictable gold and other primary exports' prices caused foreign exchange problems (Joffe et al., 1993: 11; Bell, 1995).

Commitment to trade protection, state industry and homeland industrial development fell away as the state embraced goals such as privatisation and tariff reform, and lost faith in separate homeland development (MERG, 1993: 214). Arguments for the free market were widespread, for example, appearing in the Cosatu-linked ISP (Bell, 1995). South Africa was not alone in moving towards neoliberalism at this time. The move was part of a global trend, in which the Bretton Woods institutions – General Agreements on Trade and Tariffs (GATT, later the World Trade Organisation or WTO), the IMF and the World Bank – provided a key institutional framework. Bezuidenhout (2002: 381) stressed that local debates on the correct relationship between states and markets were deeply shaped by global moves towards a neoliberal approach, including by Bretton Woods institutions.

The global rise of the neoliberal model included support for market-driven industrial development, rather than an interventionist "developmental" state operating active industrial policy measures (Evans, 1989). There was also a growing emphasis on the inefficiency of state firms internationally, signalled by the massive privatisation programme of Margaret Thatcher's government in Britain. Privatisation means transferring to the private sector enterprises or services that were previously owned and controlled by government (CRIC, 1989: 58). Major methods include contracting out functions to private companies; leasing out facilities and other partnerships with the private sector; sales of state assets; and halting a service or activity that was previously provided by the government to create space for the private sector (CRIC, 1989: 59-67). Employee share ownership schemes (ESOPs) in state companies envisaged for privatisation were seen as way in which to make workers shareholders or active participants who would then do what was right for their companies.

This new approach had major implications for the South African government, which by the end of the 1980s operated a vast network of assets and corporations ranging from gigantic operations like ESKOM to small municipal operations like water treatment plants (Van der Walt et al.: in press). In addition, a number of homelands had state corporations of their own, such as Bop TV and the "Big T" (Radio Thohoyandou) in the allegedly independent Bophuthatswana and Venda homelands. In 1987, the government estimated that the state sector had become responsible for 63.7% of all net fixed investment from 1970 to 1984, compared to 36.3% by the private sector (Republic of South Africa, 1987: 8-9). This is easily understood if we consider the size of the state sector that existed by the early 1970s, the crisis of the economy with falling private investments from that time (Bell, 1995), and the major expansion of ESKOM (Gentle, 2009:62-63) and Sasol (Bell & Farrell, 1997: 609-610) in the 1970s.

By the late 1980s, the ISI model was for all intents and purposes moribund in South Africa, with the state seemingly set on the continuation of the neoliberal approach. Moves were made towards the corporatisation, commercialisation and privatisation of state corporations, at times under the guise of restructuring. Over time, there was a growing pattern of graft, corruption and abuse of state resources (Giliomee, 2010: 450, 537; Nattrass, 2014: 21) in which state corporations played a role (Hyslop, 2005), and this fed into fantastical arguments for "free enterprise". There was a push for restructuring the cost structures, profitability, governance and aims of state firms like ESKOM (see discussion of ESKOM below and in Chapters 1, 2 and 5), which were accused of poor leadership and undue pressure on the state budget (CRIC 1989a; CRIC 1989b; Greenberg, 2006; Saul & Gelb, 1986).

By the end of the 1980s, it was becoming increasingly clear that some sort of democratic transition was required to recreate institutional and social structures that were more conducive to growth and stability. This was the context for preliminary discussions with ANC leaders inside South Africa, like the jailed Nelson Mandela, and contacts with the ANC in exile, followed by F. W. De Klerk ousting P. W. Botha in the NP, unbanning parties like the ANC, SACP and Pan-Africanist Congress (PAC), and beginning formal negotiations in the early 1990s, leading to the 1994 democracy. The details of the negotiations are outside this thesis.

The 1990s saw rival visions of economic and labour market policies, inside and outside the state, and this continued from 1994 (Nattrass, 2014: 1-4). The negotiations did not cover the economy. Running alongside them, the NP continued to promote the neoliberal measures of the 1980s. Industrial policy under De Klerk stressed deregulation, privatisation, export promotion and accessing new markets abroad (Joffe & Ngoasheng, 1992: 480-482). Deregulation focused on cutting trade protection and removing subsidies, while export promotion focused on manufacturing and tax exemptions of capital goods imports.

The 1993 policy document entitled *Restructuring of South African Economy: A Normative Model Approach* (Republic of South Africa, 1993), also known as the Normative Economic Model, proposed a package of neoliberal measures. It argued that the country needed a national policy to increase the competitiveness and market share of the country's producers (Republic of South Africa, 1993: 65). South African economic performance was poor when measured by multifactor productivity (MFP) growth, where South Africa attained approximately 0.3% per annum from 1960 to 1987, compared to South Asia at 0.6%, East Asia at 1.9 % and Germany at 1.4% (see table below).

Region/Period	**1960-1973**	**1973-1987**	**1960-1987**
Africa	0,7	-0,7	0,0
East Asia	2,6	1,3	1,9
Latin America	1,3	-1,1	0,0
South Asia	0,0	1,2	0,6
Germany	1,9	0,9	1,4
UK	1,7	0,6	1,2
USA	1.0	-0,1	0,5
South Africa	0,9	-0,3	0,3

Table 3.3.1: The 1991 World Bank Development Report as quoted in the Normative Economic Model provides the average annual growth in multifactor productivity of South Africa in comparison with other countries and parts of the world (percentage per annum)
Source: Republic of South Africa (1993)

The core measures promoted in the Normative Economic Model were deregulation aimed at increased investment performance, sound economic policy and macro-economic stability, to be coupled with the eradication of violence and political and social uncertainty (Republic of South Africa, 1993: 239).

A 1990 Harare Declaration, endorsed by the ANC, argued for a mixed economy. The ANC at the time favoured "Growth through Redistribution" in place of the NP's "Redistribution through Growth" (Joffe & Ngoasheng, 1992: 485-487). It seemed to favour a more direct role for the state, speaking in terms of growing small and medium businesses, creating jobs and social pacts. Like the ISP, it was worried about the monopolistic structure of business and wanted a drive for higher productivity in manufacturing and a more peaceful workplace. The ANC plans were actually quite vague (Joffe & Ngoasheng, 1992: 486).

Increasingly, Cosatu outlined a vision of a globally competitive economy based on social pacts, co-determination and a well-paid highly trained workforce without apartheid wage gaps (Adler & Webster, 2000) – rather than a low wage, low skill, cheap black labour force. This drew on ISP, but went beyond it. The ideas were expressed in the 1994 RDP (ANC, 1994), which originated in the unions in 1993, but served as the ANC's 1994 election manifesto (Adler & Webster, 2000).

The original RDP, also known as the RDP Base Document, is symbolic of the ANC government under Mandela, and has been described by Masilela and Mthiyane (2014) as the most significant statement on South African society since the adoption of the ANC-led South African Congress Alliance's 1995 Freedom Charter. As an integrated, coherent and socio-economic framework, the RDP (1994: 4-6) outlined basic principles that included a "people-driven process", nation-building, democratisation and integrating growth, development and redistribution into a unified programme. What was notable was that its macroeconomic framework used a Keynesian paradigm, and this was linked to an active industrial policy (Adelzadeh, 1996: 66-67).

For the 1994 RDP, the key to economic recovery in South Africa was a programme of public works that would deal with the legacy of apartheid through a massive housing programme, an upgrading of skills and a democratisation of the workplace, including partnerships with unions, which would lay the basis for a high-skill, high-wage, high-productivity industry that would be globally competitive (Adelzadeh, 1996; Masilela &

Mthiyane, 2014; Nattrass, 2014). It can be seen as part of the pro-worker, left-Keynesian approach to restructuring promoted by the Cosatu unions (Adler & Webster, 2000:17). This approach was not ISI, but a social-democratic model with a mixed economy (Moll, 1993: 166-169). It promoted a democratic, high-skill, high-wage, rights-based, pro-worker “high road” to competing in the global economy, rather the authoritarian labour-repressive “low road” of East Asia (Van der Walt, 2011).

This approach, however, was marginalised soon after the 1994 elections. The RDP was reworked into a neoliberal RDP White Paper in 1994, which was followed by the GEAR strategy in 1996 (Adelzadeh, 1996; Adler & Webster, 2000: 11-12, 15). Adelzadeh (1996: 66) argued that, with the publication of the 1994 RDP White Paper, the government had dropped the original RDP and accepted the tenets of the neoliberal framework and policy orientation advocated by international financial institutions (IFIs). GEAR was released in June 1996 by the Department of Finance and was an unambiguously neoliberal macro-economic policy, which some noted was very close to the last major economic policy by the NP, namely the Normative Economic Model (Marais, 1998).

This approach envisaged that the growth path as “redistribution through growth” based on neoliberal measures would end unemployment, a main driver of poverty, and help finance infrastructure and welfare (Moll, 1993: 166-169). Gelb (2005: 372) argued that the dominant view became an orthodox strategy of insulating fiscal decisions from popular political pressures, by those who believed in the primary role and capacity of the free market in dealing with economic inequities, at the apex of which was a group of government ministers responsible for trade and industry, macro-economic policy and monetary policy functions. They were at pains to explain the need for a prudent fiscal policy and the role of private capital in development. A draft National Growth and Development Strategy (NGDS) presented in February 1996 also significantly departed from the RDP by adopting a trickle-down approach in economic development (Adelzadeh, 1996:67).

The fundamental difference between GEAR and the RDP was that the former called for the meeting of demands of international competitiveness by ensuring that state spending would not crowd out private investment, while the latter envisioned a people-centred development founded on the constructive relationship across all stakeholders, linked by the benefits of a massive boost in aggregate demand: Trade unions, business, civil society and government (Adler & Webster, 2000). Sibuyi (2008: 55) explained:

> The Growth, Employment and Redistribution Strategy (GEAR) of 1996 was designed to achieve stability, fiscal austerity, consolidation and re-engineering to create a framework for sustainable growth and development. This policy-formulation process meant that SA had to redefine its role in a context of a changing environment and with the election of Nelson Mandela as President came a different approach to foreign policy. Mandela's South Africa bears the imprint of the influence of the international community on the transition to a meaningful change. It reflected the most obvious change in the country's status from a pariah to a paragon.

This embracing of a neoliberal framework and ideological policy orientation marked the abandonment of economic transformation by redistribution in favour of a home-grown version of the structural adjustment programmes associated with the Washington Consensus. Terreblanche (2002: 118) argued that despite GEAR's dismal performance, it continues to receive support from key state figures and the corporate sector, especially the larger and globally orientated South African corporations. GEAR rests in economic liberal or neo-classical economic thinking and the five values of the individual, freedom of choice, market security, laissez faire and minimal government (Larner, 2000: 7).

The ANC did not abandon more radical goals, such as those outlined by the party's Joel Netshitenzhe (2007: 1) 10 years after GEAR that the ANC aimed at a National Democratic Society (NDS):

- A democratic state that draws its legitimacy from the people;
- Recognition of the multiple identities of South Africans such as race, gender, language and class – but identities that should feed into an over-arching sense of our common belonging as South Africans;
- The need to eliminate patriarchy and all forms of gender discrimination;
  Taking care of the most vulnerable in society especially children, the elderly and people with disabilities;

- Equality of opportunity including access to education, health facilities, water, sanitation and other basic services; and
- Right of access to land, professions and opportunity to take part in economic activity at all levels.

It simply decided, however, that these are compatible with neoliberalism, which stresses equality of opportunity, some role for the state in basic infrastructure and welfare for people unable to participate in labour markets, and the supposedly neutral mechanisms of the market, unencumbered by considerations of race, class, gender, creed and language. All of this would take place in the context of fiscal austerity, as GEAR (Department of Finance, 1996) envisaged funding for infrastructural programmes through "fiscal transfers, concessional finance from multilateral institutions and other international sources, development finance channelled through development finance institutions, and loans raised on commercial terms".

Active industrial policy is now mainly promoted by Cosatu, and there are only traces of it left in government policy, notably in the MIDP, the NIPF and the IPAP. Essentially, the NIPF is a policy framework that sets out the long term intensification of South Africa's industrialisation process and the movement towards a knowledge economy, economic linkages that catalyse employment creation, non-traditional tradable goods and services that compete in export markets as well as against imports (DTI, 2007). Meanwhile, the IPAP reflects the government's work in the implementation of the NIPF to fast-track four lead sectors that have emerged from research and interactions with stakeholders: Automotives and components; chemicals, plastic fabrications and pharmaceutical; capital/transport equipments and metals; and forestry, pulp and paper and furniture. All these sectors are bolstered by a revised suite of industrial instruments to support the industrial policy, reducing input costs through competition policy and the review of import duties on a range of intermediate inputs into manufacturing (DTI, 2007).

It is kept within the GEAR framework by insistence that industrial policy is only for the short term, and to be phased out, just like tariffs, in favour of a liberal market economy. The ruling ANC also retreats from GEAR prescriptions at times, as it needs to appease its alliance partners (mainly Cosatu and the SACP) by discussing policy proposals and creating relations of patronage and clientalism (Nattrass, 2014).

In years that have followed, the ANC has released a raft of policy documents, too many to list here: For macro-economic policy, GEAR has been followed by ASGISA, the New Growth Path (NGP) and National Development Plan (NDP). ASGISA was a sequel to GEAR and aimed at fighting poverty, creating jobs, reducing unemployment and building a stronger economy as part of the national effort to ensure that poor people share in the country's growing wealth (The Presidency, 2007). Like GEAR and ASGISA, the NGP set aside for infrastructure programmes aimed at improving service delivery, such as roads and railways, water, electricity, housing, schools and clinics, business support centres, sports facilities and government service centres (Department of Economic Development, 2011). The NDP, as earlier outlined, is the penultimate long-term perspective that aims to eliminate poverty and reduce inequality by 2030, inclusive of drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society (National Planning Commission, 2011).

The basic framework, however, has remained the same, although the emphasis has differed. One would like to argue that the ANC government still envisages the neoliberal framework as the necessary and desirable means of achieving the party's historic goals, disregarding the original RDP approach so beloved of Cosatu. In fact, Cosatu accepted part of the neoliberal approach, such as privatisation, in principle, as long as there is proper consultation (Musi, 2000), while, as seen earlier, the Cosatu-linked ISP favoured trade liberalisation.

3.4. STATE ASSET RESTRUCTURING IN THE NEOLIBERAL PERIOD

Privatisation, commercialisation and corporatisation did not start with GEAR. Under the NP, Sasol was largely privatised from 1979 to 1981, and Iscor from 1987 to 1989. In 1987, the NP government issued a *White Paper on Privatisation and Deregulation* *in the Republic of South Africa* and the Ministry of Public Enterprises was tasked with managing the largest state corporations. The White Paper (Republic of South Africa, 1987: 8-9) argued that privatisation was a broad approach enabling the state's role to be "limited or reduced so that capital, means of production and opportunities can be made available to the private sector", while "the private sector is given the opportunity to develop and grow optimally and with minimum state intervention and regulation". It argued that privatisation improved the performance of the economy by optimising the effective use of production factors, functioning of market forces, and increasing the percentage of net fixed investment by the private sector.

The new Ministry of Public Enterprises became the home of the biggest state corporations, which were also restructured: Escom was rebranded ESKOM in 1987; South African Transport Services (SATS) and South African Airways (SAA) were combined into one company in 1989, which became Transnet in 1990; the national department of Posts and Telegraphs (P&T), which was formed in 1910, was split in 1991 into the South African Post Office and Telkom, for telecommunication; and in 1992, Armscor was restructured into a procurement agency, Armscor, and a weapons manufacturer, Denel. Besides these "Big Four", which accounted for the most employment and capital, the Ministry held a number of smaller state firms (Van der Walt et al.: in press).

The issue of state ownership was one of the most difficult for the ANC. During the opening dialogues with the NP state, the ANC and Cosatu did not favour privatisation as this would reduce what an incoming ANC government would control (Hirsch, 2005: 47). There was widespread belief in the anti-apartheid movement that the apartheid state's privatisation was an attempt to denude the post-apartheid state of assets and ensure white ownership of economic wealth (CRIC, 1989a). What was economically necessary to the late apartheid government was not politically feasible to the ANC. Hirsch (2005: 47), an ANC insider, noted that nationalisation remained on the ANC's policy agenda from the 1950s to the 1990s. This was partly because of popular support for nationalisation, and also a warning to the apartheid state that any privatisation it carried out might be reversed when the ANC came to power. The ANC, including in the Freedom Charter, envisaged a mixed economy, although it leant towards a central role for the state.

In the 1990s, ANC leaders began to view both privatisation and nationalisation in a more pragmatic way, as means to meet the national interest (Hirsch, 2005). Like the MERG, the RDP presented the two as options, to be decided on a case-by-case basis, although existing state-owned corporations – notably ESKOM and Transnet – were given a central role in future developmental activities, especially extending infrastructure (MERG 1993: 273; ANC, 1994: 80-81). One outcome was a heavy stress on the role of ESKOM in national electrification, a role it performed well in the 1990s and 2000s (see below andChapters 1, 2 and 5).

In 1996, after Cosatu threatened a general strike over privatisation plans, the government signed a National Framework Agreement (NFA) with the main union federations. Privatisation had to be considered by all the social partners, and negotiated on a case-by-case basis (NALEDI, 1999). To quote Greenberg (2006: 94), the ANC government was generally supportive of privatisation:

> …the main official arguments for privatisation were to reduce the national budget deficit; the redistribution of infrastructure and resources; and to improve the efficiency of the economy. The economic logic was that the state was crowding out private sector investment and absorbing scarce skills and resources, and that a competitive market is the best mechanism for the distribution and allocation of economic resources.

There was, however, an important addition:

> Apart from the economic motivation, there was also a political motivation for privatisation. Although not immediately present, the use of the sale of state assets to support black economic empowerment became an additional official motivation. Underlying this was the use of public resources to consolidate a social bloc around the post-apartheid political leadership through patronage and transfer of public assets to private hands'.

In summary, the government's main desire and motivation for privatisation was mainly to make it more difficult for a post-apartheid government to control and transform the economy in order to meet the needs of the people. For the unions on the other hand, state-owned assets tended to be viewed as national assets important to industrialisation, which in turn required state direction (Jerome, 2004; Shangase, 2007; Roberts, Malikane & Makhaya, 2001; Masondo, 2001).

As noted earlier, there were significant moves to restructure the big state firms in the 1980s along neoliberal lines. There are three main types of neoliberal state asset restructuring, and all have been applied in South Africa from 1979. Privatisation includes sales (divesture) to the private sector, partnerships with the private sector (public-private partnerships, or PPPs), contracting functions from the state to the private sector, closing a state service to push people to the private sector, and various leases and concessions (CRIC, 1989a: 59-60). This is different from corporatisation, which sees state operations structured along the lines of a private firm in terms of management and aims, and which sometimes includes being registered as a firm that pays tax (the state remains the shareholder) (Greenberg, 2006). Commercialisation involves a state asset operating on completely commercial lines, funding itself through profits (Greenberg, 2006).

Sasol was largely privatised by sales from 1979 (CRIC, 1989a). The focus was then on Escom (renamed ESKOM in the 1980s), Iscor, municipalities, the Post Office/Post and Telecommunications (P&T) (today split into the South African Post Office and Telkom), and the SATS (today Transnet) (CRIC, 1989a). The SATS and the Post Office began cutting jobs (CRIC 1989a: 61-62) and plans were put in place to restructure both (CRIC, 1989b). Iscor was sold off from 1987 (CRIC, 1989a; CRC, 1989c). We will return to ESKOM in a subsequent chapter.

3.5. CONCLUSION

This chapter has tried to elaborate an understanding of the post-apartheid state and the transition towards neoliberalism, and how they are deeply intertwined, with a medium and longer-term strategic perspective on the character and content of the state, industrialisation and democratisation. In this context, the researcher concludes that South Africa is a neoliberal state, in terms of its policy model, with elements of a black African nationalist commitment to BEE and poverty alleviation. This path is largely aligned to the quotation from Mbeki at the beginning of this chapter around the centrality of policy permutations in an evolving state and fervent actions.

Taken together, the evidence is that there is a deep difference between the view that the state could or should drive national economic development and access to vital services such as electricity, education, water, land, health, security, transport infrastructure and telecommunications, and the ability of the state to actually do the job.

There are palpable nuances, experiences and lessons for South Africa within the context of state capture and how state corporations serve the interests of private firms and individuals. Despite the whimsical posture adopted by the state on state capacity, neoliberalism, privatisation and restructuring of SOEs, it requires a forum to determine the "rules of the game" and act as an umpire to interpret and enforce those rules (Friedman, 1962).

The missing link appears to be the ambivalent contemporary movement from economic to political crisis on the institutional framework of what the South African state seeks to become a highly competitive polity. In a sense, the controlling idea and understandings of the state, or even theories of the state, are only intelligible in the context of their time, as these are always the outcome of the spatio-temporal experiences in which the country is immersed. The next section will examine the South African automotive industry in the context of industrialisation through the MIDP and the APDP.

CHAPTER 4

REMAKING THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY: THE DTI AND INDUSTRIAL POLICY

Localisation is no longer a priority but a given.

Ugo Friggerio, NAACAM President, *Financial Mail*, May 2-8, 2019

4.1. **INTRODUCTION**

Previous chapters have outlined the larger context in which the South African automotive industry has developed, paying particular attention to the two defining periods of ISI, running roughly from 1924 to 1979, and neoliberalism, from about 1979. They noted how manufacturing industries were deeply shaped by the state, built upon extensive protections and subsidised inputs in the ISI era, and then affected by moves towards more open markets in the neoliberal period.

The process was a complex one. The automotive sector, which involved local assembly plants from the 1920s, was shaped by a multi-decade LCP starting in 1961. This persisted for more than 15 years after neoliberalism was adopted by the South African state. Phase II, starting in 1971, was intended to ensure that by 1977 66% of a manufactured vehicle (by mass) was local content (Black, 2007: 74). The main change in the 1980s was that Phase VI, starting in 1989, would calculate local content by value not mass (Bell, 1989). While Phase VI was partly intended to prepare the industry for global competition, it was only from 1995 that the post-apartheid state introduced the MIDP, in a decisive move to open markets and help the automotive industry to adapt (Black & Bhanisi, 2007). Running alongside this was a process of restructuring ESKOM, which started in 1987 but accelerated in the latter part of 1990s, with the state electricity utility intended to become more profitable and the electricity sector more open.

While the changes at ESKOM have been discussed in depth in the previous chapters, relatively little has been said about the restructuring of the industry in the 1990s, or the MIDP (Board of Trade and Industry, 1995), which was followed by the APDP in 2013.

This chapter outlines and analyses the development of the industry, locating it within the context of similar models of automotive restructuring elsewhere in this period. Close attention is paid to the Australian Passenger Motor Vehicle Manufacturing Plan (also known as the "Button Car Plan"), which was introduced in 1985 and strongly influenced the MIDP (Black, 2007: 59).

Like the Button Plan, the MIDP was intended to restructure an automotive industry built under state protection for an export-led growth path. The MIDP, and its successor the APDP, have been credited as a post-apartheid success story. Rather than decline, the local automotive industry has grown significantly in the period of restructuring, since the introduction of the MIDP in 1995. In 2012, South Africa was ranked 25th in global vehicle production, with a market share of 0.6% (DTI, 2013). The MIDP, followed by the APDP, has helped generate increased investment in the sector, which is still growing. Pouris and Steyn (2007:686) noted that investment in plant, machinery and tooling from 1998 to 2004 constituted more than 80% of the vehicle manufacturers' total annual investment. Damoense and Simon (2004: 255) noted that "the composition of the South African car market has shifted towards the production of smaller, cheaper and fuel-efficient models" as the industry rationalised.

A "low-volume motor-vehicle-producing" country in the late 1980s (Bell, 1989: 103), South Africa grew its automotive exports from R668 million in 1990 to R45 billion in 2005, and the local industry "weathered import liberalisation rather well" (Black, 2007:2). The automotive industry has grown to become the leading manufacturing sector in South Africa's economy. In 2010, tt contributed 6.2% to the country's GDP and employed a total of 93,100 people (AIEC, 2011). In 2009, South Africa was responsible for approximately 73% of Africa's vehicle output and produced 0.61% of the world's vehicles (OICA, 2010). In 2010, the automotive industry exported 11.9% (to the value of R585 billion) of the total exports from South Africa mainly to China, Germany, Japan, the United Kingdom and the United States of America (AIEC, 2011).

These achievements are even more notable when we recall the long-standing problems in South African manufacturing, including its poor export performance, and the virtual collapse of other liberalised industries like apparel, as well as the fact that in post-apartheid, in general, "South Africa's export performance is dismal" outside of mining (Hausmann, 2014). The MIDP and APDP must therefore be given some credit for post-apartheid economic growth. The first 20 years of freedom were an economic success, according to a Goldman Sachs report (Coleman, 2014):

> Confounding apartheid apologists, from 1994-2007 South Africa enjoyed a peace dividend, with real GDP growth averaging 3.6% a year, slowing to 2.3% after the 2008 global financial crisis. Debt-to-GDP fell to 28% by 2007, and while it is now at 42%, it still compares favourably with most developed markets. After 1994, the economy grew 2.5 times in size, from $136bn to just less than $400bn today. Under the guidance of the Reserve Bank's inflation-targeting policy, inflation plummeted from an average of 14% in the 14 years to 1994 to an average of about 6.4% since. South Africa now boasts a respectable $50bn of gross gold and foreign exchange reserves. The tax net grew from 1.7-million taxpayers and R114bn in receipts in 1994 to 13.7-million taxpayers and R814bn in receipts last year. Notwithstanding a recent one-notch downgrade, South Africa's sovereign credit rating deservedly improved to investment grade.

A respondent who is an independent economic risk consultant and former Managing Director of Econometrix, Rob Jeffrey (2019: personal interview), stated that government regulation has been unfriendly toward the development of capital structures. The respondent said:

> In fact, I would say South Africa in 1995 following the birth of a rainbow nation, was attracting capital from the world. We had come from a non-investment grade, a junk grade, prior to that, and most of the world was not prepared to talk to us. Never mind invest in South Africa. We changed our policies, we changed them into economically viable, private sector-oriented policies. And the capital flowed in, unfortunately, there has been a misdirection of these capital flows in time, and that is why we are going back towards sub-investment grade. We are going to be marked down, in my mind, regrettably. So it is possible though, we pulled ourselves out of the mud, we got in to the realms of global acceptability. We are back down there in the mud and going deeper at the moment.

4.2. INTERNATIONAL INDUSTRY EXPERIENCE AND THE BUTTON PLAN

The automotive sector was a keystone of state-led industrialisation in many former colonial countries, including the NICs in East Asia. It was central to the second industrial revolution of the late 19th and early 20th centuries, which was based on chemicals, electricity and steel, and involved mass production of the type made famous by the Ford factory (Niler, 2019). This also facilitated mass industrial trade unionism, in South Africa as elsewhere (Southall, 1985: 305; Innes, 1983; Lamprecht, 2009: 133). The process involved a transition to machine production and automation, notably through assembly lines (Innes, 1983; Southall, 1985).

Lamprecht (2009: 132) noted that while the car originated in Germany, the early development of the industry began in France in the early 1900s (hence the term “automobile”), and it was Henry Ford’s adaption of the moving assembly line and task fragmentation in the USA that made automotives a mass-production industry: The modern car industry emerged in the 1920s based on Fordism. The industry is capital intensive, with high fixed-capital costs, requires sophisticated infrastructure and supportive state policy, and benefits from economies of scale (Erwin, 2016).

The industry evolved over time, and was updated in the second half of the 20th century by General Motors of the USA with planned obsolescence that “involves the frequent changes in design that tempt customers to switch frequently to a new model”, and by Toyota of Japan with “Toyotism”, which was based on “lean production” and “just-in-time” manufacturing (Lamprecht, 2009: 133). Toyotism, which aimed at more efficient assembly lines and automation, was part of a package of measures known as “neo-Fordism”, which involved higher quality, more flexible production and customisation for niche markets, smaller inventories and sub-contracting of parts of production (Moody, 1997). This was aided by the third industrial revolution from the 1950s, which was based on micro-electronics and included the use of computers for record-keeping and communications (Niler, 2019).

In many late-industrialising countries, ISI was crucial to the establishment of local automotive industries. The "production of motor vehicles is one of the world's largest industries", at "the cutting edge of new technology and product development and especially of new forms of production organisation", and long "considered to be especially deserving of various forms of state support", as it "played an important role in the successful national development of some countries" (Black, 1994: 4).

Automotive exports were part of the successful penetration of world markets in manufactured goods by leading NICs (Moll, 1991: 4-11). As noted earlier, the automotive industry in South Africa can be dated to the 1920s, when the first motor plants were established in the country (Kaplan, 2003: 15). Ford opened its first plant in 1924 (Southall, 1985: 309), and although the country failed to establish its own automotive firms (unlike South Korea, for example, with Daewoo and Hyundai), it used local content measures to ensure that it was not simply a location assembling imported inputs. Although there has been significant automotive production in Nigeria and Zimbabwe (both now defunct), and some ongoing production in Egypt, Kenya and Morocco, "currently significant modern assembly" in Africa "is largely located in South Africa" (Erwin, 2016). Only Morocco and South Africa have seen sustained supportive infrastructure and effective, consistent policy (Erwin, 2016).

South Africa's manufacturing export performance, however, has generally been poor, as previously discussed, especially in comparison with East Asia's NICs (Moll, 1991). By the 1990s, the local automotive industry was facing serious challenges. Joffe, Kaplan, Lewis and Kaplinsky (1994), in their capacity as ISP co-directors, averred in the editorial comment of Anthony Black's report, *An Industrial Strategy for the Motor Vehicle Assembly and Component Sector: Contemporary Policy Issues,* that the "1980s was widely seen, in economic terms, as something of a lost decade" for South Africa. In the same editorial, they added that the "poor performance of South Africa's manufacturing sector loomed large in the litany of problems bedevilling the South African economy", and was notable for its "inability to create jobs, and to produce commodities that satisfied the divergent requirements of the domestic and international markets" (Joffe et al., 1994). In addition, the manufacturing industry was wracked by industrial unrest, with the automotive sector in the centre of massive labour resistance in the post-Wiehahn landscape, especially in East London, Port Elizabeth and Uitenhage in the Eastern Cape (Southall, 1985: 317-321). Insurgent unions waged a relentless battle against state-sponsored repression and racial capitalism (Buhlungu, 2001: 292).

As seen in earlier sections, the reasons for the poor performance of manufacturing were greatly and profoundly debated by both the Cosatu-linked ISP and experts on the automotive industry like Anthony Black (1994), who blamed the low skill, repressive and monopolistic structure of local capitalism. The crisis of the 1980s, with sanctions, political unrest and uncertainty (Moll, 1991:23) and global economic turbulence (Bell, 1995), clearly also played a role and contributed to the end of apartheid. Problems specific to automotives in South Africa were identified by some as a lack of specialisation, with small-scale, multiple-model plants and a proliferation of suppliers undermining economies of scale, and promoted by extensive protection measures (Black, 2007). Too many low-volume producers in a fairly closed market meant inefficiency and limited space for local component manufacturing (Black, 2007).

By the 1990s, the old order was ending, and it seemed clear that the new era would involve more integration into global markets. In the 1990s, for example, South Africa became active in the General Agreement on Tariffs and Trade (GATT). GATT was later reconfigured when signatures by 123 nations in Marrakesh on 14 April 1994 during the Uruguay Round Agreements moved for the establishment of the WTO. It made commitments in 1995 to reduce protection in the automobile, clothing and textile industries, showing that after decades of protectionism and ISI, the country was to shift towards open markets, export orientation and international competitiveness (Hirschsohn, Godfrey & Maree, 2000: 55). The automotive industry was profoundly shaped by shifts in global capitalism in the era of neoliberalism, as multinational corporations sought to "globalise their production and markets" and engaged in rapid changes in production organisation, with significant effects on "developing countries with relatively small markets and weak technological capabilities" that "sought to create for themselves a role as producers of vehicles and components" (Black 1994: 4).

Restructuring the automotive industry in South Africa was a major risk in these transfigured shifts of global capitalism in the era of neo-liberalism. As explained in the previous three chapters, the global campaign against apartheid discrimination intensified against all commanding heights of the economy. In essence, these constituted the vicissitudes of the environment within the development of the South African automotive industry. According to Lamprecht, (2009: 214), in response to the sanctions imposed on South Africa, foreign original equipment manufacturers (OEMs) – such as the two large North American OEMs, Ford and General Motors – disinvested and sold their holdings to domestic parties. Lamprecht (2009: 214-215) added that some OEMs, such as BMW and Volkswagen, continued to operate in South Africa through wholly owned subsidiaries. Mercedes-Benz maintained its 50% equity in Mercedes-Benz South Africa. Toyota, and to a lesser extent Nissan, started to assemble vehicles in South Africa under franchise (Lamprecht, 2009:215). Black's report, *An Industrial Strategy for the Motor Vehicle Assembly and Component Sector: Contemporary Policy Issues,* pointed out that the production of motor vehicles and parts accounted for 5.9% of South African manufacturing value added over the period 1990 to 1998, with vehicle exports exceeding 5% of the annual output, and actual sales of commercial market accounting for 182 000 units in 1992 (Black, 1994: 44).

The assembly firms operating in South Africa were Volkwagen SA, owned by Volkwagen AG and producing both Audi and Volkswagen, with 18.1% market share; Toyota, locally owned and JSE listed, with 24.0% market share; Samcor, owned by Anglo American and assembling both Ford and Mazda, with 15.6% market share; Nissan, under the ownership and control of Sankorp and producing Nissan and Fiat, with 14.3% market share; Mercedez-Benz, owned by Damler Benz AG and assembling Mercedez and Honda, accounting for 10.0% market share; Delta, locally owned and producing Opel, with 9.4% market share; and BMW South Africa, owned by BMW AG and assembling BMW, with 8.6% market share (Black, 1994: 47). According to the South African Automotive Master Plan (SAMA), the South African automotive industry contributes an estimated 7.5% to the GDP. The evolution of the automotive industry, as outlined in the ISP, would later witness substantial improvement in the SAMA. The master plan reveals that South Africa is a marginal light vehicle global player, with 0.68% global production market share and 0.69% global consumption market share (DTI, 2018: 13).

The rate of employment, unemployment and retrenchments are key issues in the South African automotive industry. Black (1994: 48) revealed that in 1991, the assembly industry accounted for 36 895 employees, the component industry for 65 000 employees, and motor trade for 155 000 employees. Black (ibid) further posited that employment was in dire straits, with retrenchments taking place from 1991, with the component sector hard hit. There was immense pressure to avoid mass job losses and preserve this crown jewel of local industrialisation. Major unions in the sector, like the National Union of Metalworkers of South Africa (NUMSA), which was the largest and most radical union in Cosatu, sought to ensure that restructuring benefitted black workers by proposing a social-democratic, high-skill, high-wage, rights-based, pro-worker, left-Keynesian "high road" to competing in the global polity (Adler & Webster, 2000: 17; Moll, 1993: 166-169; Van der Walt, 2011). The idea was that social compacting and constructive proposals by Cosatu unions would enable the unions to shape the economic transition. Since a revolutionary seizure of power was unlikely, the aim was rather to maximise worker influence on restructuring and the macro economy (Forrest, 2007: 367-368). The RDP originated in NUMSA, although it was reworked by the ANC (Marais, 1998).

NUMSA was notably interested in Australian union engagement in national policy from the 1980s (Forrest, 2007: 370-373). Australia seemed to exemplify the "high road" model. The automotive industry's Button Plan was of special interest. Introduced in 1985, its aim was to encourage major structural changes in the industry and incentivise exports through the Export Facilitation Scheme (EFS), which allowed firms to accumulate export credits and use them to offset import duties (Sanidas & Jayanthakumaran, 2003; Bamber & Lansbury, n.d.; Emmery, 1999). The system promoted minimum volume output restrictions in the industry, and tariff protection was gradually reduced (Bamber & Lansbury, 1999; Sanidas & Jayanthakumaran, 2003). It included the use of lean production manufacturing principles directed at improving quality, and cost and cycle time reduction (Womack et al., 1990).

The above permutations raise the relevant and necessary question: What was or is the industrial policy in Australia, and how did it facilitate exports and imports to boost GDP, employment and competitiveness? The Australian Productivity Commission report (1997) on the automotive industry provides some indicators in responding to this question: The Australian automotive industry includes the wholesale and retail of both new and used cars, accessories, repair, services, components and manufacturing. In 1994 to 1995, the industry accounted for 6.9% of the manufacturing sector turnover and 1% of Australia's GDP (Australian Productivity Commission, 1997: C2). Occupational education and training in the automotive industry was exponentially increased in the 1980s, with established links between training policy and the commitment to training demonstrated by government support, unions, employees and automotive firms, which helped to increase labour productivity (Australian Productivity Commission, 1997: G1). It was estimated that in 1996 about 370 000 people were employed in the automotive retail, manufacturing, wholesaling and servicing industries (Australian Productivity Commission, 1997: H1).

Black (1994: 21) argued that Australia followed the path of rapid integration into the international political economy with the exponential growth of both imports and exports. Black (ibid) clarified that in 1991, imports accounted for 45% of the total market of 511 000 cars and trucks, while 27 000 cars were exported. In 1997, exports containing $100 of Australian automotive value added earned a credit worth $22.50 in import duty saving (Australian Productivity Commission, 1997: L7).

Australia had a well-developed motor vehicle component industry that had been relatively successful in exporting to Asia, Europe and the USA. Ford, Mitsubishi and Toyota exported cars from Australia; Holden was exporting engines; and in the early 1990s, Toyota built a modern, world-class production plant in Melbourne, aimed at the export market; while other companies committed significant investments in the country. As earlier explained, Australia followed a route of fairly rapid integration into the global industry with the rise of both imports and exports. Bamber and Lansbury (1999) argued that the Button Plan was a success by the late 1990s.

The Button Plan's objectives were to (a) increase the industry's production efficiency to allow it to compete with imports at lower levels of assistance; (b) give consumers access to better quality and more affordable cars; and (c) minimise disruption to production and employment during the transition to a more efficient industry (Black, 1994: 21)

Sanidas and Jayanthakumaran (2003: 3) asserted that the Button Plan addressed the incentive issues by broadening the EFS to allow firms to accumulate "export credits" that they could use to offset import duties, and by promoting minimum volume output restrictions. In 2001, the EFS was replaced with the Automotive Competitiveness and investment Scheme (ACIS), which makes available duty credits on the basis of research and development, production and investment. Sanidas and Jayanthakumaran (2003: 5) added that penalties for low-volume production were continued until 1996. Car producers received duty credits at a rate of about 15% on 25% of the value of car production and 10% of the value of new investment in plant and equipment. The Australian Productivity Commission (1996: 47) revealed that between 1988 and 1995, reforms for electricity, road freight, industrial relations, customs clearance procedures, taxation and regulation had both positive and negative impacts on the passenger motor vehicle (PMV) industry.

The work of South African economist Anthony Black was a key conduit for this influence on South African automotive policy post-apartheid, connecting it directly to the Australian experience. He was invited by Alec Erwin, who was then education secretary of NUMSA, to advise the union on its contribution to the MITG, which was established by then Minister of Trade and Industry Derek Keys. Following intense negotiations, the MITG process led to the introduction of the MIDP in 1995. Some of Black's work was published in 1994 as *An Industrial Strategy for the Motor Vehicle Assembly and Component Sector* (Black, 1994), followed by a PhD in 2007 entitled "Automotive Policy and the Restructuring of the South African Industry, 1990-2005" (Black, 2007). On the basis of his expertise, Black worked for the DTI in a part-time capacity, from 1995 to 1999, on the implementation and monitoring of the MIDP; was involved in establishing the Motor Industry Development Council (MIDC), which he chaired; and helped set policy until 2007 (Black, 2007).

Black (1994) explored investment, production and policy, showing that in all cases ISI had come to the end of the road in late industrialisers (see Table 4.2.1 for a summary), and the issue was what South Africa could learn from other examples of restructuring.

COUNTRY	CONTEXT	POLICY IMPACT
Australia	Has an established automotive industry. Levels of local content and production volumes achieved in the early 1960s.	Button Plan was introduced in 1985 to give consumers access to affordable cars, minimise disruption to production and employment, and increase production efficiency.
Brazil	Affected by macroeconomic problems and debt crisis during the 1960s and 1970s.	Forum established comprising the private sector, government and labour to raise the country's automotive competitiveness. Taxes were slashed to make cars affordable for Brazilians.
Mexico	Domestic sales plummeted from 600 000 units in 1981 to 240 000 in 1987. Vehicle exports increased to 279 000 in 1990.	Automotive Decree of 1989 accelerated the process of trade liberalisation and international integration.
South Korea	Founded in 1962 and produced 1.2-million cars in 1992. Hyundai's Pony joined international producers during the 1990s.	Followed a policy of supporting exports and heavily taxing domestic sales. Government policy maximised independence from OECD producers.
Taiwan	Government and industry collaborated on R&D spending 3.25% in 1995 and 55% by 2000.	Followed a policy to be internationally competitive and this now provides a viable basis of built-up vehicles for export

Table 4.2.1: Late industrialiser' countries investment, production and policy

Source: Black (1994)

The countries in Table 4.2.1 are obviously very different: Australia is a developed country, while South Korea and Taiwan are successful NICs with major manufacturing exports, and Brazil and Mexico are closer to South Africa as economies that grew substantially under ISI, but struggled to penetrate export markets with manufactured goods. The reason why Black (1994) chose the above-mentioned countries, and preferred Australia most, was primarily because they all had the following in common: Import-substitution models had been used, but were abandoned from the 1970s onwards, often as a result of economic crisis and policy shift to neoliberalism. The two successful NICs had both moved from reliance on global firms, with South Korea establishing its own competitive brands, and large local firms in Taiwan producing global brands under licence. Production in the other named countries was mainly by subsidiaries of global firms, sometimes in joint ventures. Australia seemed the most successful of the remaining countries, and its restructuring most beneficial to workers, unlike Brazil where decades of dictatorship were only just ending (from 1985) and Mexico where independent trade unions were suppressed.

Sanidas and Jayanthakumaran (2003: 1) noted that before the shift to neoliberalism, the Australian PMV industry "traditionally received special treatment from the government and has initiated trade reforms in the late 1980s". It is appropriate to point out that trade policy reforms in Australia during the period 1968 to 1985 saw the automobile industry receive four types of government assistance in the form of export facilitation, import quotas, tariff protection and local content.

The Industry Commission (1995, 1997; Conlon & Perkins, 2001), which succeeded the Industries Assistance Commission, posited that in 1995 local content level was 95% and, in the period 1966 to 1972, reduced to 85% as an option for models with volume less than 25.00 units. Local content was abolished on 1 January 1989 in accordance with the Motor Vehicles Standard Act No. 65 of 1989, eliminating any restriction on the proportion of components that producers could source overseas, while paying import duties at a rate no greater than the standard tariff applying at the time. The Industry Commission (1989) recommended an automotive bylaw entitlement by which producers receive duty-free access to imported vehicles and/or components equal to 15% of the value of their production (Conlon & Perkins, 2001).

Sanidas and Jayanthakumaran (2003: 2) posited that the EFS in the Australian automotive industry became functional in 1982 and allowed PMV producers to reduce the level of local content in their vehicles to less than 85%, conditional on their export performance. During the period 2001 to 2007, however, the EFS was replaced by the ACIS. In the process, car producers received duty credits at a rate of about 15% on 25% of the value of car production and 10% of the value of new investment in plant and equipment (Industry Commission, 1995: 126-212, 1997: k12-k14).

Sanidas and Jayanthakumaran (ibid) added that the additional duty-free entitlements (export credit) were used to import components free of duty or sold to other vehicle producers. Given the highly protective nature of the Australian PMV, this was increased to a peak of more than 250% until 1988, with a rider to the effect that these protective reforms were reduced to 233% (Sanidas & Jayanthakumaran, 2003: 2-3). Trade unionism played a pivotal role in the Australian automotive industry, and this found expression in 1995 when the Australian Manufacturing Workers Union (AMWU) was established and contributed to the collective agreement with employers on restructuring (Industry Commission, 1995, 1997; McCallum, 2002)

4.3. THE DTI AND RESTRUCTURING THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY

The aim of the MITG, a special team of industry experts, was to advise government on long- and short-term strategies for the future of the automotive industry. This appointment was necessitated by the challenges of sustaining industry growth in a liberalised trade environment, and concerns about the limitations of local content requirements as a policy tool. The South African government had long legislated local content requirements (DTI, 1994). The MIDP, by contrast, aimed at making South African vehicle manufacturing internationally competitive in terms of efficiency and FDI, while securing employment and aiding local suppliers.

4.3.1 Overview of the Motor Industry Development Programme (MIDP)

The MITG was intended to secure policy agreement among the major industry stakeholders, namely the trade unions, assemblers, components suppliers and government. In early 1994, the MITG presented a delicately balanced consensus-based programme that focused on tariff reduction and incentives to discourage the local production of low-volume models. According to Hirschsohn et al. (2000: 62-63), the MITG report was submitted to the Board of Tariffs and Trade, which was responsible for making recommendations to Trevor Manuel, then Minister of Trade and Industry (from 1996, this ministry was the DTI). On the Board's recommendation, the Minister initiated an accelerated tariff reduction process in August 1994, cutting tariffs from 115% to 80%. A year later, the government finalised the MIDP, which led to further reduction of import duties on vehicles, from 80% to 65%, and a planned phase-down to 40% by 2002. Phase VI of the LCP came to an end, and the Motor Industry Development Council (MIDC) was established to represent the major interest groups, namely NUMSA; the National Association of Automotive Component and Allied Manufacturers (NAACAM), representing the component industry; the National Association of Automobile Manufacturers of South Africa (NAAMSA), representing OEM manufacturers and major importers; and the DTI. The MIDC monitored the implementation and effects of the MIDP, and provided a discussion forum in which all players could make policy proposals for the benefit of the industry as a whole (Hirschsohn et al., 2000: 62-63).

Flatters (2005) argued that the MIDP was commonly regarded as a major achievement of South Africa's post-apartheid trade and industrial policies. The MIDP was extended or modified several times, continuing until 2012 when it was replaced by the APDP (see next section). A key part of the MITG argument was that the local automotive manufacturing industry, through ISI with its high levels of protection, was inward-looking and involved the production of a limited volume of vehicles and a proliferation of models (Black & Mitchell, 2002). The industry was marked by poor quality products, inefficient supplier chains, a proliferation of small suppliers unable to exercise economies of scale, and high prices that limited the local market further (Kaplinsky & Barnes, 2000; Kaplan, 2003; Flatters, 2005).

Moving beyond the macro-level, there were serious problems in the operations of the major firms themselves, including highly conflictual industrial relations and skills shortages (Forrest, 2007; Granerud, 2003; Joffe et al., 1995; Southall, 1985). Granerud (2003) stressed the importance of development problems connected to internal relations in the firms and human resource management, which affected learning and the utilisation of equipment and machinery. Technology use was shaped by organisational behaviour.

Phase VI of the LCP built on its predecessors, but tried to improve efficiency through the measure of local content by value not mass (Bell, 1989) because the old system rewarded the production of heavy (sometimes too heavy) and simple local components. This reflected a growing interest in moving the focus of the automotive industry from import substitution to export promotion. In essence, the encouragement and deliberate promotion of exports to the rest of the world was intended to obviate protectionism, but required more competitiveness. Although Phase VI was enthusiastically received, it did not manage to achieve economies of scale, and high scales of automotive production and specialisation (Black & Bhanisi, 2007; Black & Mitchell, 2002).

The MIDP was far more ambitious. Its aims were to provide high-quality, affordable products based on sustainable employment, increased export trade and increased production contributing to economic growth (DTI, 1997). Black and Mitchell (2002:6) summarised the key features of the MIDP as:

(i) Reduced tariffs on light vehicles and components, with tariffs being phased down even faster than required by WTO obligations
(ii) Removal of local content requirements
(iii) Duty-free import of components up to 27% of the wholesale value of the vehicle
(iv) Duty rebate credits to be earned on exports of vehicles and components and used for duty-free import of vehicles and components

Expanding on the above points, it is critical to note that following many years of international isolation, South Africa was finally accepted and integrated into the global political economy. South Africa had to shed its pariah status when it was accepted into the country of nations by re-modelling participation in the GATT (of which it has been a member since 13 June 1948), which later metamorphosed into the WTO, with South Africa joining on 1 January 1995. The WTO Committee on Subsidies and Countervailing Measures (2009: 2) reported that:

> …the opening up of the economy and the structure of the MIDP have resulted in imported passenger vehicles growing their share of the domestic market from about 9 per cent in 1995 to about 62 per cent in 2008. Due to the import-enhancing nature of the MIDP, the industry trade balance has continued to deteriorate, as imports outstripped exports. The increased demand for imports is directly attributable to increased demand for vehicles domestically in the SACU [Southern African Customs Union] market over the relevant period. The SACU market grew from about 382 000 units in 2003 to 714 000 units in 2006, whilst local production increased from 421 000

> units to 587 000 units during the same period. A positive spin-off has been increasing affordability, availability and choice of motor vehicles available to consumers. All these positive outcomes have obviously been prior to the onset of the recent economic downturn occasioned by the financial crisis in 2008.

Amid all this, vehicle and components companies are guided by the South African Automotive Master Plan 2035, which affirms the significance of the South African automotive industry, its 6.9% contribution to the GDP (4.4% to manufacturing and 2.5% to retail), 30.1% manufacturing output, 13.9% of total exports, and employment of 110 000 people in vehicle and component production, with an annual investment of R12,2 billion (Sasfin, 2019: 3). Given the immense competitive nature of the global automotive industry, South Africa's industrialisation process has suffered from a multiplicity of constraints such as poor export, low investment and low output (DTI, 2007).

For all intents and purposes, South Africa is the first developing country to enter into a free trade agreement with the European Union (EU). After almost four years of negotiations, South Africa and the EU entered into the Trade, Development and Co-operation Agreement (TDCA) to create a trade and development relationship – the agreement was concluded in 1999 and came into effect in January 2000 (Meyn, 2004). In terms of this agreement, 95% of South African exports would enter the European market duty free after a transnational period of 12 years, while 86% of all European exports would enter the South African market duty free after a transnational period of 12 years. There was an added development in 2010, when the EU would have reduced its average tariffs for South African products from 2.7 to 1.5%, while South Africa would have decreased its average tariff for European products from 10% to 4.3% in 2012 (Eurostep, 2000: 10). Trade-offs were made to cement relations between the two parties and improve market access to the EU, with South Africa agreeing to open its agricultural market to a larger extent than the EU (81% vs 62%). This takes into consideration that the EU is South Africa's major trading partner and accounts for around 37% of South Africa's imports and 40% of its exports, while the EU's trade volume with South Africa was 1.4% in 2001 (European Parliament, 2002: 22).

In addition, South Africa boxed above its weight by entering into partnerships and collaborations with other first world countries. The generalised system of preference was such that South Africa enjoyed this before the Africa Growth Opportunity Act (AGOA), which provided duty-free status into the USA since 1 January 1976. For instance, a total of 98% of products traded with the USA qualify for duty-free access (AIEC, 2016: 35). Lamprecht (2009: 299; 2015: 136) explained that various automotive components and vehicles qualify for duty-free and quota-free access into the USA, varying from 2.5% for passenger cars to 35%, with South Africa enjoying the removal of tariffs as opposed to other countries entering into trade with the USA.

The prime objective of the import-export complementation scheme, as Black and Mitchell (2002: 13) described it, was to assist component suppliers to increase volumes, which would make them more efficient and able to compete both in the export market and the domestic market against imports. But how does one succinctly understand the historical moment of reducing assistance to exporters by phasing down the credits earned per unit of export? Black and Mitchell's (2002: 6) repeated references to the phenomenon around the effect of earlier policies of heavy protection have been replaced by a system that encourages export orientation. Impelling export orientation represents what Black and Mitchell (2002: 2) call "an isoquant for a typical firm producing a car using imported and domestic components".

Bronkhorst (2010) found that participating stakeholders in the study noted the following benefits in the automotive manufacturing industry:

(i) The MIDP creates the opportunity to be competitive.
(ii) The MIDP contributes to covering packaging costs, model-based testing costs and warehousing costs of exports.
(iii) The MIDP assists in offsetting logistical costs.
(iv) The MIDP promotes price competiveness.
(v) The MIDP creates the opportunity to provide consultation services (Bronkhorst, 2010:102).

Not only did the overall industry grow under the MIDP (see the opening of this chapter), but so did its parts, including leather component and catalytic converter manufacturers, which were profitable and exporting to companies in Europe in 2008 (Kok, 2008).

Some significant problems, however, remained in the automotive industry. In a study by Bronkhorst, “stakeholders indicated that, in order to sustain and expand the automotive industry’s contribution to the South African economy, support would be required beyond 2012” (Bronkhorst, 2010: 3). According to Naude (2013: 407), the local content in vehicles produced for 2011 in South Africa is only 35%, down from the percentage achieved in the older LCP. The Board of Trade and Industry (1989), and Black and Bhanisi (2007) noted that the 1989 Phase VI LCP marked a shift in which local content was measured by value rather than mass. In summary, exports by an assembler counted as local content and enabled it to reduce actual local content in domestically produced vehicles (Black & Bhanisi, 2007).

Local manufacturers, including auto assemblers/OEMs, have to import many of their parts requirements as there is a lack of local suppliers in the markets, and because of deficiencies caused by the Automotive Component Manufacturers’ (ACM) lack of technology, high labour costs, poor infrastructure, global supply capability, cost competitiveness, demanding customers who are squeezing their suppliers on price factors, and geographic location (Naude, 2013: 407, 415). While the industry is assisted by the South African state, it remains dominated by foreign multinational corporations, the global giants of car manufacture (Naude & Badenhost-Weiss, 2012: 96). This finds concrete expression in an imbalance of power in the automotive industry in favour of these firms in negotiations and relations with local partners and associates, where factors such as size, volume of business, environmental conditions and ownership by one party of some asset that the other party simply does not have all play a role (Wisner, Tan & Leong, 2008: 122; Gullet et al., 2010: 331; Lysons & Gilingham, 2003: 378). Although the MIDP was successful in terms of export growth of automobiles, it has been less successful with regard to stagnant domestic production, a limited domestic market and rising unemployment (Damoense & Simon, 2004: 266).

4.3.2 The Automotive Production and Development Programme (APDP)

The conclusion of the MIDP in 2012 was followed by the unveiling of the APDP, which sought to achieve vehicle production levels of 1.2 million units by 2020 and ensure consistency with the WTO rules (Pitot, 2011; DTI, 2013). In terms of the WTO rules, article 3(1) clarified that:

> The contracting parties recognize that internal taxes and other internal charges, and laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use of products, and internal quantitative regulations requiring the mixture, processing or use of products in specified amounts or proportions, should not be applied to imported or domestic products so as to afford protection to domestic production.

The WTO rules are executed through the Duty-Free Allowance (DFA), a policy instrument for the automotive industry aimed at encouraging the manufacture of vehicles for the domestic market. One would like to argue that the DFA is a discriminatory subsidy that largely fails to flatten the curve for fair discrimination in car manufacturing. The motive behind the DFA is that (based on the advantage for local manufacturers, which is not enjoyed by foreign manufacturers) manufacturers would aim to locally produce more vehicles for the domestic market in order to derive benefits from the importation of such vehicles. According to the Customs and Excise Act, No. 91 of 1964, the calculated DFA can be used to reduce the customs duty value of components and to subsequently reduce the same customs duty value of cars (South African Revenue Service, 2009: 61).

According to the DTI's IPAP (2013), the key objectives of the APDP were not very different from those in the MIDP:

(i) Improve the international competitiveness of the automotive industry;
(ii) Continue to encourage overall production growth and improve the industry's current trade imbalance by optimising export levels, while at the same time encouraging greater use of domestically manufactured products as part of the South African auto value chain;
(iii) Stabilise and potentially increase employment levels;

(iv) Encourage the rationalisation of platforms so as to achieve economies of scale in assembly; and

(v) Encourage further capital investment into South Africa.

The APDP added two crucial new objectives to the mix:

(i) To raise volumes to 1.2 million vehicles produced per annum by 2020; and

(ii) To provide assistance to component manufactures so that they can provide cost-competitive components to the OEMs and international markets via exports (DTI, 2013).

While the increase in volume followed logically from both the ISI and MIDP planning, the assistance in aid to component manufacturing marked a significant departure. The draft Regulations for the Administration of the APDP further stress edthe need to "enable component manufacturers to significantly grow value addition, thereby leading to the creation of additional employment opportunities across the automotive value chain" (Deloitte, 2012).

The DTI (2013) stated that the automotive industry was fairly mature in terms of South African manufacturing capability, and the APDP represented a new phase of government support to competitiveness improvement and development throughout the supply chain. The new programme was well received by industry. For example, the NAAMSA review for the second quarter of 2012 stated that as at 29 February 2012 "the Automotive Investment Scheme, which forms part of the Automotive Production and Development Programme, had resulted in planned investments by automotive assemblers and component supplier companies of R12 billion" (Deloittee, 2012: 7).

Four policy instruments drove the APDP, namely import duty, vehicle assembly allowance (VAA), production incentive (PI) and an automated investment scheme (AIS) (Deloitte, 2012: 7; Pitot, 2011). The APDP would have stable, moderate import tariffs from 2013 (Pitot, 2011):

(i) 25% for completely built up vehicles (CBUs);

(ii) 18% for CBUs out of Europe via the EU preferential rate[3] (as explained below on the large discount on imported inputs); and

(iii) 20% for completely knocked-down components used by vehicle assemblers.

The VAA would allow vehicle manufacturers with a plant volume of at least 50,000 units per annum to import a percentage of their components duty free – in brief, 20% of the ex-factory price, reducing to 18% over three years. This equates to approximately 30% of the components (Pitot, 2011), and obviously rewards high-volume production by enabling a large discount on imported inputs. While this would seem to undermine local suppliers, the PI would provide an allowance for duty-free importation of vehicles or components on the following terms:

(i) 55% of value added in the South African supply chain, reducing to 50% over five years; and

(ii) An additional 5% for vulnerable sub-sectors.

The PI, as outlined above, would reward an increase in the depth of localisation, encouraging OEMs and suppliers to source sub-components locally.

Pitot (2011) and Deloittee (2012) further explained that the AIS aimed to stimulate investment and job creation, with a focus on technologically advanced automotive production as well as new and replacement models/components, promoting increased plant production volumes and strengthening the automotive value chain. The base benefit is calculated on the investment in the following qualifying assets: Plant, machinery, equipment and tooling such as jigs, dies, moulds; in-plant logistics (software and hardware), IT equipment and supporting software. It involves a taxable cash grant paid over three years, while an additional taxable cash grant of 5% or 10% can be granted to projects that contribute to the following economic benefits:

(i) Substantial support for the local tooling industry;

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[3] South Africa is the EU's largest trading partner in Africa. South Africa's primary exports to the EU are fuels and mining products, machinery and transport equipment, and other semi-manufactured goods. EU exports to South Africa are dominated by machinery and transport equipment, chemicals and other semi-machinery.

(ii) Significant research and development (R&D) in South Africa related to the project;

(iii) Maintaining employment levels throughout the incentive period and/or resulting in the creation of new jobs;

(iv) Strengthening the automotive supply chain through backward and forward linkages; and

(v) Increasing unit production per plant for OEMs in line with the 2020 output goals of the APDP.

Deloitte (2012) noted that there is an additional benefit available for qualifying component manufacturers in the form of a competitiveness improvement grant through the Manufacturing Competitiveness Enhancement Programme (MCEP). The MCEP provided enhanced manufacturing support to encourage manufacturers to upgrade their production facilities in a manner that sustains employment and maximises value-addition in the short- to medium-term. According to the DTI (2015), the MCEP qualifying criteria is based on projects identified by the DTI sector desks and IDC's strategic business units that focus on new areas with the potential for job creation, diversification of manufacturing output and contribution to exports, that would otherwise not be candidates for commercial or IDC funding. That is, they may be eligible for an MCEP grant that may be structured as part of the borrower's equity contribution. Notwithstanding the fact that MCEP had supported 1 153 entities with the acquisition of capital equipment and re-engineering of business processes to improve competitiveness, the programme was temporarily suspended in 2015 due to the unavailability of funds.

In addition, the DTI expressed a growing interest in promoting a shift towards electrical vehicles (EVs). An Electric Vehicle Industry Road Map was developed in conjunction with several other state entities. An Electric Vehicle Task Team was established in 2010, involving the DTI, the CSIR, the IDC and the Department of Science and Technology (DST). The task team evolved into an Electric Vehicle Industry Forum comprising the National Treasury, the Department of Environmental Affairs, ESKOM, the South African Bureau of Standards (SABS), the National Regulator of Compulsory Specifications (NRCS), the International Trade Administration Commission of South Africa (ITAC), and the Technology Innovation Agency (TIA).

This reflects a growing interest both locally and internationally in the viability and necessity of shift towards EVs, and their potential for the future of the automotive industry. According to the International Economic Development Council (2013), EVs create additional economic development opportunities by improving quality of life, reducing energy spend, and decreasing reliance on foreign oil. Electric vehicles represent a challenge, but also opportunities to capitalise on new vehicle technologies and, in the process, reap substantial economic development benefits. Furlonger (2019) posited that EVs would account for 55% of vehicle sales worldwide by 2040. In 2018, more than two million were sold – half of them in China. In Norway, which wants to eliminate petrol and diesel vehicles by 2025, EVs accounted for 49% of new vehicles (Furlonger, 2019).

Admirably, the move is timely given the challenges of climate change. The DTI (2012) observed that the International Energy Agency (IEA) predicted that transport energy use and CO_2 emissions would increase by more than 50% by 2030 and more than double by 2050. The automotive sector is a major source of emissions, while South Africa is the 13th largest global emitter of $C0_2$ and the largest on the African continent. With this background, the DTI's Electric Vehicle Industry Road Map (DTI, 2012) looked hopefully at interventions for demand stimulation, investment support, R&D support, provision of regulatory and infrastructure measures, and changes in public road transport fleet procurement policy to include EVs from 2018 (DTI, 2012; SAnews, 2013).

4.3.3. Locating the MIDP and APDP in larger industrial policy

The evolution, prospects and effects of South Africa's industrial policy approach have been iterated in the previous chapters. An understanding of this industrial policy is diverse as dictated to by the changing conditions of the actors in the form of labour, government departments, corporates, civil society and academia. The advent of democracy in South Africa in 1994 compelled the state to conceptualise and execute the Integrated Manufacturing Strategy (IMS) and the NIPF, complemented by the IPAP.

The IMS (2003) observed that during the apartheid state, South Africa's industrial performance in the 1980s and 1990s was constrained by international sanctions and economic isolation. During this era of sanctions, manufacturing policies predominantly gravitated towards import substitution and high levels of protection until the early 1990s. The post-apartheid state placed high premium on long-term manufacturing elements to elevate integrated value matrices, knowledge intensity and service integration, equity and economic participation, beneficiation and value addition, regional production, and market access through the IMS. The IMS proposed a "value-matrix" framework to understand the vertical and horizontal relationships affecting production. The link between the IMS, the NIPF and the IPAP gave concrete expression to South Africa's geo-strategic, economic, manufacturing and industrial capacity as the firm basis for competitiveness to become a unique player in the international political economy (DTI, 2003; Machaka & Roberts, 2003).

The NIPF, a comprehensive statement of the government's approach to industrialisation and industrial policy, was adopted by Cabinet in January 2007, while the IPAP was endorsed in July 2007 (DTI, 2007). Both the MIDP and the APDP fit into the larger government NIPF and are complemented by the IPAP. The NIPF is a policy framework that sets out government's approach to South Africa's industrialisation trajectory, and is part of the long-term intensification of South Africa's industrialisation process and the movement towards a knowledge economy, economic linkages that catalyse employment creation, and non-traditional tradable goods and services that compete both in the export market and against imports. The IPAP reflects the government's work in the implementation of the NIPF to fast-track four lead sectors that have emerged from research and interactions with stakeholders, namely automotives and components; chemicals, plastic fabrications and pharmaceutical; capital/transport equipments and metals; and forestry, pulp, paper and furniture. All of these sectors are bolstered by a revised suite of industrial instruments to support the industrial policy, reducing input costs through competition policy and the review of import duties on a range of intermediate inputs into manufacturing (DTI, 2007).

The iteration made in the previous chapters that South Africa's industrial policy is primarily neoliberal is confirmed by the former DTI Director-General, Tshediso Matona, with other chief directors responsible for various economic sectors during the DTI presentation to the parliamentary Economic Affairs Select Committee and the Trade and Industry portfolio committee joint meeting on 5 September 2007. Matona indicated that:

> …the framework sought to respond to the current economic growth that South Africa had experienced in the last few years and it was an elaboration of the previous policies ranging from Reconstruction and Development Programme (RDP), Growth, Economic and Redistribution Strategy (GEAR) and the Accelerated Shared Growth Initiative for South Africa (ASGISA). Its main focus was on the manufacturing sector because this was key to the Gross Domestic Product (GDP), employment, current account and overall balance of payments.

Although this research study is primarily on South Africa’s industrial policy, ESKOM’s restructuring, macro-economic policy and the automotive industry, it also recognises the inextricable role of industrial grid electricity, agricultural water supplies, sanitation, wastewater, roads, railways, airports, harbours, pipelines, telecommunications, housing, hospitals, clinics and educational facilities – areas that add to the quality of life in communities, while simultaneously building productive economic capacity (Department of Finance, GEAR, 1996: 160). This free market neoliberal response on South Africa’s macro-economic policy is largely aligned with Hausmann, Rodrick and Velasco’s (2005: 1) argument that the Washington Consensus has “the potential to be growth promoting … and increasing growth rates is the central challenge that developing nations face”. Furthermore, neoliberal prescripts also find expression in the IMS, and its shift towards state-led micro-economic reform to achieve structural change in critical areas of economic activity shaped both the MIDP (see table 2.9.1 on the technical parameters of the MIDP 1995-2012 in Chapter 2) and the APDP, which section 4.3.2 examined and the next section explores.

4.4. AUTOMOTIVE MANUFACTURERS, THE MIDP AND APDP

The big firms and OEMs in the automotive sector are centralised and organised. This enables them to coordinate activities and engage the state in a coordinated fashion. All the respondents interviewed for this thesis indicated that the OEMs engage the DTI at several levels – via Business Unity South Africa (BUSA), the largest national private sector business association that unites a range of other business groups and chambers; NAACAM, the recognised voice of component manufacturers that supply OEM assembly plants; and NAAMSA, which represents OEMs and major importers. In turn, BUSA is represented at the National Economic Development and Labour Council (NEDLAC), a corporatist body, while the big firms are represented at the Motor Industry Development Council (MIDC), which meets quarterly, and the Automotive Industry Action Group (AIAG). Employer associations also have direct access to the DTI.

In addition, Mpho Mafole from the DTI's automotive section pointed out that there are various platforms of engagement, depending on the nature of policy discussion: (a) An Executive Oversight Committee (EOC) chaired by the Minister set up to oversee the master plan development programme; and (b) a quarterly Motor Industry Development Council, where industry performance and policy matters are addressed (Mafole, 2019: email).

Given the impressive results of the automotive industry and its growing weight in the South African economy, there is no doubt that industry representatives are taken seriously. The DTI consults with them directly, and they are represented in the DTI-chaired EOC (which delivered the South Africa Automotive Master Plan 2035) and in associated policy changes.

The Automotive Master Plan, for example, was the outcome of a collaboration and participation by different stakeholders, inclusive of organised labour, business and government. According to NAAMSA president Andrew Kirby (2018), on the occasion of the Investment Summit on 26 October 2018:

> …together with government and labour, the industry has robustly participated in the formulation of the Automotive Policy Regime or the South African Automotive Industry Master Plan (SAAM) which will run from 2021 through to 2035. The Master Plan comprises a set of aspirational targets, namely, that by 2035 the industry should achieve 1% of global production with significantly higher levels of local content and employment, an improvement in competitiveness, transformation and enhanced value addition throughout the automotive value chain.

It was generally confirmed that the automotive industry had contributed greatly to growing FDI in the sector, and to the commitment of major international automotive manufacturers to South Africa. NAAMSA's Kirby (2018) noted that this found concrete expression:

> ….in the high quality of vehicle exports which represent the outstanding feature of the MIDP and APDP from 1995 with over 4 million vehicles having been exported. The total export value of vehicles and components from 1995 exceeds R1.47 trillion. In 2017, exports of both vehicles and components parts grew to R165 billion. The industry remains on target to produce about 700,000 vehicles in 2020 of which about 410, 000 (59%) will be earmarked for export. This is up from 604,000 total industry production in 2018 of which 340,000 (56%) will be exported.

A respondent from the DPE, Deputy Director-General: Manufacturing Enterprises (and now Director-General) Kgathatso Tlhakudi, said it is crucial to note that a "number of manufacturers in 2005 to 2014 period have relocated manufacturing/ assembly operations to South Africa", benefitting "South African suppliers that have been successfully integrated into the automotive original equipment manufacturers supply/value chains" (Tlhakudi, 2019: email). The focus, however, was, on local production for export markets. This success was in sharp contrast to the general situation outlined by the Governor of the South African Reserve Bank, Lesetja Kganyago, who expressed the sentiment that we "don't have balanced and sustainable growth in South Africa" and, given "annual GDP growth rates of 1%, we barely have any growth", with state debt rising and "real risks we will soon have one of the [highest] debt levels amongst our emerging market peers" (Kganyago, 2019).

One of the cardinal benefits for OEMs of the MIDP and APDP was that exports were incentivised by the DTI. Representatives of OEMs (BMW South Africa, Ford, VW South Africa and Nissan), that their main market is South Africa, the Asia-Pacific region including Japan, Australia, Britain, the European Union, and Sub-Saharan Africa especially Ivory Coast, Kenya, Nigeria and Togo.

Gert Kruger, Nissan's Regional Director Customs and Trade: Africa, Middle East, India, stated that Sub-Saharan Africa was of importance, but that exports were generally constrained due to foreign exchange, unreliable payment systems, and competition from second-hand imports (Kruger, 2019: personal interview). Since few of these countries have auto industries of their own, they do not have protections like tariffs in place. Nationals can then buy second-hand vehicles from abroad, and this constrains new South African sales into the region. Some respondents also noted that the international economic crisis of 2007/08 also subdued exports for years (Jeffrey, 2019: personal interview; Cruickshanks, 2019: personal interview; George, 2019: personal interview; Barnes, 2019: personal interview; Selumane, 2019: personal interview).

All the OEM respondents (BMW South Africa, Ford, VW South Africa and Nissan) believed that the South African automotive industry could not survive without MIDP/ APDP support, or in totally free markets. NAACAM's Executive Director Renai Moothilal stated that it was "a global phenomenon to have government support for automotive industries, and if SA does not have an appropriate programme then the sector will shut down, as happened in Australia," after the Button Plan ended (Moothilal, 2019: email). He added that the problem was that "we have a relatively small domestic market and are too far away from big export markets to have a sector that exists on pure market principles without any government support" (Moothilal, 2019: email). This logistics problem was stressed by another OEM respondent, Nissan's Gert Kruger (Kruger, 2019: personal interview):

> We are very far removed from any major market. We've got trade agreement with Europe, unfortunately they are very far away. So, we're not like the Thailand or Mexico or India that's adjacent to larger markets. I mean Thailand and India they're adjacent . . . I mean India is a market itself, but Thailand is next to the whole Asian market, Mexico is next to the US etc. So, they've got closed bargains; we've got this logistics disadvantage. Put that together with the fact that our market is so small, how do you achieve larger volumes when you have this clear disadvantage, logistically, market size? So, you can see, take away the APDP incentive and you have nothing because we are far away, we are in the breadbasket of Africa, lots of resources etc but it means nothing if you're so far away from these markets.

In the words of another respondent, Executive Director of Toyota Wessels Institute for Manufacturing Studies at the University of KwaZulu-Natal, Professor Justin Raymond Barnes (Barnes, 2019: personal interview):

> The automotive industry is evolving and other countries, with Australia being a recent example are questioning the support an industry which is essentially a foreign industry with international brands owned by multinational OEMs. The Australians as a result have withdrawn support leading to closure of automotive plants.

The same view was shared by a representative of organised labour, Vusi Mkungo, NUMSA's Auto and Tyre Sector Coordinator (Mkungo, 2019: personal interview):

> When I was in Australia, we made a variety of observations. First, we realised that the automotive industry cannot survive without the support of policies like MIDP, APDP. That's how they survive even throughout the world. They get that support. It's an international phenomenon because what they did in Australia, they withdrew that support. That is why now we don't have manufacturing companies in Australia. No auto manufacturing in Australia. The last one was in 2017, it was Toyota which came out last in Australia.

That said, some respondents did feel that there were a number of areas where policy could be improved. According to one respondent, Ian Cruickshanks (2019: personal interview), SAIRR's Chief Economist:

> The automotive industry is evolving and other countries, with Australia being a recent example are questioning the support an industry which is essentially a foreign industry with international brands owned by multinational OEMs. The Australians as a result have withdrawn support leading to closure of automotive plants. The South African experience is that we have been unable to develop local brands despite the number of years that support has been expended on the industry. Countries like India, China, Russia, etc. seem to have done much better through technology transfers to develop indigenous automotive brands, some of which are now being seen on local roads.

Cruickshanks (2019: personal interview) also noted that:

> The automotive sector is evolving towards electric vehicles and away from the internal combustion engine. How our incentive is programmed for adapting to this change? Is South Africa backing the wrong horse through its incentives? Europe and United States of America's State of California are leading in demanding green vehicle and reducing emissions, and the industry has been given tough timelines to move to electric vehicles.

Some respondents also believed that the industry needed some tax relief, as the introduction of tax in general and the Ad Valorem Tax in particular significantly impacts on the costs of doing business in South Africa (Barnes, 2019: personal interview; Kruger, 2019: personal interview; Selumane, 2019: personal interview). According to SARS, Ad Valorem Excise Duty on Ad Valorem products is payable by manufacturers of motor vehicles, electronic equipment, cosmetics, perfumeries and other products generally regarded as “luxury items”. All these products are subject to the payment of Ad Valorem Excise Duty if used within the Southern African Customs Union (SARS, 2018).

Vusi Mkungo (Mkungo, 2019: personal interview) from NUMSA argued:

> Taxes will ordinarily have an impact because when you look at who OEMs compete with, they compete with countries like Thailand, for instance. Thailand is a serious threat to the South African automotive. Because, they have quality, they deliver in time. And you find that some of these taxes which we are caring in South Africa, they don't have those taxes, in their countries.
>
> And even their labour cost is low compared to us. I was once in Thailand, I think it was 2000 something, where I found that our Rand was R5 to a Thai Baht. Then it tells you that even their manufacturing costs, that's how it's measured against you but they are saying that your competitor is Thailand. These are the challenges which you will be faced with in terms of your costs. Yes because when we were there, some OEM's globally, they may not be doing South Africa a favour by allocating vehicles to South Africa but because of political stability. You can guarantee political stability in South Africa as compared to other competitive countries, but you can't guarantee that area of global growth.

An issue that arises here is that the current tariff system effectively puts a 23% import tariff on EVs (Bowker, 2019). In addition, the state has not yet rolled out a charging infrastructure. This has led BMW, Nissan and Volkswagen to campaign for the removal of the tariff on these vehicles, to boost their availability and popularity (Bowker, 2019). NAAMSA is working on a unified stance on electrification to present to the government (Lamprecht, 2019: email). The DTI had agreed to incentivise local production of such vehicles, and South African facilities were capable of being retooled for this purpose, but the small local markets – and questions around the reliability of ESKOM’s power supply – were barriers to EVS taking off. We will return to the ESKOM issue in the next chapter.

4.5. CONCLUSION

This chapter examined, described and explored the restructuring of the South African automotive industry, with particular reference to the role of the DTI's MIDP and APDP. The South African automotive industry has made significant progress, thriving in the face of liberalisation, and finds itself marked by expansion, innovation and international competitiveness. Now at the core of the country's manufacturing industry, it is an inspiring post-apartheid success story, despite its limitations. It is evident that the South African government continues to support the automotive industry, impelling economic growth and industrialisation. It must, however, be noted that this success story co-exists with other episodes in post-apartheid South Africa that are far less impressive. The restructuring of ESKOM, together with state capture and an unreliable electricity supply, poses a real and credible threat to the future of manufacturing itself. How then has the automotive industry responded? This is the issue to which we turn in the next chapter.

CHAPTER 5
CHALLENGING THE SOUTH AFRICAN AUTOMOTIVE INDUSTRY: ESKOM AND ENERGY POLICY

Realism can be star-scattering, even if you have lived your whole unthinking life in reality. Especially in Sophiatown, these days, where it can come with the sudden crash of a flying brick on the back of your head (Can Themba, 2006:49)

5.1. INTRODUCTION

This chapter examines the neoliberal restructuring of ESKOM that began under the NP in the 1980s and continued under the ANC from the 1990s, as well as its effects on the automotive industry. The role of the MIDP and the APDP, and of the state department that hosted both, namely the DTI, has been fairly extensively studied, but far less attention has been paid to how the automotive sector has been affected by another set of state policies that govern the restructuring of ESKOM. ESKOM's historical role in South Africa's industrialisation has been that of provider of cheap reliable bulk power to South African mining and manufacturing (Gentle, 2009).

The restructuring of ESKOM, while part of the same raft of neoliberal reforms that have, for example, seen the liberalisation of manufacturing, challenges the manufacturing industry in three main ways: First, steadily rising prices; second, the system of annual price revisions; and third, an increasingly unreliable power supply. In examining these issues, this study reveals that neoliberal reforms by different parts of the state may contradict each other – even if framed by one larger neoliberal programme such as GEAR – and suggests that this has significant implications for how we understand the South African state. A fuller discussion of these implications is provided in a subsequent chapter.

5.2. ESKOM RESTRUCTURING AND SOUTH AFRICAN MANUFACTURING

Today's ESKOM Holdings SOC Ltd is the outcome of metamorphoses of the organisation created in 1923. As noted in Chapters 1 and 2, ESKOM (initially, Escom) was established as a state monopoly with a specific mandate to produce cheap electricity in the public interest, on a non-profit basis, and intended to foster local industrialisation (Eberhard, 2003; Gentle, 2009).

The Electricity Act of 1922 required ESKOM to be self-funding, and to run neither at a loss nor a profit. Tariffs were expected to match expected funding needs. The Capital Development Fund established in the 1970s was intended to fund necessary capital expansion through tariff hikes. The fund was scrapped in 1995. According to the Electricity Act, No. 41 of 1987, the principle of operating at neither a profit nor a loss was replaced by the need to "provide the system by which the electricity needs of the consumer may be satisfied in the most cost-effective manner, subject to resource constraints and the national interest" (ESKOM, 1987).

One of the study's respondents, ESKOM Chief Executive from 2007 to 2009 Phirwa Jacob Maroga (2019: personal interview), proffered a historical perspective on ESKOM's cardinal role on industrialisation:

> Before 1910, South Africa was one of the key moments when the country or the two warring white parts, the Boers and the English, agreed to a treaty of friendship at the early stages of the 20th century, in 1902. Then, there was an epilogue in 1910: formation of the Union of South Africa. Then out of that Union, then emerged industrialisation strategies of South Africa. And at the time, the key utility at the time was mining, because then, besides the diamonds in Kimberley, gold was discovered in Witwatersrand, and there were a flurry of money activities. Having an energy system, as a platform for industrialisation was necessary. Some of the mining companies had their own energy companies.
>
> However, all of them amalgamated into ESKOM and their idea was to have actually an integrated power system across the country, to power the industrialisation. Then out of that also came the formation of Iscor for steel, the strengthening of the transportation system, the rail system and then later on came the formation of the IDC for the funding of the industrial development. The period between 1923 to about 1950 was a key period for industrialisation because some of the key state-owned institutions or companies, or whatever they call them or ESKOM as a commission were formed around that time, to actually integrate this issue of industrialisation.

The researcher notes that the same efforts of national economic integration and growth were complemented with the development of the national road and railways network, a national air carrier (South African Airways or SAA), the state-run post and telecommunications system, and a Land Bank for commercial farming. ESKOM was built with substantial state support and, following major power shortages, underwent a major expansion in the 1970s. This created an excess generating capacity in the 1980s, estimated at 3 600MW, compared to 440MW in the 1950s (Jaglin & Dubresson, 2016: 19). This led to the Camden, Grootvlei and Komati power stations being mothballed in the late 1980s and early 1990s, due to the declining reserve margin, and the construction of new generating capacity was blocked.

The focus on assisting farms, mines and factories – as well as white areas – saw the gigantic state corporation enter the 1990s with a substantial over-capacity, obviously problematic in a country where large parts of the population did not have residential electricity supplies (Gandar, 1991). In 1990, perhaps two out of three South Africans did not have access to electricity in their homes, according to study respondent Professor Anton Andriaan Eberhard (Eberhard, 2019: personal interview), who is an energy expert from the University of Cape Town, where he directs the Management Programme in Infrastructure Reform and Regulation at the Graduate School of Business. ESKOM faced some financing problems, but conditions in the early 1980s were favourable to borrowing owing to the high gold price and low interest rates (Gentle, 2009: 64). There was a borrowing spree in South Africa, which in 1982 alone saw “close to R2 billion” borrowed abroad (Padadyachee, 1991: 96).

In 1983, the country received a negative IMF report, and in 1985 declared a moratorium on debt repayment. Parastatal debt soon became a millstone around the neck of the apartheid regime and was to be a powerful impetus for reforms at political level (Gentle, 2009: 64). Today, ESKOM is plagued by massive debt that reached R400 billion in 2018, on which it struggles to pay interest (Eberhard, 2018), ESKOM historically had an excellent credit record. Analyst Ian Cruickshanks (Cruickshanks, 2019: personal interview) from the Johannesburg think tank, SAIRR, provided the researcher with an interesting historical perspective:

> When I first started in asset management, a long time ago, 50 or 60 years ago, ESKOM was seen as the best risk in South Africa. They could raise money; borrow funds, at a lower rate than government. That is unheard of … a state-owned enterprise being better rated than the state itself. And the answer was management. Because they managed their funding, their revenue and expenditure better than the government itself did… You think ESKOM [wants money, and] the government bond rate is 10%; when ESKOM wants money, we say "You are so well run, we are so sure of your ability to repay us, we are going to give you money at 9%." Think of that, you know I am just saying. What it could.

ESKOM was, however, heading for major changes. In 1983, the state appointed the De Villiers Commission to examine ESKOM (then Escom) and electricity pricing throughout South Africa. This was part of the larger rethinking of state policy at the time. The commission was appointed by the Department of Minerals and Energy and headed by Dr W.J. de Villiers (Jaglin & Dubresson, 2016: 20). The parastatal's investment strategy, management and opaque accounting practices came under heavy fire from the commission. The commission's report argued for management changes (a two-tier governance structure, modelled broadly on the German corporate governance system consisting of a board of supervision and a board of management); nationally generated electricity tariffs, as opposed to municipalities being able to charge highly varying tariffs; and more emphasis on black areas. It also advocated changes in how ESKOM funded its expansion. Former ESKOM Chief Executive Maroga (2019: personal interview) commented:

> Before 1995, ESKOM had what is called [the] Capital Development Fund. It was embedded in the tariffs: so, they put money aside for new development. And then De Villiers Commission came and said "No, take it away." But they didn't say what must happen in its place.

Eberhard (2003: 2) spoke of the 1987-2001 reforms as "slow and modest," noting that ESKOM remained in state ownership. Gentle (2009: 64) similarly argued that while the De Villiers Commission is often credited with relatively modest prescriptions, it left a decisive imprint in insisting that Escom's public-interest limitation (no-profit model) should end and the parastatal operate on a more corporatised and commercialised basis, including paying taxes and dividends to its "shareholder", the state. These recommendations were in line with an international emphasis on state utilities being commercialised or privatised. The new goal, of making profit, represented a profound break with 60 years of ESKOM history. Former ESKOM Chief Executive Maroga (2019: personal interview) further commented:

> … [until that time] the issue of [a] cost-reflective tariff was not a dominant construct. The issue, with respect to ESKOM until probably about 1985, its mission was to provide abundant and cheap power where it was required in South Africa. In summary, it was neither for profit nor loss. ESKOM was not a commercial enterprise. It was a developmental enterprise, because its mandate was to bring adequate power where it was required. It was developmental entities which provided energy and the net effect was the national dividends to be channelled through in industrialisation, as opposed to the profit of ESKOM.

The commission's recommendations were largely accepted, and followed by the amendment of the Electricity Supply Amendment Act No. 6 of 1985 and a new Electricity Act No. 41 of 1987. These Acts provided a perfect means to change the way in which things were done in the electricity supply industry. The 1985 amendment set the state corporation up for serious future problems, abolishing the Capital Development Fund (Maroga, 2019: personal interview). The 1987 legislation also put in place an Electricity Control Board as the national regulator, a radical departure from the 1910-1948 practice wherein ESKOM played the dual role of regulator and supplier (Gentle, 2009: 51-52). This allowed ESKOM to start to be hived off as a distinct corporation, allowing for corporatisation and commercialisation, and opening up the industry.

According to Jaglin and Dubresson (2016: 5), the reforms of the late 1980s opened ESKOM to market pressures. It concluded that privatisation was possible. Jaglin and Dubresson (2016: 20-21) stated that the 1987 Electricity Act included a clause exempting ESKOM (as it was now renamed) from the obligation to acquire an operating permit from the Electricity Council, a structure dominated by consumer interests. The new management board was tasked with re-establishing the organisation's credibility and reputation, and its priorities became increasingly commercial. Eberhard (2004: 6) added that a full-time executive management board now reported to an ECB comprising representatives of government, major electricity consumers and municipal distributors – all appointed by the Minister of Public

Enterprises. In 1988, at the government's request, ESKOM launched a study into possible privatisation, conducted by the utility with a committee made up of manufacturing and government representatives (Eberhard, 2003: 7).

This helped lay the basis for the post-apartheid ESKOM Conversion Act, No. 13 of 2001 (see below), which made ESKOM subject to the Companies Act, No. 61 of 1973: A dividend-paying, taxpaying entity. This, Eberhard adds, has largely been downplayed by commentators, given that ESKOM remained a state-owned company. With the 2001 ESKOM Conversion Act, the utility was formally a profit-making, taxpaying company with shareholders – it was owned by the DPE, run by its own Board of Directors, and regulated by the DMRE and NERSA (effectively the successor of the old ECB), which issued licences in the electricity sector and approved tariffs. ESKOM remained in state ownership and retained a developmental mandate, but this was combined with a new profit-seeking mandate. In 2005, ESKOM's after-tax-profits were nearly double that of the median of the 23 electricity utilities listed in the *Fortune 500* top global companies (Greenberg, 2006:39). These processes also saw ESKOM systematically increase rates above the inflation rate throughout the 1990s and until the present. At the same time, the removal of the Capital Development Fund mechanism (which took place in 1985), set up the state corporation for serious future problems (see below).

The days were over when cheap power was provided below cost by the state; the new principles were cost recovery and profitability. It was a prime example of what some have called "state capitalism". The fourth-largest corporation in Africa with operations in more than 20 countries (Van der Walt et al.: in press), ESKOM remains South Africa's and Africa's largest single producer of electricity, generating approximately 95% of the electricity used in South Africa and 45% of that used in Africa (ESKOM Factor, 2011: 13). ESKOM is also one of the top 20 utilities in the world by generating capacity. It is active in all elements of the electricity supply chain, generating, transmitting and distributing electricity to industrial, mining, commercial, agricultural, residential customers and redistributors.

Greenberg (2006, 2009) rejected the idea that the changes in the 1980s and 1990s had only modest effects. He noted that the restructuring of ESKOM, which began under the NP and continued under the ANC, saw employment gutted, prices rising (including for industry) and plants ageing as new investment collapsed (Greenberg, 2006, 2009). ESKOM had cut maintenance, and staff numbers were falling steadily for 20 years, from 65 000 in 1985 to 30 000 in 2003 (Greenberg, 2006: 38). In the 1980s, there was widespread fear that privatisation would destroy jobs, as was the case with the two major parastatals sold off in this decade: Iscor and Sasol (Greenberg, 2006: 12). In fact, as noted by a 1980s study, the restructuring of ESKOM from 1985 led to at least 10 000 job losses (CRIC, 1989: 103).

The changes in ESKOM were part of a large process of neoliberal reforms. The apartheid state set up the Ministry of Public Enterprises in the late 1980s to drive the process of restructuring SOEs and house the largest parastatals (Greenberg, 2006: 10). De Villiers became its first minister. Individual ministries retained some control over the daily management of specific state enterprises, but it was decided that a single ministry was needed to ensure that restructuring occurred in a uniform manner. The state also laid out plans for the restructuring of ESKOM, state-owned forests, national parks, the state-run sorghum beer industry, SATS (which was restructured into Transnet) and the P&T (later broken into Telkom and SAPO) (SAIRR, 1990: 583-586).

The 1980s restructuring of state industries was slowed by ongoing protests and initial dialogues between the NP, business and ANC leaders from the late 1980s. One result of the ANC's threat of privatisation was that sales of state assets more or less stopped from 1990 to 1994 (Hirsch, 2005: 47). Key developments continued in the period 1990 to 1994, mainly in the form of steps towards commercialisation and corporatisation.

For ESKOM, there was continuity with the 1980s. Jaglin and Dubresson (2016: 25) noted that the 1987 Electricity Act was amended in 1995 (Electricity Amendment Act No. 60 of 1995), which set the stage for the legal changes affecting ESKOM in 2001. This amendment declared the national electricity regulator a juristic person; made provision for the appointment, conditions of employment and functions of the chief executive officer and employees; and made provision for funding, accountability and reporting. Arising from this amendment, a national electricity regulation body known as the National Energy Regulator (NER) was set up. In 2004, the NER became

NERSA, with a remit covering fossil and nuclear energy, in terms of the National Energy Regulator Act, 2004 (Act No. 40 of 2004). NERSA's mandate is to regulate the electricity, piped-gas and petroleum pipeline industries in terms of the Electricity Regulation Act, 2006 (Act No. 4 of 2006), Gas Act, 2001 (Act No. 48 of 2001) and Petroleum Pipelines Act, 2003 (Act No. 60 of 2003). Greenberg (2009:76) stated that NERSA replaced the ineffectual ECB as the national regulator. It had far greater power than the ECB, since its regulatory jurisdiction included ESKOM and local distributors. It regulated market access by licensing all producers, transmitters, distributors and sellers of electricity. All electricity tariffs had to be approved by NERSA.

In essence, NERSA regulates the energy industry in accordance with government laws and policies, and standards and international best practices in support of sustainable and orderly development. Overall, the state sets the policy and legislation covering the electrical industry in South Africa and, through NERSA, decides who gets licensed, i.e. access to the South African grid is controlled by NERSA. The structure of the energy regulator consists of nine members, five of whom are part-time and four are full-time, including the Chief Executive Officer (CEO). The energy regulator is supported by personnel under the direction of the CEO. The mandate of NERSA is derived from legislation governing and prescribing the role and functions of the regulator.

The question of breaking up ESKOM arose repeatedly. As observed earlier, it was seriously considered by the NP. In 1998, the ANC resisted the idea, as the 1998 White Paper on Energy argued for competition from the private sector through IPPs, and discouraged capacity building by ESKOM. The expectation was that IPPs would meet any future shortfalls. Plans to bring in IPPs encouraged the argument that ESKOM should not build more stations as this would crowd out new entrants and, in fact, some stations were mothballed (Shangase, 2007). ESKOM chose not to build more stations, despite projections of supply running out in the 2000s.

Additional policies were agreed, intended to break up the ESKOM monopoly, separating out generation (by ESKOM and the hoped-for IPPs) from distribution (to be handled by competing regional electricity distributors or REDs) and transmission (Shangase, 2007; Jaglin & Dubresson, 2016: 36-37). The White Paper (1998: 58) posited that ESKOM would be restructured as a preparatory step for competition in the electricity supply industry. In the long term, ESKOM would have to be restructured into separate generation and transmission companies. For future restructuring, government intended to separate the power stations into a number of companies. Such a step would assist the introduction of competition into electricity generation. It was also intended to create opportunities for private sector and BEE investment in the generation sector. The restructuring of ESKOM would be done in terms of government policy on the rationalisation of state-owned assets**.**

REDs were intended to continue the process of consolidation seen from 1998, where more than 400 distributors (mostly municipalities, but also ESKOM) were grouped into 170 units by 2005 (Jaglin & Dubresson, 2016: 36-37). This fragmentation was held responsible for inefficiencies, wide price disparities, unequal treatment of customers, inadequate network maintenance, poor economies of scale, and structural brakes on the introduction of competition. In 2006, the government approved a new proposal establishing six REDs as non-municipal public entities.

Key to creating competition in the electricity supply industry was the creation of REDs and the possibility of splitting transmission into high voltage and low voltage transportation from the sub-station to the customer. There was an appreciation that ESKOM would retain control over high voltage transmission and so encourage the private sector to actively partake in low voltage transmission. All things considered, the state asserted that transmission was potentially going to be opened up to a strategic equity partner (Greenberg, 2006: 30). As former ESKOM Chief Executive Maroga (2019: personal interview) noted:

> The state has never hidden the intention that at some point they would want to see private capital coming into the energy sector. The notion that the parastatals can continue being state-owned forever is also unrealistic. So, you going to have a mix of certain parts being owned by private and certain parts being owned by government. And government can continue to have a strategic control/power. I sympathise with the unions about privatisation and job losses. But it’s going to, like Telkom and Aventura happened like other state-owned enterprises. When you need new investments, government cannot be the only one that is burdened with investments. And when you need international experience in running the SOEs, you’re going to have to bring in

> international players. And it's good for the country. But we do not want to do it when ESKOM is on its knees and it can be bought for nothing. And maybe you can have strategic control for some of the key parts

However, unbundling ESKOM into distinct generation, transmission and distribution sections, and bringing competition into the three spheres of the electricity supply industry, has stalled (Eberhard, 2003: 2). REDs faced significant objections, including from municipalities. The Cape Town municipality, for example, believed the government decision had changed the nature and governance of regional entities to the detriment of municipalities, making the new arrangement unacceptable (PMG, 2007). It therefore asked NERSA to re-establish the status quo ante, which was effected in December 2006. All agreements were cancelled, the distribution licence was reallocated to the municipal council, and the relevant RED was dissolved. After 15 years of unfinished transition and reorganisation, on 8 December 2010, the government finally gave up on this controversial plan and decided to halt the process of RED creation (Jaglin & Dubresson, 2016: 36-37).

Plans to breakup ESKOM in the 1990s and 2000s also failed. Political turbulence had stalled the process in the 1980s, the proposal was strongly opposed by unions linked to the ANC, and the use of ESKOM as an agency of redress was considered (Eberhard, 2003: 2). Attempts at privatisation and unbundling were fiercely opposed by Cosatu, the SACP and other interest groups, as they argued that ESKOM should remain a publicly owned entity and that privatisation does not always have a positive effect on the economy. The claim was that it should be used as a government agent to provide low-cost electricity services to all (Grobelaar, 2010).

There was no urgency for synchronisation, or even unbundling. Meanwhile, hopes for IPPs proved empty, because of low power prices and the entrenched ESKOM monopoly. By the late 2000s, not a single major IPP had been established. ESKOM remains a monopoly in the electricity supply. Although core ESKOM operations have not yet been privatised or unbundled (Eberhard, 2005), it has contracted out certain services to the private sector. These services include prepaid electricity meter installation; construction, transformer and switchgear services; logistics services; bulk material services (ash and gypsum commercialisation, coal transportation logistics, and bulk water operations); reputation management; advertising; stakeholder relations assessment; catering (fin24, 2014); security; ICT; cleaning (Malope, 2017); and process control manual development

Contracting out certain services of ESKOM has had both positive and negative effects. For instance, the ESKOM generation expansion project has witnessed the construction of Medupi and Kusile power stations and the Ingula Pumped Storage Scheme. For the Medupi Power Station project, “Hitachi was awarded the contract for the boilers, which controversially coincided with the ANC’s Chancellor House organisation taking up 25% of the local subsidiary of Hitachi which is undertaking construction of the boilers” (Lloyd, 2011: 11).

One service that has seen positive effects was Fluor, which in a joint venture with Pangaea supported the recommissioning of a mothballed 1,200MW Grootvlei Power Station that consists of six 200MW coal-fired units, all of which were shut down around 1990 because demand was lacking. In the joint venture, Fluor was responsible for project and construction management, project controls, safety, contracting and procurement, and people development. Given all the problems and uncertainties around the power station, Fluor took the lead in facilitating employment of local rural labour, with 3 000 of the local population working on the jobs at peak. Local residents and future power plant operators were able to learn more about their trades as they participated in bringing the Grootvlei power plant back into service. The three units were in commercial operation by 2008. President Jacob Zuma officially re-opened the Grootvlei Power Station in Balfour, Mpumalanga, as part of the rollout of the Government's Infrastructure Build Programme on 20 September 2013. The project received 27 ESKOM Chairman's Awards for Safety performance (Aveva, 2013; Zuma, 2013).

Other services contracted out to the private sector have been more controversial. There were claims that catering (fin24, 2014) and cleaning (Malope, 2017) were corrupt and excessively priced. Contracts to German software maker SAP, management specialists McKinsey and Company Africa (Pty) Ltd, Trillian Management Consulting (Pty) Ltd, and Trillian Capital Partners (Pty) Ltd were later deemed part of the complex of state capture in “the South African state under the

Presidency of Jacob Zuma" (Southall, 2018:2 9-30). ESKOM had concluded contracts with McKinsey in 2015 and 2016, and made payments to both McKinsey and Trillian in excess of R1,7 billion. These and the resultant payments were set aside as unconstitutional in a June 2019 High Court judgment (Jonas, 2019: 82,162; SAFLII, 2019).

ESKOM has a close relationship with and direct impact on the mining sector. Most of its coal is provided by the private sector. However, this is not an example of neoliberalism, as this arrangement has been the case since the 1920s. The use of private coal suppliers then does not involve moving functions or operations from the state to the private sector, as no move took place.

The use of local coal suppliers had two important aspects. First, as the researcher was reminded by several of the study informants, the mining industry itself benefitted from the expansion of ESKOM in the 20th century (Khoza, 2019: personal interview; Mthombeni, 2019: personal interview; Makwana, 2019: personal interview). South Africa's power is largely generated through coal-fired stations, and private firms supplied most of the coal. ESKOM's coal supply contracts were highly prized, as they involved long-term, well-paid contracts for massive volumes of coal. In providing a steady source of income, the contracts enabled collieries to develop and expand. To a large degree, balancing ESKOM demand with that of other markets, including internationally, helped drive expansion and investment.

Second, successive governments have been able to use ESKOM coal supply contracts as instruments of policy (and patronage). Hattingh (2018) noted that the NP used the contracts to assist emerging Afrikaner capitalists, with Federale Mynbou/General Mining (later Gencor, which has since developed into the gigantic BHP Billiton) benefitting handsomely from ESKOM contracts. The ANC has followed this model for BEE, although it was corrupted in Zuma-era state capture to benefit top politicians working with a foreign business dynasty, the Guptas (Swilling, 2017: 30, 32-33, 47-48, 54-55).

One respondent, former ESKOM Chief Executive Maroga (2019: personal interview), proffered another dimension to the effect that "sophisticated state capture" has always remained a phenomenon to unravel in the pre- and post-apartheid state. The respondent stated that the capture of the state has an overall impact on the long-term sustainability or efficiency of SoEs in general and the state in particular. Maroga (2019: personal interview) further proffered:

> What is coming out in the Zondo Commission is quite clear. Some of the state-owned enterprises were seriously captured – PIC, Transnet, PRASA, SAA, SABC, Denel, ESKOM. But I think we should also be very careful that some of the problems of these enterprises are not only attributable to state capture. State capture just brought another dynamic. There were certain systemic and structural things, like ESKOM's funding model, which was never solved, which the state capture just made worse. And also, to say, as much as the Zuma years I think was dominated by state capture, state capture did happen prior to that. I mean some, but I think it was some sort of sophisticated state capture. It was not the Bosasa state capture of cash in vaults and, you know. So, but I think, Ja, I mean, the state capture has just compromised the, I mean it dampens confidence, you know the institutions are I mean in terms are even in financial risk, you know a reputational risk, you doing business with ESKOM become a reputational risk because of the tainting of state capture.

The main suppliers of coal, as noted in the 2008 NERSA report, were Anglo Coal SA, Rand Mines, Ingwe Coal Corporation and Eyesizwe Coal (NERSA, 2008:2-3). The coal suppliers operated mines dedicated to the supply of ESKOM base-load power stations – 80% of ESKOM's coal comes from dedicated/contracted pithead coal mines and the remaining 20% is purchased on short-term contracts from elsewhere. For the three-month period from November 2007 to January 2008, 28.9-million tons of coal was received at ESKOM power stations, of which 78% was delivered by tied collieries, 19% was transported by road, and 3% by rail (NERSA, 2008: 2-3).

While ESKOM was not privatised, it was thoroughly commercialised and corporatised, operating as a profit-making, vertically integrated monopoly, generating 80% of electricity produced in Southern Africa and dominating the regional market (Greenberg, 2009: 81). ESKOM Enterprises (Pty) Ltd was launched in 1999 as an investment company owned by ESKOM with an interest in operating outside of South Africa. It was largely a vehicle for expansion outside of Southern Africa, synchronised with the export-oriented economy of GEAR and, consequently, saw 32 bids and projects in Africa, with another nine elsewhere (Greenberg, 2009: 90-91).

These processes also saw ESKOM systematically increase charges above the inflation rate. NERSA helped map the picture in a May 2008 report:

> The electricity supply industry in South Africa comprises ESKOM, a state owned enterprise that generates 92% of the electricity in South Africa. The other 8% comprises power imports (4.5%) and power generated by municipalities (0.5%), private generators (3%). ESKOM imports 4.5% of the electricity supplied and exports 5.5% of the electricity sales in South Africa. Private generators include independent power producers and co-generation by industries such as Sasol and the sugar industry. ESKOM is also the only national transmitter and system operator. ESKOM distributes and retails 60% of electricity sales in South Africa, to 40% of the electricity customers. The remaining 40% electricity is sold to 60% of electricity customers by 184 licensed municipalities and a small number of private distributors.

ESKOM has a diversified customer base, as depicted in the chart below (ESKOM Factor, 2011). Residential users consume a minority of ESKOM power, even though they comprise the majority of customers.

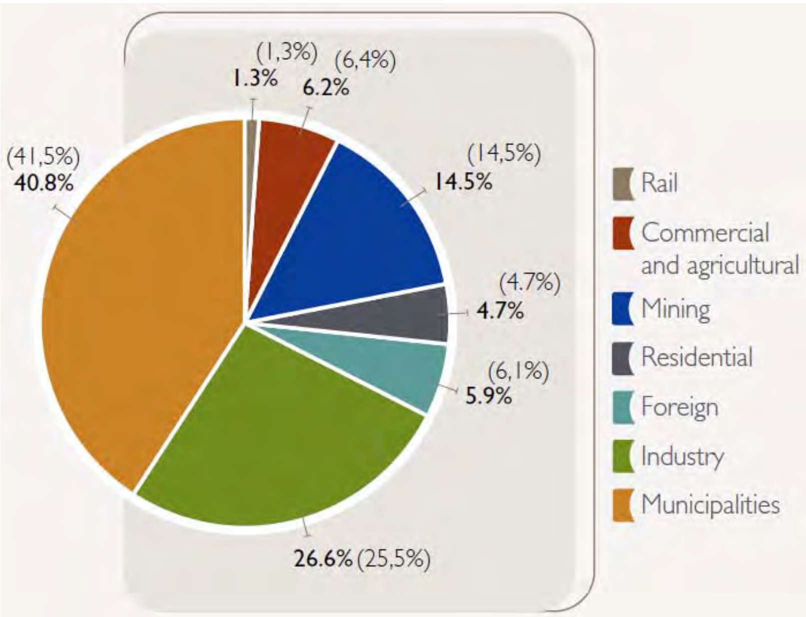


Chart 5.2.1: ESKOM customer base
Source: ESKOM (2011)

The chart above shows residential users at 4.7%, but refers to residential users who are directly supplied by ESKOM. Most municipalities resell power from ESKOM to commercial, government and residential users in their boundaries, with a mark-up. One respondent, Professor Sampson Mamphweli, Director of the Centre for Renewable and Sustainable Energy Studies at Stellenbosch University, noted that large metros home to significant industries were the largest buyers and resellers of power (Mamphweli, 2019: email). He provided the following chart:

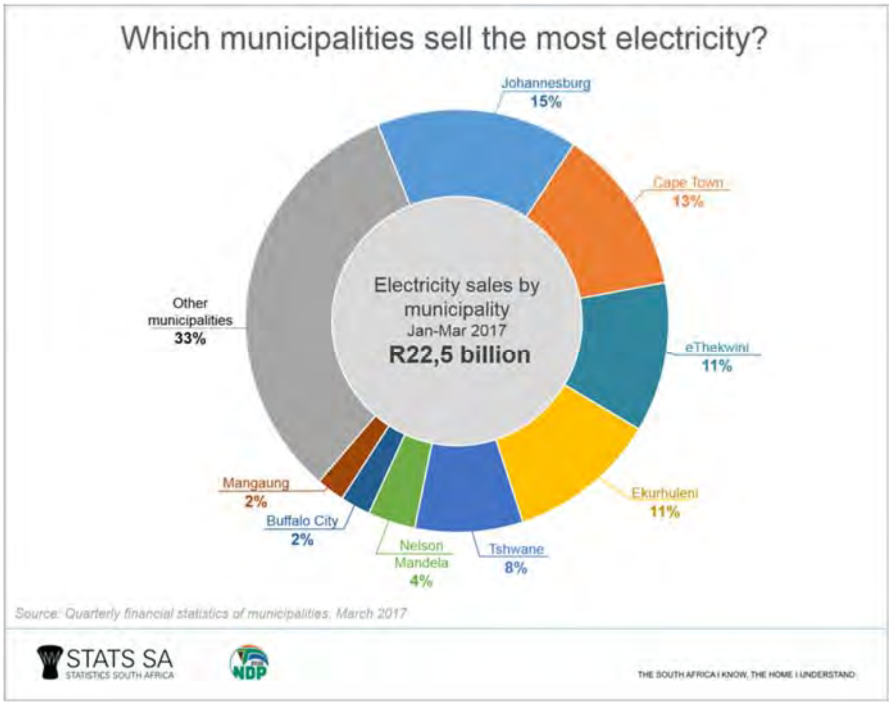


Chart 5.2.2: municipalities selling the most electricity in South Africa
Source: Stats SA (2017)

NERSA reported that ESKOM imports 4.5% and exports 5.5% of the electricity supplied in South Africa. NERSA (2008:3) provided a more detailed overview of the groups of users in Table 5.2.1.

Customer Group	Electricity consumption	Number of consumers
Residential	17%	7.5 million
Agriculture	3%	103 000
Commercial	13%	255 000
Mining	15%	1 100
Industry/manufacturing	38%	33 000
Transport	3%	1 800

Customer Group	Electricity consumption	Number of consumers
Exports[4]	6%	7
Own use of distributors	5%	
Total	100%	7.9 million

Table 5.2.1 South African profile based on NERSA: Electricity supply statistics for South Africa 2007
Source: NERSA (2008)

This shows that residential users (comprising 7.5 million consumers, mostly households) were using 17% of power, while commercial operations, industry/ manufacturing, mining and agriculture accounted for 59%.

One of the major changes in the ESKOM user base, to the credit of state corporations, was the massive rollout of power to historically neglected black residents. Linked to this, ESKOM completed 191 585 connections under the Department of Energy's electrification programme (ESKOM Integrated Report, 2019). Greenberg (2009: 85) explained that, from 1987, ESKOM started a black residential electrification programme under the pay-off line, "Electricity for All". Soon after the 1994 election, the post-apartheid state asked of each of the parastatals a set of "RDP commitments" (Khoza, 2019: personal interview). Besides electrifying homes, the utility agreed to embark on an affirmative action programme at managerial, professional and supervisory levels, and to educate and train employees to upgrade skills. ESKOM also undertook to "maintain transparency and worker consultation in decision-making" (Khoza, 2019: personal interview). It further undertook to contribute R50 million a year to the electrification of schools and clinics, and other community development activities. Notably, ESKOM undertook to finance its commitments to the RDP from its own resources and international development funding (Khoza, 2019: personal interview). It made a further commitment to reduce the real price of electricity by 15% between 1995 and 2000 and to keep connection charges as low as possible.

In 1994, the RDP set an electrification target of 2.5 million household connections by 2000 (450 000 connections per year), and all schools and clinics as soon as possible. ESKOM integrated its programme into the RDP targets, aiming for 1.75-million

[4] ESKOM imports 4.5% and exports 5.5% of the electricity supplied in South Africa.

household connections (300 000 per year) (Khoza, 2019: personal interview). The ESKOM chairperson at the time suggested that 300 000 homes were electrified per annum from 1997 to 2002. Notably, each one of those houses connected were given access to a number of other things, including electric stoves and refrigeration, which in turn benefited industries, namely the suppliers of those stoves and refrigerators. The impact therefore was not only on the RDP, but also the life and lifestyle of South Africans. The children who lived in those RDP houses, for example, had studied by lanterns or candlelight but now had access to electricity, enabling them to study better.

Anton Eberhard, an energy expert and Professor Emeritus at the University of Cape Town (Eberhard, 2019: personal interview), commented:

> ESKOM actually started its electrification programme a little earlier. So, this is one of the interesting things about ESKOM, is that so that the political environment is going to change, it's so that the ANC was unbanned and that we would have democracy and that there would be a big demand for, to expand electrification. Remember in 1990, two out of three South Africans did not have access to electricity. It's amazing to actually remember that people in their homes did not have electricity. So, ESKOM started its electrification programme in the early 1990s and it started, I remember they had a programme in Alexandra and Soweto and other places.
>
> And then when the RDP started, it was actually well positioned to respond very positively and to expand the electrification programme. So the fact of the RDP was to increase the number of connections that ESKOM planned to do very significantly. And in retrospect, we have to say that the electricity component of the RDP was the most effective of all the electrification programmes, more effective than houses, more effective than water or any of the others, because we're now sitting at close to 90% of households who have access to electricity and that's an extraordinary story. It's actually one of the world's most rapid electrification programmes. And of course, it wasn't just ESKOM, right: I mean so ESKOM did about half the connections, or just over half and municipalities did the other half.

As former ESKOM Chairperson Dr Khoza (2019: personal interview) noted:

> The key manifestation of the RDP were actually the so-called RDP houses, now ESKOM stood ready to electrify all of those houses that were built as that RDP programme. From 1997 to 2002, ESKOM was connecting on average a thousand homes a day. More than 300 000 homes per annum and each one of those houses that were connected actually was given access to a number of things: an electric stove, refrigeration; all of that benefited the number of industries, suppliers of electric stoves, suppliers of refrigerators.
>
> So, the impact was not only on the RDP, but the life and lifestyle of South Africans was impacted extremely positively. The children who might have lived in those RDP houses using lanterns or candles had access to electricity that enabled them to study even much better, so there's not a single walk of life in the country that was not positively impacted, let alone just the RDP.

Professor Mamphweli from Stellenbosch University asserted (Mamphweli, 2019: email):

> … in 1995 less than 13 million South Africans (40% of the population) had access to electricity. ESKOM then started a programme to electrify villages and townships across the country to increase access to affordable electricity. In 2002, ESKOM was restructured as a public company, ESKOM Holdings Limited. ESKOM also went through the process of transformation achieving its 45% target of employees in managerial, supervisory and professional positions being black. The transformation phase was not an easy phase as well. ESKOM also had to capacitate black professionals and engineers during the process through educating them…

Another respondent, ESKOM executive responsible for finance and economic regulation Deon Joubert (Joubert, 2019: email), explained that ESKOM supported government's developmental agenda through electrification (now the highest in Africa), social activities and investments, learnerships and pipelines, procurement from SMMEs and previously disadvantaged businesses, and affirmative action. It perhaps missed the fact that the single biggest contribution ESKOM could make to uplift previously disadvantaged people would be to operate as efficiently as possible to produce adequate, reliable and cost-efficient electricity, so as to contribute to economic growth and job creation in South Africa.

Khorommbi Bongwe, Chief Director: Integrated National Electrification Programme at the Department of Energy, noted that the RDP policy affected ESKOM positively "in the sense that on a positive side they have connected more households to grid electrification and collecting revenue from those communities" (Bongwe, 2019: email). On the other side, "[i]n the negative, we have noted that most communities residing on the metro municipalities are connected illegally and not paying electricity, e.g. some parts of Soweto" (Bongwe, 2019: email).

According to Dr Jarrad Wright, Principal Engineer at the CSIR's Energy Centre (Wright, 2019: personal interview):

> … since ESKOM have been around in 1923 …, they've pretty much played the developmental role in different contexts. Of course pre-[1994] ,,, ESKOM's role was predominantly industrial development, not really electrification and access because it wasn't a priority for the dominant portion of our population. It was obviously focused on a lot of white citizens of the country. Post-apartheid, post 1994 that obviously changed as it should to focus on significant deployment of electrical networks for electrification purposes to provide electricity access to as many households as possible.
>
> That was actually done quite well over the last 25 years. Almost 25 years and we've gone from very-very low electricity access rates pre-1994, to just above 85% electrification access now in South Africa. That's predominantly driven by combination of ESKOM and municipalities funded via the Department of Minerals and Energy in accordance with what's called the Integrated National Electrification Programme (INEP).
>
> When I talk about that pre- and post-apartheid sort of mandate, the developmental mandate was there, but there was also a very strong focus on industrial development and this has seen the minerals-industrial complex gain traction. And that policy was then enacted via trying to ensure that tariffs were kept as low as possible, specifically for the industry. So, large mining houses, big mineral processing companies they were given very special concessionary agreements to have very low tariffs and the policy was always to keep tariffs as low as possible for industry, specifically the energy intensive industry so that those industries can expand and grow the economy.

However, in line with its new pricing model and neoliberal directives, ESKOM had begun to raise electricity prices for users, aiming at full cost recovery. Rates for households, already higher than those for industry, rose sharply, especially for township areas where flat rates were phased out and per-unit prices were often higher than in suburbs (MacDonald, 2002: 27). A key instrument was the prepaid metering systems, which allowed for self-disconnection. The effect of rising prices and stricter cost recovery was that many people on the grid were either disconnected (Greenberg, 2006) or remained on the network illegally, a problem of large-scale non-payment (see next section for more on residential and municipal debt).

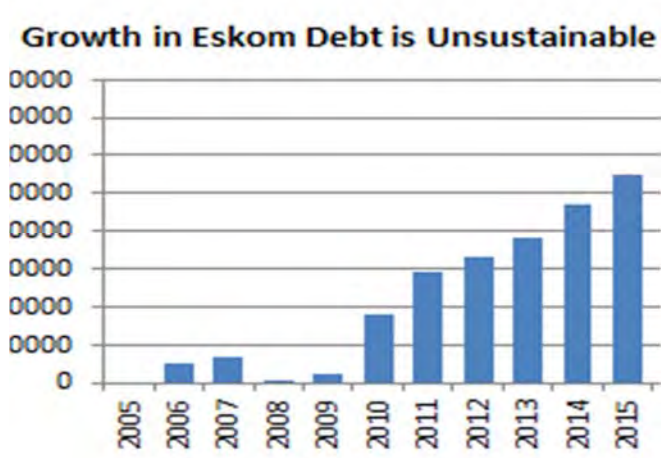
Tough cost recovery and rising prices were controversial in black townships. Protests, legal challenges and political considerations saw the ANC government make an important concession in the form of a system of free basic electricity (FBE) for poorer households, which was rolled out from 2003. Ruiters (2009:248) observed that the FBE allowance was 50kWh per household per month, deemed sufficient to provide basic services for a poor household. The aim of FBE was to support indigent households on the national electricity grid in meeting their basic energy needs. The FBE allocation was calculated as sufficient to provide basic heating of water using a kettle, basic ironing, and power for a small television set and radio. Access is provided by local municipalities, which compile a register of indigents who qualify in terms of the municipality's indigent policy. The register is provided to ESKOM for the relatively small number of areas where the utility is the direct supplier to households (Dugard, 2009; Ruiters, 2009; ESKOM, 2018).

The system is closely tied to the installation of prepaid meters (Ruiters, 2009). The meters are either set to permit FBE or FBE tokens are provided. Households using more than 50kWh a month need to purchase extra units from local vendors. The argument is that meters allow customers to manage electricity consumption by purchasing via a pay-as-you-go system, monitoring use in real-time through the meters and avoiding monthly bills. The system is characterised by upfront payment, which improves municipal cash flow; there are no account posting costs, no meter readers, and no municipal disconnection and reconnection and associated fees. Implementation, however, is uneven between provinces and municipalities (Ruiters, 2009:255).

5.3. PROBLEMS POSED FOR MANUFACTURING

5.3.1 Pricing and planning challenges posed by the pricing system

As noted in Chapter 1, ESKOM no longer shows a profit. The reason is that the utility has massive and growing debt that it struggles to service, much of it arising from the disastrous planning and construction at the Medupi and Kusile power station projects. It is this bungling in particular that has plunged ESKOM into a debt crisis. Debt is an albatross around the neck of the giant utility: Effectively, the parastatal went from nominal debt to one that ballooned out of control, to the extent that ESKOM is unable to pay the interest on its R440-billion debt from the revenue it generates (Eberhard, 2018). The figure below shows that the debt growth is unsustainable:



Graph 5.3.1 ESKOM Debt
Source: Eberhard (2018)

This should not distract us from the concrete facts that ESKOM seeks profits, and was very profitable until the late 2000s; that its debt crisis is heavily, although not totally, linked to neoliberalism (Sizovuka & Van der Walt, 2013); and that ESKOM has continued to push prices far above inflation for more than two decades. ESKOM's reported average revenue per kilowatt-hour grew from 14.98 cents per kWh in 2002 to 90.01 cents per kWh in 2019, a fivefold increase in revenue per unit but with much higher unreliability (Roussow, 2019). For example, there were annual average price increases of 27%, 31%, 25% and 25% in the years 2008 to 2011, and further increases of 25% a year from 2012 to 2015, increasing prices fivefold in eight years (Yelland, 2011). More increases took place over the years that followed. These are averages, and there are significant variations in tariffs between categories of users – for example, as seen above, residential users pay more for a unit of power than industrial concerns – and there are also a number of special, often confidential deals with large investors (Yelland, 2011).

A crisis was, however, looming: load shedding. Former ESKOM Chief Executive Maroga (2019: personal interview) told the researcher:

> So, since 1985 … there was no Capital Development Fund. Then 1994 comes and 1998 comes and the government says [the White Paper on Energy would be the antidote to the ailing ESKOM as a utility: "ESKOM, don't prepare yourself financially for new capital investment." ESKOM didn't have the money. Government didn't put aside the money. They said the private sector would put in the money [though IPPs, but]… he private sector didn't come. So, they said: "ESKOM, go and build." But they didn't say: "ESKOM, here is the money: go and build."

Former ESKOM Chief Executive Maroga (2019: personal interview) added:

> It is cardinal to reflect on the Energy White Paper of 1998 and the non-implementation [of its plans]. ESKOM had to step in and build power stations. The 1998 White Paper's idea was to break up the vertical chain of distribution, transmission and generation. And in distribution you separate the wires and the sales, and then for new power stations you bring in IPPs and then you have, sort of you start comparing for the competitive unbundling model, which was, I mean the standard thing across the world, in the western world.
>
> And it didn't happen. And the reason it didn't happen is simple. (i) Given the price of electricity where it was, whenever you talk to a potential international investor who is likely to bring generation capacity, the first question is how much is electricity in South Africa? And it's here, and internationally the price is there.

> So, an international investor says look, I benchmark my investment on this price. (ii) The second thing is that I think we underestimated the complexity around unbundling the electricity system. And most countries that did it, it takes long and its complex. It takes time, and one must also be prepared for some unforeseen circumstances. And of the California's where they had black-outs, we know even in England, you know, major issues en route a full private and unbundling model.
>
> Then ESKOM was forced to take on the burden of building the power stations. And that was also a problem. (iii) While ESKOM was eager, we didn't have the financial muscle, because we had not prepared for this big role. In fact, government said don't prepare, at some point the government said don't even think, so you are not going to build, so don't prepare, don't put money aside, don't say you need capacity because that's going to go to the private sector. So now, and there was no funding model for new capacity. [Medupi, Kusile & Ingula] And even today, that funding model has not been resolved. (iv) We cannot avoid that at some point the unbundling must happen, because you know, across the world you have to unbundle so that you can treat each separate part with a fit for purpose, so that the commercial dynamics of each one are different. So, you need to treat them differently. If you continue to be in the same thing, like we did with the vanilla model, you'll have to, you going to find yourself, you know, either disadvantages certain parts you are looking at it as a whole.

As load shedding increased, ESKOM – which had made profits while cutting maintenance and shying away from expansion – was essentially forced to borrow money. The state refused to pay for Medupi or Kusile, which were announced in 2007. What the state offered instead was that ESKOM could raise money by raising tariffs. Former ESKOM Chief Executive Maroga (2019: personal interview) stated:

> They say: "No, no, over time, we would give you tariffs." In fact, that was a major strategic blunder. And it was the National Treasury that said [that], because the National Treasury was of the view, that the user must pay: it was that principle. But the problem with capital [for new] generation is that you have to put R200 billion upfront. Alright: now where do you get the tariffs to fund R200 billion upfront? So, in the end it defaulted [was forced into] to debt... which is guaranteed by government, alright.
>
> But you have to repay that debt!. If the tariffs are not enough… then the rating agencies look .. and say: "ESKOM has got too much debt," … . everyone is just

> saying look you've got a huge financial obligation, huge debt, low tariffs. Your rating crumbles. And, of course, the default [backer] is the state. Now we're also going to start re-rating the state, because you are risk to the State. So now it's a snowball!

What we have here is a perfect storm of entangled neoliberal policies (Sizovuka & Van der Walt: in press). The DPE wants ESKOM to cut costs and make profits, so it praises years of cuts in maintenance and staff, and a freeze on expansion in generation at ESKOM – until load shedding starts. The DTI's success in attracting investment and expanding manufacturing puts new pressure on the power grid – although the DPE mandates to ESKOM prevent the utility from keeping up with the growing demand. The National Treasury and the Department of Finance want to cut state spending, reducing subsidies to state corporations and pushing them to rely on cost recovery – and when load shedding hits, ESKOM is pushed to raise its own money after two decades of having no capital development fund. The idea is that this can be done by raising tariffs, however, tariffs do not rise sufficiently to help ESKOM (Maroga, 2019: personal interview), but do rise enough to provoke widespread protests across townships (see above) and harm private investment (see below).

As explained above, power prices are not set unilaterally by ESKOM. The corporation is mandated to provide electricity in the interest of economic growth, and to meet the needs of citizens at home. NERSA is meant to provide a regulatory framework that binds ESKOM to these goals, although, as seen above, it has permitted substantial increases. NERSA has power in that it licenses electricity suppliers, and licensees must apply to the regulator when increasing prices. ESKOM directly distributes and retails 60% of electricity, with the remaining 40% sold to licensed municipalities and a small number of private distributors who then sell it onwards (NERSA, 2018). All these distributors are licensed by NERSA and need its permission to change tariffs – ESKOM applies for multi-year changes for revenue and annual changes for retail tariffs, while municipalities and private distributors apply annually – and the final tariffs are set by NERSA after inputs from all stakeholders (including unions and the public) and in line with national policy (NERSA, 2018-2019: 4).

NERSA agrees that prices must enable cost recovery plus a "reasonable return" (NERSA, 2018-2019: 1). It has also obviously allowed ESKOM to consistently raise prices well above inflation. Rapidly rising prices is one of the causes of ESKOM's growing debt, in that many consumers struggle to pay. Debt from municipalities to ESKOM, as well as from residents directly supplied by ESKOM, as in Soweto, has jumped to nearly R40 billion (Staff Writer, 2019).

Steadily rising prices, well above inflation rates, and the tendency of prices to be adjusted through applications to NERSA every year (municipalities), or every three years (ESKOM), have caused problems for industry. In looking at this situation, it is important to note that the almost static growth in electricity use in South Africa is not simply due to ESKOM policies. Anton Eberhard, energy expert and Professor Emeritus at the University of Cape Town (Eberhard, 2019: personal interview), told the researcher that economic growth needs electricity and has historically tended to lead to more demand for power:

> In the last 12 years we've seen that relationship change. I mean if one plotted economic growth now versus electricity consumption over the last three decades you'll see that from 2007 it starts diverting really so that we are seeing a very slow and negative electricity growth over the last decade and the expansion of the economy. In fact the key date is really 1998. It is from 1998 that we see the energy intensity of the economy declining. In other words, you look at kilowatt hours per GDP, it reached its most intensive peak in 1998. And South Africa started to become a less energy-intensive economy since then.
>
> And I think for a number of reasons. I think primarily it's around structural change to the economy, so we've seen the decline of the private sector, mining in particular and we've seen the growth [of] secondary and tertiary sectors. And obviously secondary and tertiary sectors, particularly the tertiary sector, service sector obviously uses a lot … less energy. And so the economy has become less electricity-intensive.

Mpho Makwana (2019: personal interview), who served on the ESKOM Board for nine year and is the current Chairperson of JSE-listed ArcelorMittal South Africa, suggested that demand was stagnant due to economic changes:

> Central to note is that industrialisation has now taken a different meaning through the Fourth Industrial Revolution. So each of the key power users in South Africa needs to

> begin to look at how they play their own part capabilities to generate their own power with minimum reliance to ESKOM. Also because the growth prospect of South Africa's economy currently lie largely in the area of services, banking, ICT rather than mining. Mining is declining in South Africa and traditional … what we will call "real economy" industries, are in the decline. They've reached maturity and therefore there's a need for new manufacturing and industrial capability to be explored in South Africa and for that to happen you can't rely on the old business model of ESKOM. You need a new way, new approach, and different business model.

There is, however, good reason to believe that stagnation in electricity use is driven from the supply side. As noted earlier, manufacturing and mining remain large parts of the economy. According to Jarrad Wright, Principal Engineer (Wright, 2019: personal interview) at the CSIR's Energy Centre:

> [Pre-1994] the developmental mandate was there, but there was also a very strong focus on industrial development and this has seen the minerals-industrial complex gain traction. And that policy was then enacted via trying to ensure that tariffs were kept as low as possible, specifically for the industry. So, large mining houses, big mineral processing companies, they were given very special concessionary agreements to have very low tariffs and the policy was always to keep tariffs as low as possible for industry, specifically the energy intensive industry so that those industries can expand and grow the economy.

With the new system, industry pays lower rates than residents, but prices for industry have also risen sharply in comparison with the past. The EIUG of Southern Africa has called for urgent revisions in prices in "light of the threat being posed to domestic mining and industrial firms by steeply rising electricity tariffs" that have seen some large power users "already beyond the tipping point" (Sizovuka & Van der Walt: in press) Several analysts have spoken of a possible "death spiral" as ESKOM raises prices to continue operating, but in so doing drives away customers and closes industries, forcing it to raise prices even further (Roussow, 2019).

A number of respondents pointed to ongoing processes aimed at mitigating the situation. Engagements with the DTI were central to these efforts. The decline in cheap power, for example, has obvious negative effects on energy-intensive industries such as aluminium and chrome smelters. This is a key concern when looking at beneficiation. South Africa has a lot of chrome, and smelting chrome is a big opportunity. Special price concessions known as commodity-linked pricing were a big incentive for smelters to locate in South Africa. A respondent from the mining houses, Dr Tsakani Lotten Mthombeni (2019: personal interview), Chairperson of the EIUG and Group Head of Carbon and Energy at Goldfields, observed the following:

> [The ESKOM] we knew, and the ESKOM we have today, and the ESKOM to be in the next five, 10 years is fundamentally different. Things have changed both internally, within ESKOM, as well as externally. Externally, this has witnessed industries that have opted to move operations, smelting capacity, out of the country because they came in because of cheap power. Power is no longer cheap anymore.

It might seem that automotives, which uses less power, would be less affected. Some respondents and, in particular, ESKOM executive responsible for finance and economic regulation Deon Joubert argued that electricity input to the automotive industry was small in terms of total cost, and that electricity in any case was already cheap, so there was no additional incentive that could be given to the automotive industry (Joubert, 2019: email). An OEM respondent, BMW Fastening (System) Engineer Jabulane Selumane (2019: personal interview), disagreed strongly, noting that the comparison in pricing should not only be made in relation to prices within South Africa:

> … the powers that direct ESKOM have to understand that is what we are up against. Well, we cannot get electricity from or anywhere else. But unless we cannot keep the cost per unit, per kilowatt down, we can never be a globally competitive participant. Our manufactured exports are doomed to remain local contributors, and nothing to the exports … that is what we are up against.

This concern has become a consistent and dominant narrative on OEM's access to electricity. It is fuelled by the significance of access to electricity in powering the economy, and its contribution to manufacturing and FDI. A respondent from a mining house, Dr Mthombeni (2019: personal interview), who is actively involved in the EIUG of Southern Africa, stated pertinently that the decline of the manufacturing industry was not due to economic maturity or some sort of iron law imposed by economic development, but rather was a policy choice by parts of government that undermined the manufacturing drive of other parts:

> I think the country is also deindustrialising very fast. We've been promoting the knowledge economy since former President Thabo Mbeki's days, when he split Science from [the Department of] Science, Arts and Culture; Department of Science and Technology to be a standalone department. This was intended to focus and accelerate the "knowledge economy", to make sure that we can, not only depend on these mineral complexes, but also have a balance.
>
> … if you look at the rate at which we've been able to make inroads on the knowledge economy, it hasn't been, I think as successful … compared to the traditional industrialisation, mining in particular … So, we are still very much relying on mining. Johannesburg, Gauteng, was built on gold mines, gold revenue. You look at North West Province: it is all mining. Rustenburg grew up because of platinum mining. You look at Mpumalanga, coal mining and a whole lot of other minerals that are there.

These remarks are supported by Mpho Makwana (2019: personal interview), a former ESKOM Board member for nine years, who agreed that the country was deindustrialising and that "each of the key power users in South Africa needs to begin to look at how they play their own part capabilities to generate their own power with minimum reliance on ESKOM".

As leading independent economic risk consultant Rob Jeffrey (2019: personal interview) noted, goods-producing industries such as mining, manufacturing, agriculture and agricultural processing are crucial job drivers in the country's economy. These industries have significant upstream and downstream linkages to other primary, secondary and tertiary sectors that make a significant contribution to the South African economy in terms of GDP, industrial output, employment, compensation, government revenue, exports and capital investment. The Manufacturing Circle's former Executive Director, Coenraad Bezuidenhout (2019: email) noted:

> The objective was to drive the message that the health and growth of manufacturing was important in ensuring an economy that provided upward socio-economic mobility for South Africa's people, and that in order to do so, a conducive policy environment that provided certainty and predictability to manufacturing and important upstream sectors (electricity provision, water provision, agriculture and mining) and policies that

> would ensure improved off-take for South African-manufactured goods (buy local, better access to export markets…). Inclusive of this was also conducive policy to promote efficiency (incentives to promote investment in competitiveness) and innovation (IP protection, education etc.).

This perspective is similar to that of the DTI and the MIDP, which have documented the enormous contribution the automotive industry makes to the economy and employment. As this indicates, it is important to have both conducive and coordinated policies.

Setting up a competition between services and manufacturing does not assist. It is a mistake to overstate the break between heavy industry and services, since the service sector includes, for example, trucking, trains and security forces for factories; or the break between heavy industry and areas such as banking and ICT, as these are based on vast physical infrastructures that rest on mining, coal-based power and factories building equipment (Sizovuka & Van der Walt: in press). At least 10% of power worldwide is currently used in the ICT system, including its larger infrastructure – as much power as was used for global lighting in 1985 – and since coal is still the largest and fastest-growing source of electricity, the digital world is built on coal mining (Mills, 2013).

Historically, cheap ESKOM power underpinned South African industrialisation. This is amplified by former ESKOM Chairperson Dr Khoza (2019: personal interview), who asserted:

> No modern economy can function without steady supply of energy, in particular electricity. You cannot do mining, particularly deep level mining which South Africa is known for, if you don't have [a] steady supply of electricity. Electricity is cornerstone, and it largely help mitigate against the risks of all sorts of things that may be dangerous for the people who are underground. ESKOM aided and abetted companies like BHP Billiton who were in aluminium. Without ample supplies of electricity, you cannot produce aluminium. We had cheap electricity.
>
> In the main, the manufacturing industries machinery is moved by electric energy. We were also known to have very reliable and cheap electricity. I mean, in certain instances we're leading in medical research and medical technology and health services. All of

> these are dependent on reliable and steady supply of electricity whether we are talking about operating in theatre or talking about preserving medication all of those are essentially dependent on electricity.
>
> If you take Mozambique Aluminium (otherwise known as MOZAL), [it] came about essentially because of reliable and cheap electricity from ESKOM and in the wake of supplying that electricity to Mozambique Aluminium, we also benefited Swaziland because our transmission lines went through Swaziland, so they could tap into that as well. So, those are the benefits of industrialisation and is also largely thanks to ESKOM electricity.
>
> Education, particularly now that we are relying on [ICT] technology: without electricity even your computers can't function; even those days when we relied on this huge computer hardware that filled up offices … they had to be powered by energy. So, essentially without energy there's no movement.

ESKOM executive Deon Joubert averred (Joubert, 2019: email):

> The points that I can make are generic and apply to [the] automotive industry. Given the fact that ESKOM built an integrated power system that had a national footprint in South Africa, which was a big boost for any industrial enterprise including automotive industry, because you had it integrated and it was across so you could place a plant anywhere and you could actually access the grid.
>
> Part of the pricing in ESKOM was not to burden new customers with capital costs to bring electricity to the mines and factories. The operating model was such that wherever industries are, a few kilometres from the grid, there was a way of separating the cost of bringing power. Part of it is diluted into the part and customers pay a connection charge that is reasonable so that the cost by the customer to bring electricity is not prohibitive. So, one could posit that there was a developmental pricing.

The mining sector also benefited:

> The operating model was such that wherever industries are, a few kilometres from the grid, there was a way of separating the cost of bringing power. Some argue that the key benefit at the time was that the high-grade coal produced was utilised at power stations. This coal was also earmarked for export. This was part of the business model. In summary, balancing of the two created a solid base to drive economic synergies for the coal miners. The mining industry could build the mine on the basis of ESKOM but also seized opportunities in terms of the export of coal.

Relatively easy access to cheap electricity enabled certain striking technological paths for industry. Respondent Professor Roderick Crompton, former full-time board member at NERSA for 11 years, ESKOM Board Member and Director of the University of the Witwatersrand's African Energy Leadership Centre, stated that this cheap power was part of a set of policy choices that enabled capital intensity in industry (Crompton, 2019: email), despite South Africa being a labour surplus economy for at least the last 40 years.

The tendency of short-term changes in prices leads to significant uncertainty for investors, as it cannot be predicted what NERSA would approve and what prices could be in future. NERSA can reject or amend proposed increases and if there is significant disagreement between ESKOM and NERSA, the matter could end in litigation. Some manufacturers receive power through municipalities, where tariffs can change year-on-year, while others get power directly from ESKOM. These manufacturers and municipalities are obviously affected by the moving target of multi-year ESKOM tariff changes.

5.3.2. The challenge of an unreliable power supply

Since 1994, policymakers have grappled with what is required for effective public infrastructure, utilities, entities and civil service. Not only does this require coordination and a conducive environment, but also serious long-term planning in which the different parts mesh well rather than block one another. A respondent, former ESKOM Chief Executive Phirwa Jacob Maroga (2019: personal interview), had this to say:

> What is beginning to emerge in my head, if you look at Sanral, PRASA, Denel, ESKOM, Transnet, Public Works, water system, schools and health amongst others, is a conversation about public infrastructure that is geared for service delivery. Like energy policy, when you manage high levels of public infrastructure, you need a 25- or 30-year long-term view. I mean it is like we did, we use to have energy, integrated energy planning for 25 years.
>
> For instance, with IRP you must start being clear. You know in the next 15 years I must have these power stations. And from now onwards I must do this and be meticulous,

because if you don't do that, you'll never catch the shortage of public infrastructure. Its long-term, you need to plan it upfront, do the engineering, the budgeting, upfront. If you're going to spend R20 billion or let just say R100 billion building a power station, you can't wake up and say "I'm going to." How I'm going to fund it, so that when it comes in 15 years, I've got the money.

Then we need to also look at how we maintain it. And the maintenance also has a huge cost which must be factored into the initial planning. So, at the moment the lot of public infrastructure you build, the maintenance part is not paid for. In fact in some cases you build infrastructure, 18 months later, certain things do not work. The biggest issue post 1994, it's the issue of public infrastructure. You know China, these highly successful countries, when it comes to this public infrastructure, they are very detailed in their plans. I still wonder about how all the ESKOM will be turned around. I don't think people fully understand.

I mean if this thing continues to falter, you can't do anything with the economy. So now when it cuts across, I mean, for instance the e-tolls now are not operating. But someone must pay for that. So those things if they are not done, public infrastructure is going to be a problem.

The policy views above are supported by independent economic risk consultant Rob Jeffrey (2019: personal interview), who remarked:

… by the way people thought [planning for] 2030 [as in the NDP is not] … too far. They think 2040. Yes, it's a good number to set the target around. No, its not too far. So I think they have learnt, hopefully they have learnt in the last nine years that when the centre does not hold, nothing is expected to happen.

So, in the energy space, is the same thing. What are we aspiring to do, what is energy security for us? The World Bank defines energy security as energy that is available, that is [as] reliable as affordable. And increasingly you will hear people and it must be of low carbon, or it must be sustainable. As far as you look at things, if at the end of the day the objectives are met: affordability, accessibility and list risk option…

The context for such reflections is the third pressure that ESKOM has placed on the automotive sector, which is unreliable power supply or load shedding. From 2005 onwards, the country was hit with regular blackouts as ESKOM failed to meet demand; this situation continues at the time of writing, despite ESKOM's crushing debt to resolve it. It is very serious when we recall that ESKOM generated 92% of the country's power, and owned the only national transmitter and system operator (NERSA, 2018). The impacts of state capture on the electricity supply are undeniable, and include ESKOM awarding inflated contracts to suppliers of substandard coal, and major delays in expansion projects owing to litigation with regard to unfair tender awards (Swilling, 2017: 30, 32-33, 47-48, 54-55). It is also clear, however, that problems at the utility preceded state capture. As seen in the discussion above, ESKOM froze construction of new power stations, cut staff and maintenance, and hoped that IPPs would fill any gaps. This never happened, leading the parastatal to commission two mega-stations, Medupi and Kusile, for completion in 2015 – however, neither is fully operational, and plagued by massive cost overruns and serious design flaws (Burkhardt & Cohen, 2019).

Most proceed from the premise that, essentially, South Africa cannot grow its economy if it does not have security of electricity supply, and that it needs to be able to not only meet today's needs, but also future needs:

> Without electricity and for small to a medium-scale mining that may not have the necessary generators to generate enough electricity to continue mining, mining comes to a standstill. Depending on when the load shedding happens, there may actually be people underground so, human life gets lost. Take movement and transportation, modern economy is very heavily reliant on electricity. When there is load shedding, even the traffic lights don't work and you wind up with locked jams. There are people wasting a lot of time inside their cars when in fact they should be either at home or relaxing so that they can work and be more productive the following day. It is also generative of tension. Talking about essentially mild psychological illnesses like neurosis that renders us less functional. Load shedding affects just about everything you can think of. Lecturers in lecture rooms, pack up and go when electricity goes. So, even in terms of preparing South Africa's prosperity, you get affected" (Khoza, 2019: personal interview).

A respondent from a Johannesburg research think tank, the SAIRR's Chief Economist Ian Cruickshanks (2019: personal interview), commented:

> By the way in South Africa we have the equivalent of water shedding [referring to problems in water delivery in some regions]. It just says the ability of government to supply, whether it is ESKOM or Rand Water or whatever products, it is diminishing.

> What does that mean? Reduced … can you imagine trying to run a massive mining organisation without a massive supply of water? And how do you attract workers if you do not offer them a right type of shower every day or even occasionally? This is compounded by ESKOM's failure to keep the lights on.

Another respondent, ESKOM executive responsible for finance and economic regulation, Deon Joubert, clarified (Joubert, 2019: email):

> …the socio-economic effects caused by load shedding between 2005 and 2014 was to constrain economic growth. Without adequate economic growth, it is not possible to adequately absorb the new entrants to the job market let alone to make significant inroads into creating employment opportunities for the 30% (depending on the definition) of unemployed people. In addition, lower economic growth results in lower tax revenue to the government, which obviously limits its ability to invest in some of the main contributors to unemployment such as addressing the lack of adequate and relevant skills as required by a modern economy (starting from pre-primary education through to tertiary and vocational training). A further effect was to damage investor confidence (national and international), leading to much reduced capital investment– -- also in labour-absorbing industries such as mineral extraction, manufacturing etc. This further caused a reduction in economic activity and in GDP growth.

Automotive manufacturers have found several ways in which to cope with load shedding. Respondents from several OEMs (Motloung, 2019: personal interview; Chapman, 2019: email; Selumane, 2019: personal interview; Luhdo, 2019: email; Kruger, 2019: personal interview) indicated that they had been able to obtain exemptions from load shedding as their operations were considered industrial, and most industrial zones were excluded from load shedding by the municipalities from which they bought electricity. "We also utilise renewable energy such as solar and gas," remarked BMW's Selumane (2019: personal interview), who is one of the OEM respondents.

VWSA's Nick Chapman (2019: email) added that the Nelson Mandela Bay Metropolitan Municipality (NMB) had been aware of the negative impact of load shedding on production operations, and had managed to avoid load shedding factories in most cases. "Kudos to the NMB Metro for a proactive and visionary stance on the matter. The worst impact that we have felt is an increase in dips due to the switching.

We have been mitigating against the dips by installing uninterruptible power supply systems for control electronics across the plant," explained Chapman (2019: email).

As the preceding comments indicate, however, the impact of load shedding is far broader than simply disrupting the supply of automotive products. It affects new investment and undermines demand. In fact, new vehicle sales in South Africa were in negative territory from 2014 to 2019 (with the exception of 2017, when sales increased by a mere 1.90%, and 2018), declining from 557 703 to 552 190 units as a result of political uncertainty, economic stagnation, soaring fuel prices and ESKOM's inability to secure electricity supply (Creamer Media, 2019).

In addition, the time and money spent lobbying for support for ESKOM reform and installing alternative sources of power supply created additional costs. ESKOM executive responsible for finance and economic regulation Deon Joubert (Joubert, 2019: email) argued that security of electricity supply has a cost impact and significance. Cost impact happens both in loss of economic activity during load-shedding events and increased costs of business, such as running back-up generators, which reduces competitiveness and lowers returns on investment. The problem is evident when we factor in that OEMs in South Africa operate in a global, competitive environment, against firms and countries where power is cheap and/or reliable, and far from major markets.

5.4. CONCLUSION

This chapter has examined the neoliberal restructuring of ESKOM in both the apartheid and post-apartheid epoch. Furthermore, it has argued that the neoliberal stratagem found expression in GEAR, ASGISA, the NGP and NDP, as well as the MIDP and APDP in the automotive industry. Challenging the South African automotive industry, industrial policy, ESKOM restructuring and energy policy are scattered like the stars in the neoliberal state's approach, while wrestling with state capture, corporate capture, corruption and malfeasance. Like Sophiatown, quoted from Can Themba at the beginning of this chapter, ESKOM's restructuring has been "star scattering" within the realm of industrial policy, characterised by the state demonstrating commitment to securing economic growth through manufacturing and export orientation. Although Ebehard (2003) posited that the 1987-2001 ESKOM reforms were “slow and modest”, they were also compounded by “motives contrary to the vision of the Constitution” (Mkhabela, 2018) to the detriment of South Africa, its people and international competitiveness. If this process continues, and there is no major drive to reverse the paradigm of negativity, it will significantly complicate the swift implementation of industrial and energy policies.

It is in this context that this researcher acknowledges Berman’s lesson (Berman, 2016) that privatisation should not be seen simply as a means by which governments can raise money. There must be larger benefits for society, among them more competition, better products, greater efficiency and lower prices (Berman, 2016). To paraphrase Nolutshungu’s theoretical approach, it is significant to strike a balance in the practical application of the ideology as divided into directive politics, infiltrative politics, orientation projects and self-reliance projects, to re-examine the educational, cultural, religious and economic facilities, needs and aspirations of South Africa in an internationally competitive setting (Nolutshungu, 1982). In the final analysis, the literature reveals the theory of what Taleb (2007) terms the “black swan”, namely the disproportionate role of high-profile, hard-to-predict and rare events that are beyond the realm of normal expectations in technology, science, history and finance.

It is evident that as the South African government continues to support the automotive industry through the MIDP and APDP, impelling economic growth to a higher trajectory would be beneficial to the local industry in terms of employment creation, exports and international competitiveness. This might be true, but the “black swan” (Taleb, 2007) remains a prospect that will dog South Africa’s automotive industrial export, competitiveness and employment growth path, characterised by the reinforced neoliberal orthodox. The next chapter presents the results and interpretation of the data of the study.

CHAPTER 6
UNDERSTANDING THE PROBLEM OF POLICY CONTRADICTIONS: THEORETICAL IMPLICATIONS

> *Ours is an unequal society, one in which past distributions affect the day-to-day living conditions of the great majority of our people. The foundational values of the Constitution-the rule of law, dignity, equality, and freedom- are the foundations on which we can build our future and come to terms with our past* (Arthur Chaskalson, 2003:609).

6.1. INTRODUCTION

There are two major sets of theoretical issues that are raised by the study, and on which the data has significant bearing. The first has to do with the question of the nature of the South African state itself, and the second with the appropriate role of the state in development.

It should be clear by this point that a number of contradictory policy imperatives have been at play in post-apartheid economic policy. The South African state has adopted a largely economic liberal policy framework since around 1979 – for almost 40 years – and this approach has been expressed in national policy documents such as the NEM (1993) and GEAR (1996). The actual application of these bigger positions to and by different ministries, state-owned corporations and planning agencies, however, has not been effectively coordinated.

We have seen this with the case study of ESKOM, which underwent neoliberal economic restructuring from the mid-1980s and, by the mid-2000s, became one of the most profitable electricity utilities in the world. ESKOM was rated a success because it was profitable, had undergone corporatisation and commercialisation, and had taken major steps towards privatisation, as well as achieved major BEE targets (Shangase, 2007).

ESKOM had met its goals under GEAR in every respect. However, by meeting its own goals in terms of GEAR, it had in fact undermined the larger goals of GEAR itself and acted in ways that contradicted efforts to apply GEAR principles elsewhere in the state. As noted in earlier chapters, ESKOM's profitability was built on cutting staff and maintenance, and freezing investment. Prices rose, but reliability fell. Hopes were placed in an IPP programme that failed, while government blocked new build. The effect was clear by the mid-2000s. At the same time that ESKOM was lauded as a success in neoliberal terms – cutting costs, making profits, and acting more along the lines of a private corporation – it was proving increasingly unable to deliver on its basic mandate of reliable and cheap power supply, opening up nearly two decades of load shedding. This directly contradicted the other goals of GEAR, which centred on attracting private investment, including FDI for economic growth, job creation and increased tax revenue. Furthermore, GEAR mandated a restructuring of the automotive industry, and the MIDP and the APDP need to be seen in the context. By removing stable power, as was pushing power prices up, it directly undermined manufacturing as well as the pivotal MIDP and APDP policies that were driving the single greatest success in manufacturing post-apartheid.

But this also means that the pursuit of neoliberalism taking place at ESKOM, as part of the raft of the overarching national neoliberal economic framework, was contradicting that taking place in automotives. We can proffer the following dimensions of these contradictions: ESKOM restructuring was not coordinated with that of manufacturing, besides some scope to contest ESKOM pricing in NERSA, and there was no match-up in timetables and measures. ESKOM was measured in terms of profitability and costs only, rather than in terms of whether its changes corresponded with what was happening in other parts of state policy and the economy. Manufacturing, and by extension the DTI, had to play catch-up with emergency responses to load shedding, as if ESKOM was not a body that needed to be directly accountable to other stakeholders.

6.2. THE PLANNING PROBLEM: SILOS AND SECTORS

What accounts for this situation? There are three basic areas to look at. First, the situation involved a planning problem within ESKOM; second, the poor coordination of ESKOM planning with other parts of the state; and third, incoherent policy within the

South African fractured state. Immanent in the education system and with the advent of democracy in 1994, the state acknowledged in a 1995 report that “the tertiary education system is to a large extent characterised by rigidity and inflexibility, with each sub-sector and institution largely working in isolation” (Department of National Education, 1995: 10). Failings in the first have been the focus in a lot of literature, and have also come up repeatedly in this research.

For example, former ESKOM Chairperson Dr Khoza (2019: personal interview), noted that reliable and cheap electricity was essential to manufacturing, as was health and safety. According to Maroga (2019: personal interview), it was the cardinal force for industrialisation and the pioneer state-owned corporation geared towards economic growth. As a massive electricity provider, one of the top 13 energy utilities in the world by generation capacity and, effectively, a monopoly provider, ESKOM’s decisions carried massive risks for the entire economy and society. Even if IPPs were established, noted Stellenbosch University Professor Mamphweli (2019: email), ESKOM would be the main buyer of their power as it controls generation and distribution. That is why it is too big to fail: The country could survive if SAA closed, but not if ESKOM did. Current licensing also makes the entry of IPPs challenging, and so, Professor Mamphweli (2019: email) continued, you get small-scale alternatives, with “some customers opting to install their own renewable energy systems, especially solar systems”. ESKOM executive Deon Joubert (2019: email) added that ESKOM’s monopoly prevented competition to ensure higher profits, thereby inhibiting efficiency and productivity of the economy.

As noted, there were many poor planning decisions within ESKOM, some because of lack of foresight, some because of mismanagement, and some because of corruption. Political appointments and interference obviously played a role here. Key examples of poor planning previously mentioned include lack of foresight demonstrated by the scrapping of the Capital Development Fund in 1995, and the pursuit of profit at the cost of maintenance and by means of retrenchments and halting new build.

This was in the context of knowledge in the 1998 White Paper that “actually indicated that ESKOM would run out of capacity by 2005 and 2006 unless … immediate generation capacity actions are taken” (Khoza, 2019: personal interview). In fact, "government at the time told us not to", even though "the finance and treasury at ESKOM was actually superior to even those of banks" (Khoza, 2019: personal interview). There are many examples of mismanagement, but the most infamous must the disastrous situation of the giant Medupi and Kusile power stations. These were authorised in 2007, when load shedding was already rampant, and to date are not running properly owing to factors such as design flaws and lawsuits; they have massively overrun costs, and plunged ESKOM and the larger government into massive debt (Crompton, 2019; Roussow 2019). Corruption, notably the sourcing of unsuitable coal from Gupta-owned mines, also played a role in the mess.

Lines of reporting were not clear-cut. For example, Dr Khoza (interview, 12 April 2019), the former ESKOM Chairman outlined reporting to a multiplicity of government departments and ministries:

> It is true that as an industry, the energy industry and particular as manifested by ESKOM has to report to various, multiplicity of government departments. I remember quite well when I was at ESKOM particularly as Chairman, I had to report to Minerals and Energy, energy policy making ministry and Department of Public Enterprises as shareholder ministry. In accordance with the African Renaissance approach [of Thabo Mbeki], ESKOM had to go beyond the boundaries of South Africa. We then had to liaise with the Department of Foreign Affairs (and now they call it DIRCO, the Department of International Relations and Coordination). Then the coordination did not end there.
>
> ESKOM was seen to be the leading pollution generator. As a leading polluter, the Department of Environmental Affairs legislatively told us about how ESKOM behaves or misbehaves in upholding environmental management laws. But not only that, because we got incorporated as a company we also had to liaise with the department of Finance (National Treasury) and report to them as in when they want you to come around in terms of credit rating etc. Because the Presidency believed in Pan African presence i.e. expansion into the rest of the continent, every now and then . . . we actually got instructions or a call directly from the Presidency. And SAPS had to deal with so much violence in places like Richmond.
>
> One Sunday afternoon I got a call from President Mandela saying people are killing each other in Richmond, I believe you and I can actually help reduce that, the killing of one another at this kind of rate in mounting numbers, it's because they do that under cover of darkness, wouldn't you like to go and put these Apollo lights there? And he

> argued that the level of crime would actually drop precipitously and indeed … I mean we had Richmond in the plan, but he said I would request … I mean he was really a wonderful Oldman. He doesn't give you the instructions, he actually suggested. And then I said, yes I will bring forward by two weeks and a week later he had been monitoring … a week later a number of people being murdered dropped by a point of 80% and then he calls me back and says, "how is my billionaire doing?" and I said "Tata I'm not a billionaire" and he said, "but you are running a multibillion rand company" so you are from that advantage point … you are a billionaire and then he said 'didn't I tell you that the rate of crime will drop precipitously once we have enough light?' So, in fact at the time as chairman, in fact I reported to seven ministries. Whenever I wanted to get them to talk to one another I would go straight to the presidency and The Presidency would coordinate and we would then meet and resolve policy issues at one go.

He added:

> I don't know if you people can articulate ESKOM's vision today and whether it is still the same one or got revised. During our the time everybody could sing almost as a mantra the vision of ESKOM being that it will be a preeminent energy company of global stature. In other words, we didn't see competing with the African. This meant the preeminent African energy company. In enriching the 1998 white paper, actually indicated that ESKOM would run out of capacity by 2005 and 2006 unless immediate generation capacity actions are taken. Unfortunately, government at the time told us not to, they've had to live to regret that. On the financial side, it so happened that the finance and treasury at ESKOM was actually superior to even those of banks.

Dr Tsakani Lotten Mthombeni (2019: personal interview), Chairperson of the EIUG and Group Head of Carbon and Energy at Goldfields, averred:

> It's very confusing when the Ministry of Environment Affairs says that as a country, we are going to reduce our carbon emissions while at the same time, you cannot do clean power. You can't do renewables. So, you then ask yourself, how else are we going to make inroads into meeting the country commitments?
>
> So, policy making right now for energy industry is not coherent. It doesn't seem to talk to a single narrative of what we want to achieve. And unfortunately, you know these narratives of nine lost years, comes back to the picture, whether it is true or not. But you have policies that have been pulling at different directions, and unfortunately, when you do that, even for five years, it will take you 10 years maybe 15 years to recover. Decisions are made often time on perceptions; investment decisions are made based on semantics.

Then we come to the other side of planning, which was the failure in coordination of ESKOM planning with other parts of the state. ESKOM was housed in the DPE but also subject to oversight by the DMRE and NERSA. Its mandate was to deliver power while increasing profitability, contributing to the larger economy as well as paying its own way, without state aid. The DPE cut ESKOM costs through stalling expansion, reducing maintenance and stocks, and raising prices, which translated directly into electricity security of supply shortages that hampered the private sector. The DMRE, as the energy policy department did not act to prevent the obvious problems that would follow.

Meanwhile, decisions about trade liberalisation and measures to help firms adapt to this, like MIDP/ APDP, were based in DTI. The DTI's whose core responsibility is to drive commercial policy and industrial policy. Meaning, the MIDP aimed to provide high-quality, affordable, sustainable employment, and to enable a shift in the industry from import-substitution to export-led growth.

It seems very clear that although ESKOM/ DPE and DTI were working to the same general, rulebook, GEAR, they were not coordinating their plans or their implementation. Otherwise there would not have been a problem like ESKOM, with government instructions, freezing new investment in plant, and cutting staff and maintenance, at the very same time as DTI was driving for a massive expansion of manufacturing, which was also reliant on energy-intensive smelting operations. As seen earlier, ESKOM's inability to provide reliable electricity at the same time that it was continually raising prices disrupted mining and manufacturing and reduced FDI including big planned investments. These operations were forced to lobby for better pricing, and better supply, through bodies like the Energy Intensive User Group (as well as invest in their own power solutions – but were not permitted to have their own power stations).

While the DTI's MIDP, DPE's ESKOM restructuring and DMRE's energy policy are all located in South Africa's unashamedly capitalist and neo-liberal model, there is a lack of coordination amongst the three, and contradictions between them in implementing same neo-liberal mandates. ESKOM's failings was generated in large part by the national state itself, and framed by neo-liberalism, just as is the DTI's projects like the

MIDP, yet with the two sets of neo-liberal reforms having contradictory effects. ESKOM's supply shortfalls reflect cuts in expansion, maintenance and employment starting in the 1980s, and corruption enabled by contracts to the private sectors. These ESKOM measures were justified by the exact same neo-liberal framework that led DTI to phase out ISI and introduce the MIDP and APDP – yet they also signally undermined both the efforts of DTI to boost manufacturing and manufacturing exports, as well as GEAR commitments to a new growth path based on export-led growth.

There is evidently, in the post-apartheid epoch, a major misalignment of economic policies within the post-apartheid South African state – between how the electricity supply is managed, execution of the 1998 White Paper on Energy and how the state seeks to foster an expansion of manufacturing industries such as export-led automotive production – despite these being framed by the same broader neo-liberal framework, exemplified by GEAR, and despite both automotive sector restructuring, and ESKOM restructuring, being profoundly shaped by neo-liberal modes.

This situation of poor coordination was not unique to the ESKOM/ DPE/ DTI /DMREsituation post-apartheid. Dr. Mthombeni of the Energy Intensive User Group Goldfields (interview, 6 June 2019) stated:

> If you have a smelter in Machadodorp that employs 3 000 people that ultimately shuts down, the livelihoods of the people in that town suffers. It has the multiplier effect in the sense that for everyone employee, they support 10 people of family members. But we have not even counted yet the suppliers. So, policy making, if you were to put at the centre, job creation and you were to say how we make all these policies to talk to each other. Take all of them, don't propose anything new. Take all the policies (RDP, GEAR, New Group Path, NDP, ASGISA, JIPSA) put them on the board and show them directionally. Current sitting ministers either talk or refer to the National Development Plan (NDP). All they do is to talk about current affairs. If the Reserve Bank is a topical thing, everyone is talking about the Reserve Bank's nationalisation. No one has their eyes on the NDP. It's very concerning that Ministries and Departments cannot fix their eyes on a common pillar. So, take all those key policies from each of the departments, put them on the table and put the NDP in the middle and stress test how many on them are actually supporting aspirations of the NDP.

The problem is not new. The apartheid state was highly fractured, both within "white" South Africa and national government, and between the national, provincial and local governments, which were also segregated, and the homeland system. The post-apartheid state reduced racial fragmentation by ending segregated municipal provincial and national departments, and reintegrated the homelands. However, it remains poorly coordinated.

Nattrass (2014: 1-4) noted that South Africa's post-apartheid economic and labour market policies have been shaped by rival visions of economic development, which has contributed to policy incoherence and contestation. Data on South Africa's policy formulation and performance among a range of policy permutations more than suggest a fundamental division by tradition, ideological perspective, class, gender and historical precedent on implementation emphasis in a myriad of ways. The prevailing reality is that the innumerable policies – such as the RDP, GEAR, IPAP, NGP and NDP – lack an impeccable, integrated and systematic disciplined execution and exact a debilitating cost to South Africa as a whole. Such divergent approaches contribute to the creation and development of what Kaplan (2013) called "policy gridlock", leading to competing conceptions of reality and felt needs easily distracted led to ad-hoc drifting away from the overall policy architecture. Together the IPAP, NGP and NDP converge on employment growth as a key objective to drive South Africa into a desired state of improving the quality of lives of the citizenry. Kaplan (2013: 28) stated that there is some major overlap, differences and identification of binding constraints on further socio-economic development, and concluded that "if there is to be policy coherence in government, choices will have to be made about which set of policies is most appropriate".

I must instantly indicate that the absence of policy coherence and the visible failure to move the needle is exacerbated by the fractured nature of the state's agenda in terms of competing interests and factions in the context of economics and politics. Further, I take as a matter of common sense that at times one feels the state is deliberately obtuse in undertaking a multifaceted strategy to address this serious policy gridlock. One would like to argue that undermining the substantial effects of policy gridlock may amount to scraping the bottom of the barrel targeted at churning out mere simplistic solutions. In this situation of urgency, to keep South Africa afloat away from maladministration, the tendency to be reductionist potentially disregard the reality that changing personnel, does not amount to changing institutions. There is simultaneously a critical social situation to which Khadiagala (2011) warns that creating synergies around policy conception and implementation should not come at the expense of institutional autonomy and bureaucratic turf wars. As Ngcaweni (2013) argues that urgent reforms are undisputed and require novel imagination that would determine the path in the chronicles of post-apartheid transformation. Without reducing South Africa to becoming a post-colonial copycat, South Africa needs an orientation that could be emulated from China and other countries in East Asia where senior bureaucrats, like their post-World War II French counterparts (known as mandarins), are conscientious, self-driven reformers, initiate change and innovation (Ngcaweni, 2013).

In addressing the effects of policy gridlock (Kaplan, 2013) and chronicles of post-apartheid transformation (Ngcaweni, 2013), the state has had taken deliberate policy and structural directions that constitute essential and inseparable partners in the project of constructing a capable and competitive South Africa. With the advent of the democratic epoch in 1994, this was accomplished through the implementation of the main findings and recommendations of the 1998 Presidential Review Commission (PRC) in relation to the operation, transformation and development of the South African Public Service, and in particular to the creation of a new culture of governance. The PRC empowered the state to restructure the Office of the President and Deputy Presidenct into one department affectionately known as The Presidency and a new system was put in place through the introduction of Medium Term Strategic Framework (MTSF), Medium Term Expenditure Framework (MTEF) and the creation of five clusters aimed at fostering an integrated approach to governance thus improving government's planning, decision-making and service delivery. In summary, the clusters are (a) Economic Sectors (b) Governance and Administration (c) Justice, Crime Prevention and Security (d) Social Protection, Community and Human Development and (e) International Cooperation, Trade and Security (Masilela and Mthiyane, 2014:61).

A deep understanding and appreciation by the ANC as the ruling party reaffirmed its commitment to ensuring that the state is well-capacitated with bureaucrats imbued with the knowledge, skills and insights in order to realise its objectives. Masilela and

Mthiyane (2014) argue that a “super ministry” in the form of the RDP Office and a prime ministerial position was established in the Presidency under the leadership of Jay Nadoo. This model of a super ministry in the Presidency was subsequently disbanded as it became quickly apparent that “new ANC ministers supported by bureaucrats from the old and new regimes were unwilling to submit their expenditure plans to a super-ministry” (Masilela and Mthiyane, 2014:63). Similarly, the NDP received overwhelming support and sufficient consensus from government, ruling party, opposition parties, civil society, religious denominations, civil society organisations and parliament. The state did not draw valuable lessons learnt from the RDP imbroglio and its bizarre failure to deliver on the objectives. Johnson (2021) argues that a critical examination of the NDP reveals that “it was simply a huge unbudgeted wish-list without any timelines or any calculation as to how the various parts fitted together”.

Johnson (2021) further argues that the NPC has an enormous number of recommendations emboldened by:

> …utter desperation and gradually these become more and more sweeping – e.g. “strengthen the project design and implementation capacity of government departments”, “restore governance to top infrastructure SOEs”, “create a skilled and professional public service” or “strengthen municipal management and oversight institutions”. Each such recommendation really requires a five-year plan of its own or, in some cases, a twenty-five year plan.

Johnson’s critique may sound bold and overly alarmist but we must see it within the context of the need for less grand demands and more concrete work, with proper planning that is centrally coordinated in aims, timetables and processes of implementation, rather than just issuing more plans that are just wish lists, not tacking the problems. Some relevant indicators of South Africa’s political mechanism, executive power relations and policy implementation are recapitulated by Booysen (2011) in her study on the ANC power and state power as manifested in the centralization and centralism in the Presidency of South Africa. She argues that:

> It is widely accepted that the Presidency under Mbeki brought centralisation of power (in government) and that this was a major reason … for ANC action against him. The process

> of centralisation had been anchored in accepted constitutional mandates and governance practices, even if they attained notoriety. It was less controversial for Mbeki to have established the system of coordination to integrate government business (even if obviously centring on the Presidency) than it was for him to minimize direct ANC engagement with policy and governance (except through his circles of associates) and marginalise the Alliance partners. Mbeki was also skilful in effecting integration-coordination, always ensuring that his actions were constitutional and formalistically in line with ANC requirements (Booysen, 2011:414).

But this was not really a solution to the structural problems we have seen. It was in the Mbeki era that the (mis-)alignment of ESKOM/ DPE/ DMRE/ DTI/ auto to which I have spoken was so clearly on display. He perhaps recognised the problems, but did not fundamentally fix them, and when he was ousted by the Zuma group, things went beyond the pale.

What is clear here is that there is poor coordination within the state, where departments and operations not only often operate in distinct silos, without much material linking, but that coordination from top is poor. The state's leadership has repeatedly noted the problem, issuing ambitious plans for a "developmental state" as well as a number of detailed economic policy statements. In reality, however, these plans have had little practical effect. In the era of "state capture," matters became worse as Cabinet expanded rapidly, as Ministers and Deputy Ministers were evidently appointed on the basis of political loyalties, and as a continually expanding Cabinet rarely met.

On the basis of the analytical arguments advanced by Kaplan (2013), Ngcaweni (2013), Johnson (2021) and Booysen (2011) above, the contradiction in all this is the level of polarisation in policy formulation, execution at a time when the country is confronted by a common challenge to implement a social compact and work together to overcome challenges earlier identified. It will be false economy for one to think that all stakeholders would agree on everything, policy, ideational plans, strategy and tactics to be employed primarily because they all are products of fertile grounds of contested yet divergent approaches and battles of ideas. But there must be visceral commitment to move the needle on effective policy execution. There must be a policy centre that drives policy and shows agility and resolution. Policy formulation and execution, in their fundamental sense, are not the sole preserve of political leadership but must require decisive action by a professionalised state leadership. Indeed, without any equivocation there is no denying that the South African state is in a downward spiral, of which the next section will expand on the state, policy and corruption.

6.3. THE 'CONTRACTING STATE', POLICY AND CORRUPTION

Although Mbeki played in pivotal role in the constructing the nature of the state, coordinating fora in accordance with good governance principles guided by the constitution, the process was a hybrid of substantial progress and attendant risks. When Mbeki was forced to resign by the ANC in 2008, the architecture of the state was blithely sustained by President Kgalema Motlhante. However, the state was subsequently re-purposed towards a downward spiral during Zuma's Presidential term from 9 May 2009 to 14 February 2018 in what other scholars and academics from different South African universities called the *Betrayal of the Promise: How the Nation is Being Stolen* (Swilling et al, 2017)

Swilling et. al (2017) argued that the political project mounted by the Zuma-centred power elite was a rhetorical commitment to "radical economic transformation." The ANC's official policy documents on radical economic transformation encompass a broad range of interventions that invoked the NDP. That plan, as seen above, has been called a "huge unbudgeted wish-list without any timelines or any calculation as to how the various parts fitted together" (Johnson, 2021). Using the NDP as a point of departure, the Zuma-centred power elite emphasised the role of the SOEs, particularly their procurement spend to private providers. ESKOM and Transnet, in turn, became the primary vehicles for managing state capture, large-scale looting of state resources and the consolidation of a transnationally managed financial resource base, which in turn creates a continuous source of self-enrichment and funding for the power elite and their patronage network. The notion of "radical economic transformation" did not denote a more efficient state, or a new economic policy consensus, but served as cover for state capture, as well as becoming an ideological football kicked around by factions within the ANC and the Alliance who use the term to mean very different things.

Zuma did centralise some functions, but less to address structural problems, and more to capture resources for tiny cliques of the highly connected. A key part of this was the National Macro-Organisation of the State Project (NMOS) project, located in the Governance and Administration Cluster. At a Cluster media briefing on 28 September 2014, then-Minister Malusi Gigaba reported that the**:**

> National Macro-Organisation of the State Project (NMOS) is progressing very well. After the Presidential Pronouncement on 25 May 2014, substantial progress has been achieved for the NMOS 2014. To manage the NMOS project, a National Steering Committee has been established and is chaired by the DG in The Presidency. The steering committee consists of the DGs of centre of government departments and all affected departments. The National Steering Committee with the collaboration of affected departments – National Treasury, Department of Public Works and the State Law Advisor – provides guidance and decisions on all relevant matters.
>
> As part of the overall project management process, affected departments are required to establish Departmental Project Teams consisting of both the existing and affected departments and chaired by the DGs of those departments or delegated officials. Accordingly, a Departmental Project Team, supported by work-streams, has been established to give administrative effect to the President's announcement: The Centre of Government Departments is supporting affected departments.

If this had been part of an effective, developmental reform of the state, it would have been of great benefit. In reality, the NMOS project, launched on 4 June 2014, became one of the key channels for the repurposing of SOEs under Gigaba for state capture. Gigaba was key, having been appointed as the Minister of Public Enterprises on 1 November 2010, and engaged in the restructuring of SOE boards into mid-2014, which thereby became broadly representative of "Gupta-Zuma" interests (Swilling et. al, 2017:12).

Procurement spend was crucial, since at every level of government, there was a massive, growing contracting-out of government services to third-party providers (Brunnette et. al 2014). This was driven by neo-liberal and new public administration ideas, which argued for privatisation wherever possible, rather than in-house mechanisms. The post-apartheid state became a massive tender-generating machine, a “contracting state” based on managing, through contractual relations, private sector capacities. This required a massive capacity to regulate tens of thousands of contracts, which the government simply did not have. The door was wide open for corruption and clientelism. Brunnette *et. al* (2014:23-45) noted endemic weaknesses in the “contracting state”:

(i) Outsourcing and decentralization have been central to the post-apartheid state’s agenda.
(ii) The decentralisation agenda affects procurement acutely.
(iii) Service delivery is placed in the hands of private companies.
(iv) Supply chain management is the largest function of government departments.
(v) Procurement planning is weak.
(vi) Poor specifications mean that tenders cannot be compared objectively
(vii) Competitive tenders and exceptional procurements create an opportunity for corruption.
(viii) Supplier-performance monitoring is unregulated.
(ix) Procurement is highly fragmented and decentralised.
(x) Politicisation of public administration compromises governance

When we understand this, it is clear that Zuma-Gupta state capture at the level of the executive and use of some of the biggest state resources to engage in corruption of tenders, built on a larger system enabling corruption. The focus on SOEs and their use in corrupt tenders involved huge corruption through relatively few deals, based on the massive resources for procurement spend in ESKOM and Transnet (Sizovuka and van dee Walt, in press). This was illustrated in the Zuma presidency which pliantly became an active principal facilitator in aiding and abetting state capture for a small clique, involving loyal Cabinet ministers, top state officials, SOE boards and private corporations, the emergence of a shadow state at odds with the constitutional state (Mkhabela, 2018).

Obviously, this did not solve the problems we have noted, but inaugurated the decay of the state. Developmental and democratic state craft requires effective policy formulation and execution in an integrated fashion, in the national interest and guided by relevant legal prescripts. The era of “radical economic transformation” was dubbed the “nine lost years or nine wasted years” by new President Cyril Ramaphosa and Finance Minister Tito Mboweni at the 2019 World Economic Forum in Davos (eNCA, 23 January 2019). There is still no consensus in the ruling party on this characterisation, some like Mbeki noting some “correct” decisions did not take place despite the rot (Bond, 2020:63; Citizen, 26 March 2019; Citizen, 30 April 2019).

Neo-liberal measures, to be brief then, basically hampered administration by generating an incredibly complex, localised system of contracting out that was well beyond the ability of most parts of government to handle, but also created massive opportunities for graft and corruption. In 2012/13, the budget of national, provincial and local government combined was R 876.6 billion. National Treasury statistics show that R 372.9 billion or 42 percent of this was allocated to procurement, or the supply chain management system. Between 2009 and 2013, spending on procurement grew by an average of 10 percent annually (Brunnette *et al*, 2014). This contributed to the difficulties of coordinating policies and generated a situation of continual drift and failure in policy implementation.

6.4. CAPACITY ISSUES

Third, it is important to note that within this very fractured state, there is a problem that different parts of the state have extremely different levels of capacity to carry out their mandates. We can see this at provincial level, where for example Gauteng and the Western Cape are far better run and report far less corruption than the Eastern Cape of Free State, and at local government level, if we contrast large, relatively efficient metros like Johannesburg with, for example, a smaller more rural municipalities that are unable to maintain basic water supplies and maintenance. At a national level, there is good deal of difference between efficient departments like the DTI and SARS, and those, like Departments of Human Settlement, Water and Sanitation (DWS), Cooperative Governance and Traditional Affairs (CoGTA) as well as Home Affairs, marked by large backlogs and scandals.

This pattern is also not new. Under apartheid, racial discrimination as a policy and practice of the NP government directly contributed to the fractured and fragmented fabric of South African society. The fragmented and repressive state was manifestly flushed down the plughole to sustain and protect apartheid's decade-long rule across education, health, police, workplaces, public services and political economy in all sectors. For the purpose of this study, one would examine the education pattern and the extent of its effects on South African society as a whole.

In proffering a historical perspective on the crisis of education, Morris and Hyslop (1991) posited that the schooling system was initially not racially segregated, and this had seen both white and black students admitted in the 19th century Cape mission schools. In their examination of education in South Africa within the context of the crisis and problems of reconstruction at the time, Morris and Hyslop (1991) argued that the education system for African people was in an undesirable state of collapse and the infrastructure was in shambles, basic equipment was disintegrated and there were inadequate supplies of books. A racially segregated structure was established in which education for whites became compulsory but (initially) voluntary for black Africans, and in which funding was greatly unequal for the races. Dire warnings of the consequences and contradictions of this approach were ignored (Huddleston, 1956).

As noted in previous chapters, besides the human suffering created, the manufacturing economy developed by ISI was to be crippled by the skills shortages such a system created. This means that the NP state itself was marked by contradictions, some parts pushing for manufacturing expansion through state aid, and other parts strangling manufacturing through adverse policies such as a racist educational system. The education system also generated political instability; the "great 1976 student uprising was a warning signal that the racist fantasies of the Verwoed-Vorster era were about to be blown away by the winds of change" (Alexander, 1990: 7-14). Emblematic of how the state has failed to take decisive developmental actions, even the non-racial post-apartheid education system has still failed to address the skills crisis. Thobejane (2005: 89) noted that the new government has failed to eradicate illiteracy among youth and adults, upgrade schools, develop the professional quality of the teaching force, and create a vibrant further education and training to equip adults and youth to meet the social and economic needs of the

21st century. A raft of new policies and laws were put in place (Chisholm, 2001), but weaknesses abound. Professor Mokubung Nkomo (2013), one of South Africa's respected education academics, aptly argued:

> South Africa's education system is teetering on a slippery and dangerous slope. The choice is whether to stay mired in a state of stagnation, camouflaged by a beguiling new vocabulary of change, or to transform a crippling historic legacy through an authentic vision, one fuelled by trenchant, and sustained vigour … [tackling … institutional cultures that are routinely executed by an entrenched staff complement who are socialised with dated attitudes and practices…

As noted, the country has a serious skills shortage and a history of cadre deployment, as seen under the NP and then again under Mbeki and Zuma. The post-apartheid state tried to reverse the Afrikanerisation of government and state enterprises – which provided the NP a fiefdom and powerbase (Ginsberg, 1998: 74-76) – but the transformation of the state created some new headaches. Equity measures stirred a hornet's nest among some constituencies, and came to be seen as conflating the party and state when appointments were linked to political loyalty rather than requirements for the job.

The issue of affirmative action has been controversial. A study in 1999 of perceptions of its effects at ESKOM showed that staff did not even agree on the effects: black African, coloured and Indian employees tended to deny any loss of skills from ESKOM as a result of white employees leaving the organisation, while white employees thought there was severe loss (Leopeng, 1999: 63). There is, however, a case to be made that a narrow focus on targets saw a significant loss of white skills and institutional memory at ESKOM and other SOEs, and that the process could have been better managed (Hermann, 2015; Johnson, 2021; Pretorius, 2001).

The rising emphasis on cadre deployment played a role here. Naidoo (2013: 265) noted that the post-1994 changes in state personnel were largely a response to the discredited public service of the past, which was highly politicised under entrenched NP rule. The NP was increasingly beholden to the public service in order to maintain political control, and delegated increasing decision-making power to bureaucrats to oversee an expanding administrative agenda. The incoming ANC did not want to be undermined by this entrenched system, but in the end started pouring new wine into old bottles to control top appointments strategically and redefine the merit principle in accordance with political loyalties and considerations (Naidoo, 2013: 266; Presidential Review Commission, 1998).

This had major effects on SOEs, where the new officials were involved in dubious practices and doubtful management (Gottschalk, 2014: 101). The same problem can be seen at other levels. For example, a study Magomane (2012: 99) on the impact of cadre deployment on the Mopani local municipality in Limpopo province revealed that "cadre deployment bears a negative impact on service delivery", considering "the deployment of party cadres who do not have the skills and expertise to fill strategic positions that demands skills and accountability".

6.5. THEORISING THE SOUTH AFRICAN STATE: STATE FORM

How we analyse a problem shapes what we would see as a solution. Because of the shocking revelations in recent years of "state capture," including at ESKOM, there has been a growing tendency to see the problems in the South African state as basically due to corruption—and the Zuma leadership. This suggests the solution is to clean house, because the basics are fine, just corrupted. This takes us to a focus on the morals of individuals and better policing of criminal activity.

My analysis does not dispute the need for clean government. What I do argue is that it is not enough to look at bad individuals, or crooked networks of small corrupt and powerful groups. Corruption must be explained. What makes it possible to thrive, and what causes it to happen? It is important to locate the actions of individuals and cliques within the larger structural and historical context in which their actions have taken place. The thesis has noted endemic problems in the state, gravely undermining development and eroding the social fabric in South Africa. These are not new, and therefore a focus on the most recent and most dramatic manifestations only, and on personalities or particular networks, can generate more heat than light in understanding the evolving polity.

Corruption happened before Zuma and indeed before 1994 and therefore it must be analysed historically and sociologically since the problems are not new (Hyslop, 2005).

Large-scale high-level corruption appeared in apartheid in two major ways, first, in the push to create homelands which ended up knitted by relations of crooked patronage, and second, in "white" South Africa from the 1970s as major items (e.g. around the military) were removed form reporting and as politicians and officials, seeing the end was near, feathered their nests. Similarly, Zuma-era corruption was enabled by policies of decentralising procurement, as well as a powerful push by senior state and ANC figures to capture tenders in order to fast-track growth of a black elite (Swilling *et al*, 2017). Zuma's rise to power "in the teeth of evidence that he had been deeply implicated in the 1998 arms deal" was achieved on the back of a populist campaign, and attacks on the integrity of state security services and the authority of the courts (Daniel & Southall, 2011: 22). Unless there is recouping of the loot of state capture through the rule of law, the burden of replacing it will fall on the shoulders of the taxpayers of South Africa (Hoffman, 2021).

I am not arguing that corruption in late apartheid was on the same scale as Zuma-era "state capture," but just that there is a long history of corruption in South Africa and that it did not start with Zuma. I am not saying that all African states are corrupt, or that corruption in African states is unique to them or their main feature. But corruption is real, with serious effects, and the truth should not be adorned with emotional, sentimental or imaginative baggage (Dickens,1995). What is needed is interrogate the nuances of corruption.

Corruption is often deeply entrenched and can cross borders. Not only has "corruption on the part of Africa's leaders and public officials" played a key role in "the severity of the continent's continuing troubles", but Western powers have failed "to promote good governance and reliable democracy in Africa,", in some cases "facilitating the spread of corruption and intensifying its harmful effects" (Ganahl, 2013: 4). Western powers have been an accessory to the transnational phenomenon of corruption that crosses national borders and affects African states. For example, at the core of arms deal scandal were bribes by large Western firms.

Mkandawire (2006), however, cautions against the sweeping assumption that African politics is simply driven by neo-patrimonialism that leads to malfeasance, corruption, patronage, neoclientelism and rent-seeking. Some African states are more developmental than others, like Botswana, and sometimes the solutions presented for corruption make matters worse.

Mkandawire (1999: 82) noted that the promotion of lending by states, such as Côte d'Ivoire, Kenya, Malawi and Nigeria, sometimes compounded Africa's problems. For example, "huge sums of money were wasted on the construction of airports, palaces, and new government buildings and the purchase of arms", and in this way the avarice, desire for self-aggrandisement, and megalomania of African leaders" was enabled by "lenders awash with excess liquidity desperate for outlets" (Mkandawire, 1999: 82). With the start of a debt crisis in the 1980s, "African countries found themselves frozen out of the private financial markets" and reliant on aid from the IMF and World Bank that was attached to neo-liberal structural adjustment programmes. This weakened the institutional capacity of the state, including the capacity to reduce corruption or drive real development (Mkandawire, 2009).

I also argue that corruption itself is part of the problem at ESKOM but not the whole story. ESKOM's decisions to not to build more stations, and its large-scale retrenchments and running down of existing infrastructure happened in the Mbeki era, and did not reflect corruption or incompetent politically-appointed leaders. It reflected *official* policy and ESKOM was in fact rewarded and praised for being so profitable. Corruption also cannot explain why these measures, which come straight out of the larger process of corporatising, commercialising and trying privatise, core ESKOM operations in distribution, generation and transmission as part of a large neo-liberal policy, amplified in GEAR, was not coordinated, synchronised or modified by consideration of what was happening in trade and industrial policy at DTI, not least the very successful restructuring of auto by MIDP and APDP. As I said earlier, this pattern of poor coordination was not unique here, to this area or even to post-apartheid, as South Africa has a long history of these problems.

There is substantial literature debating the extent to which state intervention in the past fostered industrialisation, or retarded it, much focused on the strengths and weaknesses of South African ISI policies (e.g. Wilkins and Strydom, 1978; Bell, 1989, 1995; Bell and Farrell, 1997; Fine and Rustomjee, 1996; Joffe, Kaplan, Kaplinsky and Lewis, 1995; Giliomee, 2010) and if subsequent industrial policies, especially for auto and textile, were beneficial (e.g. Freund, 2019; Black, 2007; Black and Mitchell, 2002:6; Flatters, 2002; Mosoetsa, 2005:323).

The questions that this thesis raises go more to the issue policy *implementation*, and a literature that pays attention to the independent effects of state form on policy implementation (Chipkin and Meny-Gibert, 2012; Chipkin, Tshimomola and Brunette, 2014; Evans, 1989; Masilela and Mthiyane, 2014; Picard, 2005; van der Walt, Helliker and Klerck, in press; von Holdt and Maserumule, 2005; von Holdt, 2010). It is more useful to look at the problems in terms of *structures* like the South African state – and long-term path, such as the long-term *history* of South African policy-making, rather than focus completely on relatively recent events or personalities. A focus on recent events (e.g. corruption at ESKOM) or individuals (e.g. Jacob Zuma), lead to simplistic solutions e.g. changing personnel, rather than changing institutions. Churning out mere simplistic solutions, in a situation of urgency, may help keep things afloat but does not fix the boat.

One way to address this is to look at state types, and see where South Africa fits in. it then becomes possible to draw some lessons from elsewhere. I have noted how the post-apartheid state has repeatedly described itself as a "developmental state," but also how this claim falls short of reality. The term "developmental state" does however usefully point us to a valuable literature on state types.

In a highly influential paper, Evans (1989) coined the term "developmental state," as part of a larger analysis of the "third world" state. He rejected the neo-liberal argument that all state intervention that goes beyond the basics of providing law-and-order and certain public goods, was undesirable. State intervention could deliver incredible results, as in the state-led transformation of backward South Korea from war-harmed former colony to global manufacturing power in thirty years, but it could also lead to economic implosion, like in another war-harmed former colony, Zaire (now the Democratic Republic of Congo) which started off wealthier than South Korea but is today poorer than in colonial times.

In Korea, the state was meritocratic, the bureaucracy relatively insulated from politicians, and economic policy was highly centralised but at the same time the state was able to adjust policy fairly quickly and make tough decisions (Evans, 1989). Political elites were closely linked to economic elites ("embedded autonomy") which meant there was a flow of information and personnel, and some balance between the two powers but that the state was also able to act against specific private interests for the greater good where needed. This was a “developmental state” that was able to carry out an industrial transformation of the country (Evans, 1989). It could develop effective plans, adjust then, and implement them well.

In Zaire, there was a kleptocratic “predatory state.” It was an “incoherent absolutist domination” that saw the state loot the country, collapsing infrastructure and law-and-order, as corruption and maladministration became the order of the day. Jobs were given to clients, wealth was extracted and used to reward allies, and siphoned out the national economy, and the country moved to the bottomless pit in the world’s pecking order consigning the population to desolate conditions worse than they suffered under the Belgian colonial state. Corruption did happen in Korea but not in a way that collapsed the transformative capacity of the state, but in Zaire, it was so widespread that eventually the state could not even pay its troops. The state was literally where the elite accumulated wealth, but this was done through corrupt extraction of resources not through investment and industrialisation.

Neither extreme seems to properly describe South Africa. For example, elements of the current South African state like DTI seem developmental. The fact that “state capture” was challenged is also important. One would like to make a case that South Africa is an “intermediate” state, in Evans’ (1989) terms. This means a state that is between the two extremes, with features of both. Evans gave Brazil as an example. There are “pockets of efficiency” in the state bureaucracy and departments and provinces that can drive “developmental” change, but there are also parts of the state based on favouritism, ineptitude and capture by rural (non-industrial) elites. Some parts of the state are agile, have clear career paths, an ethic of public service and professionalism. The big problem is that in this fractured state, there is not adequate coordination and synergy between parts of the state, which limits development and can lead to serious misfire.

In South Africa, as indicated earlier, there are “pockets of efficiency” (arguably the DTI), which also has a sort of “embedded autonomy” by being located in networks of manufacturers, which have some input into governance and administration. For instance, Representatives of OEMs – BMW South Africa, Ford, Toyota, VW South

Africa and Nissan etc. – and associations like NAAMSA, NACAAM, Business Unity South Africa and different business associations work in the spirit of collaboration to propel the automotive industry onto a high growth trajectory. Unlike the predatory state in Zaire / DRC, the state in South Africa (like Brazil) is not completely captured by a small elite which can do as it pleases but is constrained by outside forces in the society.

At the same time, it is clear that there are many areas where favouritism, ineptitude and corruption hold sway (including parts of ESKOM and the DPE, as the "state capture" revelations have shown), and that in these the state is indeed used for a private vehicle to extract wealth without any return for the society, in the form of investment or industrialisation (e.g. Swilling *et al*, 2017). Networks like those around DTI coexist with state capture networks like those around DPE and ESKOM.

This is a fractured state where different parts do not always work together and different parts also have very different capacities. Edigheji (2007: 48) argued that a "developmental" state "knowledgeable and insulated bureaucratic elites" who have the professional skills and capabilities to conceptualize long-term solutions for the country's development, a state on the lines of Max Weber's ideal-type modern state. The South African state has elements of this but not all parts of the civil service, including at senior level, are knowledgeable or professional or able to implement long-term plans, and bureaucratic elites are clearly not coordinated.

This aligns with the views of Picard (2005) that the South African state is fractured, and deeply shaped by systems of patronage and inefficiency dating back to the apartheid period. This is brings us closer to a Weberian approach, which argues that state actors can have interests of their own, which can contradict those of capital (e.g. Evans, Rueschemer and Skocpol, 1985). It also raises questions about Marxist analyses that see then state as obviously serving the immediate or "ultimate" interests of the capitalists, as with Lenin's description of the state as a body of armed men serving capital:" the state can frustrate, undermine and defy the wishes of even big capital in order to serve the needs of senior state officials (van der Walt, 2017) as the ESKOM debacle shows.

There is no denying that the South African state has serious capacity problems and bad coordination, and this began before 1994. Hyslop (2005) for example has examined and explored state capacity and coherence as it relates to corruption during the pre-apartheid, apartheid and post-apartheid epochs and argued that patronage, rent-seeking and avarice existed within the former white state and its homelands but also within the new democratic state and the national liberation movement. This has affected the statecraft of the democratic state. By 2005, there was ample evidence with corruption, malpractice and maladministration found expression in Travelgate, the Arms deal, patronage relationships/networks, nepotism, (mis)application of policy, perceived or real permissibility/normality for politicians to lie, and general inefficiency and incoherence.

This is far from the "developmental state" outlined by Chang (1996), Edigheji (2007) and Evans (1989, 1995). For example, the merger of the ruling party and the state, seen under the NP, continues under the ANC, along with corruption, maladministration, and patronage. Nattrass (2014) argues that corruption is not just about individual enrichment but is a means to buy support, including from employees, unions and political factions, elements of this existed in apartheid (Hyslop, 2005; Posel, 2000), and this patronage to lower-level supporters is also part of the "intermediate" state in Brazil (Evans, 1989). Picard (2005) and Chipkin and Meny-Gibert (2012) explain this partly by direct continuity in the staff of the state, with the (corrupt) old homeland governments forming the core of the new civil service.

This situation actually has serious effects on the ability of the state to implement neo-liberal measures as well. For example, the Public Affairs Research Institute (PARI) has mapped the very complex and administratively challenging system of private procurement put in place post-apartheid. There is a State Tender Board and Procurement Forum and additional financial and technical assistance from the World Bank but the effect is that municipalities as an example are expected to track and manage thousands upon thousands of contracts – and many cannot (PARI 2014: 16).

There is no clear leadership on key issues, and clearly there is not what Raditlhalo (2014) advocates: a direct causal link between ethical leadership and organisational effectiveness guided by the principles of probity, honesty, integrity and moral authority garnered over years of unflinching service to humanity. The South African state is trapped in a general leadership deficit. This has had serious effects, "making the government almost wholly impotent" in the face of serious problems, a "disastrous torpor and inefficiency" extending into state-owned corporations and other official bodies despite the political class and civil service getting an ever-larger share of the national income (Johnson, 2015:146-47).

Summing up, South Africa does not have a "developmental state" even if claims to have one or hopes for one. It only has elements of one, alongside elements of a predatory state. South Africa has an "intermediate" state with developmental and predatory features combined.

The question is whether it will remain in this intermediate position, or whether it can be shifted to one or other extreme. A predatory state is completely undesirable can help South Africa solve its many problems. A developmental state has a genuine commitment to prioritise, set broad, shared win support built by virtue of the legitimacy of the project for shared growth (Evans, 1989). It protects, remunerates and prioritise merit-based recruitment and performance-based career-track throughout the public sector (Weiss, 2010:17-20). It favours high performance standards, cooperation between government and industry, and state-owned corporations used for socio-economic aims (e.g. Pillay, 2011:17).

6.6. THEORISING THE SOUTH AFRICAN STATE: STATE ROLE

The push towards neo-liberalism, or a liberal free-market economy, had opponents inside the apartheid government in its last years and also outside it. Post-apartheid, it has been challenged. It supports an industrial development which is market-driven with a minimalist state rather than a more interventionist role (Chang, 1996). The liberal view that the role of the state in the economy should be reduced to providing what markets cannot, on the grounds that state intervention creates problems and that markets, left to themselves, solve problems. It is certainly clear that many current policies in South Africa have adopted the doctrine of liberal economics, as we saw with GEAR in 1996.

GEAR proceeded from the premise that inflation will not erode competitiveness due to deficit reduction releasing the pressure on the capital market, facilitates domestic resources into industrial development and contributes to the overall financial stability of the economy through infrastructure crowd in private investment and greater flexibility in the labour market regulatory framework. Furthermore, GEAR posited that the exchange control liberalisation is designed as a balance which will enhance economic activity for corporate entities who operate in the field of export and import goods, institutional investors allowed foreign currency transfers bolstered by policies directed specifically at foreign investors inclusive of relaxation of access to domestic credit and enhancing productivity to boost trade, investment and small enterprises (Department of Finance, 1996). As Nolutshungu (1982:40) noted, liberals wish the state to be limited, with a focus on enforcing and enabling market and property relations. Here, society is seen as made of colliding individuals, and this means that “existence is reduced to the random outcome of the calculation of fleeting interests” (Praeg 2014: xii)

As Evans (1989) noted, the argument for a free market and a small state assumes that all states have the same effects, ignoring variation in state form and state policy. Evans (1989) when looking at Brazil, South Korea and Zaire / DRC, noted that these states had a similar history including colonialism and even adopted similar ISI policies. But the outcomes were so different, despite similar histories and the same policies. So, the difference could not be due to the policies or the history, but to something else, which was the state type. ISI-based interventions by themselves could be associated with mixed gains and some serious failures (Brazil), transformation (Korea) and economic collapse (Zaire/ DRC). In Korea, the state was able to promote local industry (and use its resources to build local capitalists up) but in Zaire, growing state control of the economy and tariffs just provided new places for looting.

If South Africa’s more fractured state was a “intermediate” state type (Evans, 1989), then we can expect mixed gains and some serious failures, as in Brazil. In chapter 1 and 2, in fact I showed just this, South Africa’s (racial) ISI did lead to industrialisation but also failed at a point, because it was a low-skilled low-productivity model, which could not break into global markets. This means that, problems in South Africa’s economy were not due to state intervention as such, but due to state failures, such as poor planning, decisions and coordination, for example, building an industrial base but not investing in training most of the workforce. What makes a state “developmental” is not that it intervenes, but its intervention is successful. What makes a state “intermediate” is not that it intervenes, but that its interventions have problems in planning and implementing. What makes a state developmental, predatory or intermediate is not whether it is democratic, but its effects on the economy. For example, Brazil, South Korea and Zaire were all authoritarian states when analysed by Evans (1989), who later identified some ore while some more democratic examples of developmental states (Evans, 1995).

The liberal view suggests that free markets could have done a better job than state intervention but this ignores the successes of interventions, and how free markets can often do worse (Giliomee, 2010: 537-540). It seems clear that South African industrialisation, past and present, has relied heavily on the state and it's very likely that South Africa would never have industrialised without state intervention, specifically ISI. For example, until the 1920s, South Africa remained positioned in the global economy as a producer of raw materials and importer of manufactured goods. From 1924 onwards, a series of white-ruled South African governments, mainly Afrikaner nationalist, tried to move the country away from dependence through import-substitution-industrialisation (ISI) policies. South African ISI included successes in new parastatals that were set up (e.g Land Bank, ESKOM, ISCOR, SAR&H, ARMSCOR, IDC, DBSA) etc, older ones expanded, and there was major infrastructure development –roads, bridges, transport, electric power, hospitals, oil pipelines, some housing and the creation of large state banks and industries – driven by the state (van der Walt, Helliker and Klerck, in press).

Furthermore, policy in the automotive industry has been crucial to the expansion and development of this industry. As examined in Chapter 4, the automotive sector, which involved local assembly plants from the 1920s, was shaped by a multi-decade Local Content Programme (LCP) starting in 1961. This persisting for more than 15 years after neo-liberalism was adopted by the South African state. Phase II, starting in 1971, was intended to ensure 66% of a manufactured vehicle (by mass) was local content by 1977 (Black, 2007: 74). The main change in the 1980s was that Phase VI, starting in 1989, would calculate local content by value not mass (Bell, 1989). While Phase VI was, in a partial way, intended to prepare the industry for global competition it was only from 1995 that a decisive move to open markets, and, to help the auto industry adapt, the post-apartheid state introduced the Motor Industry Development Programme (MIDP) (Black and Bhanisi, 2007). Out of the MIDP, and its successor the APDP, South Africa was ranked 25th in respect of global vehicle production, with a market share of 0.6% in 2012 (DTI, 2013). ESKOM, which provided subsidised electricity, and the development of a local automotive sector, including a multi-decade Local Content Programme (LCP) from 1961, were part of the ISI period.

Following this, DTI efforts to adjust the auto industry to the new neo-liberal order, which include significant subsidies and careful phasing enabling South Africa to grow its automotive exports from R668 million in 1990 to R45 billion in 2005 (Black, 2007:2). This remarkable success underlines the argument that DTI is one of the "pockets of efficiency" in the post-apartheid state. The MIDP and APDP, as measures to gear the sector for global competition, still provide some state aid, and definite direction for the sector. They are not in themselves hands-off free-market measures, although the aim is to get the sector ready for a hands-off free-market situation.

This means that the success of automotive industry post-apartheid and after ISI is still linked to state intervention, and not simply to free markets. In fact, it can be severely doubted if the industry can survive without state aid, in an open market. For example, local Nissan's Gert Kruger stated (interview, 24 May 2019) that

> As a comparison, look at what happened to the motor industry in China through massive government assistance. They have made it work. We have not made it work. Australia did not make it work. So, I think this applies to a small number of other countries, who it was only at the government's financial assistance that they were kept financially nose above water. There are some nuances that the South African automotive industry is seen as a success story. But it is only a going concern because of the incentives offered by government such as access to capital, access to land, access to tax incentives and so on. Rightly or wrongly but if we do not do that, we are never going to get the benefit of all the ancillary industries that hang to the centre of that supported industry. So we are not unique. What has happened in the motor industry in Australia?

Vusumuzi Mkhungo, NUMSA's Auto and Tyre Sector Co-Ordinator, also stated (interview, 10 June 2019):

> Just an anecdote from what I learnt when I travelled abroad. A gentleman from a leading automotive manufacturer spoke about the importance of input costs in manufacturing. If we take the whole of our operation here is South Africa, let's just say that each worker has an output, we measure let's say two units per day. In the US each

> worker is responsible for five units per day. In China it is six units per day. Those are close [to big markets], we are miles way. We have not developed economically what inputs we have, and our labour forces they have to understand that as well. You know, it was a shocking indictment.

The statements above illustrate the significance of the state's support to the automotive industry. The MIDP and APDP are measures without which the South African automotive industry probably cannot survive. And if we look internationally, the same is true elsewhere as state support is also key to the motor industry through massive government assistance in countries like China, United States, Thailand and Germany amongst others. Where countries do not provide this support, as in Australia where, as we saw state investment is woefully low or non-existent in the current conjuncture, industries collapse. This shows that, even in the neo-liberal era, state support in fact remains a key part of industrialisation.

Maybe it could be replied in a neo-liberal that the disastrous state of ESKOM, which threatens the very future of South African manufacturing, suggests the opposite: that state intervention can be extremely destructive. That is clearly true, but this is too simplistic surely: South African state has both fostered and retarded industrialisation, both during apartheid (with its disastrous skills policies and lack of investment in R&D) and after (where ESKOM cutbacks, and then state capture have shaken industry). The role of ESKOM is also not all bad. The giant SOE has historically been a cornerstone of local industrialisation, and this is exactly why recent problems in ESKOM have such massive effects on manufacturing. Rather than being something outside of or a threat to industrialisation of the South African state, ESKOM has been of the one single most important and catalytic agency in the country's development.

The problems then cannot be explained by the fact of state intervention. As what Evans (1989) saw, what matter is effective intervention, in terms of good plans and good implementation. The problem however is Instead, the issue becomes one of understanding why state intervention works well in some cases, and badly in others, and the paradox we see today, of one part of the state, which runs ESKOM acting in ways that contradict that of another part, which runs the MIDP.

If we blame the problems only on state intervention, and see solutions as free-markets, then we miss the issues of what makes state intervention have positive or negative results. We also miss the fact that state intervention has been, and will continue to be, crucial to industrialisation in countries like South Africa.

6.7. CONCLUSION

This chapter examined two major sets of theoretical issues raised by my study. In doing so, the chapter explored the appropriate role of the state in development, and the constraints on development arising from South Africa's historical trajectory, as the foundational values to build the future and come to terms with the past.

Taken together, I fully agree with Edigheji's (2007: 48) argument that the state should maximise on "knowledgeable and insulated bureaucratic elites" who have the professional skills and capabilities to conceptualise long term solutions for the country's development despite opposition. In essence, it is crucial to look at economic policy and its effects rather than policy documents that have assumed the caricature of paper tigers. In addition, there is a growing body of work, that I have hopefully helped advance, on understanding how economic and industrial policy is shaped by the nature of the South African state itself, regardless of how good or bad the policies themselves are. Implementation, planning, coordination matter. The theoretical reflection and attendant competing policy imperatives looked at implementation and that means understanding the South African state.

CHAPTER 7
MAIN FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

> *There is a public advantage in the dissemination of scientific knowledge so that its veracity can be tested and so that it is universally available as a basis for material advance for all.* (Hutton, 2002: 352).

> *In public policy debates, few argue openly in terms of their own self-interest. Everything is couched in terms of general interest. Assessing how a particular policy is likely to affect the general interest requires a model, a view of how the entire system works* (Stiglitz, 2002: 217).

7.1. INTRODUCTION

The purpose of this chapter is to provide a summary of the main findings, make recommendations for further studies in this research area, and engage current proposals for the reform of ESKOM.

7.2. SUMMARY OF CORE FINDINGS AND ARGUMENTS

The aim of this study was to provide the effects of ESKOM restructuring on the South African automotive industry from 2005 to 2014, specifically looking at competing policy imperatives. This meant examining the effects of ESKOM restructuring on the South African automotive industry, a leading manufacturing sector, and the industrial policies for this sector, particularly the MIDP and APDP. This required a discussion of the history of the South African economy, the rise of state-owned corporations like ESKOM and their evolution over time, and the development of the automotive sector and industrial policy for that sector. A major issue was the transition from ISI to a neoliberal model from the late 1970s, and how this affected both ESKOM and automotives.

A key concern was to examine how the South African automotive industry has coped with the effects of the problems caused by ESKOM's restructuring, specifically rising and unpredictable prices, and the electricity supply shortages and power outages that occurred from the 2000s. In investigating this purpose statement, this researcher was guided by the exploration of the following questions:

- What was ESKOM's role and impact on the automotive industry and manufacturing sector, especially in relation to changing economic and industrial policy post-apartheid? This required an understanding of ESKOM itself, the utility's neoliberal restructuring from 1985, and its location in the state via the DPE, the DMRE and NERSA.

- What effect did the DTI's MIDP and APDP have on South Africa's automotive industry in terms of international competitiveness, investment and export promotion? This required an understanding of the automotive sector itself, how industrial policy changed from ISI to neoliberalism, and the current location and content of industrial policy for automotives in the DTI.

- How has ESKOM's neoliberal restructuring affected the automotive sector, and how has the sector coped? The evident contradictions between the neoliberal restructuring of ESKOM and the manufacturing industry needed to be discussed and explained, which required consideration of the nature and role of the state itself.

The investigation was done through interviews with key stakeholders and leaders in automotives, at ESKOM and in industrial policy, and supplemented by an examination of primary documents. Stakeholders included OEMs, government departments, SOEs, organised business, organised labour, policy analysts and academics. Nearly 30 interviews were undertaken, including with senior management from ESKOM, NERSA and business.

Chapter 2 discussed how South African ISI was based on the use of cheap and repressed black labour, protectionism, state subsidies, and the creation of large state banks and industries. ESKOM provided subsidised electricity, and the development of a local automotive sector, including a multi-decade LCP from 1961. The analysis noted, in line with Marxist scholars such as Legassick (1974, 1975) and Magubane (1996), that racist measures like those of apartheid benefitted industrialisation in keys ways. A narrow focus on the rise and racist policies of the NP, often seen as simply caused by irrational Afrikaner attitudes, ignores how many of the racist policies of apartheid were established decades before and had economic benefits for capitalism. The researcher noted the massive growth and industrialisation achieved under ISI, but Kemp (1991), the ISP (Joffe et al., 1995) and others also noted that ISI had weaknesses that were linked to racist policies, especially skill shortages and low productivity.

State-owned corporations such as ESKOM and Iscor were a major part of ISI, which as a government policy started from 1924. The state accelerated ISI from 1948, when the apartheid system of government gained currency. New parastatals were established and older ones expanded, and major infrastructure development – roads, bridges, transport, electric power, hospitals, oil pipelines, housing – was driven by the state. The IDC financed a series of industrial projects. New parastatals included Sasol, which was concerned with oil refining and the making of petrol from coal. The pattern remained that the state intervened where private capital was unable or unwilling, and directly assisted the private sector (Kemp, 1991: 187-188). By this stage much of mining, secondary industry and the financial sector were in the hands of local (white) capital, but closely tied to state aid that especially promoted Afrikaner capitalists from 1948.

A discussion was provided of the rise of automotives and ESKOM's contribution. It is clear that the apartheid state had elements of corruption, political deployment and the merger of the ruling NP and the state apparatus, and problems of poor coordination and fragmentation. For instance, corruption oiled the wheels of the homeland governments. Hyslop (2005: 783) noted that massive patronage networks, incompetence, corruption, and the issuing of trading, gambling rights and casino gambling – then illegal in "white" South Africa – in the homelands showed a proliferation of rules under the apartheid government. From the 1980s, corruption became increasingly visible in the core "white" state, which was also wracked by conflicts inside the NP, between departments and between factions (Hyslop, 2005).

Chapter 3 examined the economic and political crisis of the 1970s onwards, which not only involved economic decline and political unrest, but also a decline of ISI and a transition to neoliberalism, which dated to the late 1970s. The unravelling of apartheid and an efflorescence of corruption in the 1980s were closely linked. For example, law enforcement agencies such as the Civil Cooperation Bureau (CCB), National Intelligence and Military Intelligence built global networks of assets in support of covert operations and personal enrichment (Hyslop, 2005: 784).

The economic shift to neoliberalism is often sidelined in accounts of the transition, as these look at the political reforms that took place, ending with the 1994 democracy. But the 1980s saw the privatisation of Sasol and Iscor, and key steps to the corporatisation and commercialisation of ESKOM, and industrial policy shifts, for example, in automotives. ISI weaknesses in South Africa included a small local market and poor productivity, which meant manufacturing exports were often uncompetitive. When the ANC came into office, it continued the neoliberal shift, notably in GEAR, although it intended to promote BEE and insisted on expanding welfare. As noted in this section, South African ISI was seen to have failed, and even Cosatu-linked thinkers like the ISP were in favour of becoming globally competitive and dismissed ISI (Bezuidenhout, 2002: 385-388).

The neoliberal macro-economic approach was becoming influential everywhere, and along with it an approach to industrial policy that held direct state intervention as undesirable; the solution was the free market (Bezuidenhout, 2002: 385-388). This was the general position that the South African government adopted. There was, however, scope to allow industries to adapt to the new liberalised trade system. Chapter 4 noted that while some industries – notably apparel and textiles – collapsed, automotives thrived. Output boomed, with automotive exports rising from R668 million (1990) to R45 billion (2005) (Black, 2007: 2), becoming the leading manufacturing sector in the economy, contributing 6.2% of GDP (2010), including retail, and directly employing 93 100 at the time (Automotive Industry Export Council, 2011). In terms of exports and direct investment, automotive OEMs in South Africa have made major qualitative progress in the face of falling tariffs and changing industry incentives and investment assistance, while contending with the logistics disadvantages that come with the country's remote location.

The researcher argues that this was directly due to aid, including subsidies that the DTI provided in the form of the MIDP and the APDP. These measures are meant to prepare the industry for completely free-market conditions, but stop short of actually forcing it in a completely free market, and the researcher deems it unlikely that the industry could survive without this aid, based on research in chapter 6. For example, productivity is comparatively low, and South Africa is isolated geographically from major markets. It is, in fact, dependent on foreign OEM firms as well, since it has never managed to develop its own automotive brands. Under both ISI and the MIDP and APDP, however, these foreign firms are required to make some use of local content, which has beneficial effects.

Further, according to the South African Automotive Industry Masterplan 2035, employment and industrial growth is dependent on raising labour productivity, improved employee skills and influencing emerging industry business models to take advantage of South Africa’s labour opportunities (DTI, 2018). It is built on the Automotive Incentive Scheme (AIS) – a non-taxable grant incentive programme intended to encourage local production, administered by DTI, and the MIDP which was replaced in 2013 by the APDP, all fitting into the National Industrial Policy Framework, which has resulted in the latest iteration of the Industrial Policy Action Plan (IPAP) 2018/19-2020/21.

Chapter 5 looked at ESKOM, with close attention to how the mandate and operations of this massive state-owned corporation, the foundation of the whole economy, changed with the shift from ISI. Like local auto manufacturing, ESKOM dates to the 1920s and historically it played a key role, along with state corporations like ISCOR and SASOL in nursing a local manufacturing sector including auto. ESKOM (originally Escom) was to provide cheap, reliable power in the public interest even if it lost money, public interest here meaning mainly agriculture, manufacturing and mining, and secondarily white residents, with blacks generally neglected. By the 1970s ESKOM had become a monopoly in distribution, generation and transmission, based mainly on coal, and expanded its stations in the 1970s.

From the mid-1980s, it started to be corporatised and commercialised, part of the same reforms that saw SASOL and ISCOR sold, SAR&H becoming SATS then Transnet, and the splitting of P&T into SAPO and TELKOM. This continued post-apartheid, with the company now expected to provide electricity in black areas and make a profit while being located in the DPE and also shaped in its policy of the DMRE and NERSA. It did this but profits rested on massive job losses, declining maintenance and a freeze on new power station building. The state praised ESKOM for its profits, not noting how existing plant was deteriorating as a result, and barred new stations, hoping IPPs would fill the gap.

By the mid-2000s, there were massive problems in the power supply, leading to new stations being commissioned in 2007, which has been managed so badly that the new stations are not (to date, 2021) operating properly. "State capture" in the Zuma period targeted ESKOM and made matters much worse, as did political deployees and general malaise in the state, but is important to remember the problems at ESKOM began long before Zuma. The automotive sector took measures to avoid the worst of fallout of the ESKOM crisis but it is clear that the situation at ESKOM directly contradicts DTI (and GEAR) goals of attracting FDI and expanding manufacturing. Simply, cheap and reliable power was historically the foundation of South African industry, and rising and unpredictable prices plus load-shedding threaten the entire economy. It is striking that ESKOM did not plan for the monumental effects of losing electricity supply reliability, and that there was no direct coordination with major industries or even the DTI that could have prevented this outcome.

In fact, ESKOM has contributed to the decline of manufacturing. South African manufacturing production was running at 81.3% in 2019(South African Market Insights, n.d.). In addition, the bar chart below depicts manufacturing's declining contribution to the GDP from the 1990s to the mid-2010s:

Bar Chart 7.2.2: Manufacturing's contribution to South Africa's GDP per year
Source: South Africa's Manufacturing Industry, 2019

While lack of demand was cited as a major reason (62.2%) for underutilisation, and skilled labour shortages far less at 5.3% (South Africa's Manufacturing Industry, 2019), it is obvious that the economic disruptions as a result of load shedding have cost jobs (reducing demand) and discouraged investment. In contrast, the availability of unskilled and semi-skilled labour as well as the "problem of ignoring middle society" (Kraak, 2012: 2) contributed only 1% of the reason for underutilisation. As Professor Eberhard (2019: personal interview) noted, "the energy intensity of the economy" is declining, with a "decline of the private sector, mining and growth of secondary and tertiary sectors". Obviously, as Ian Cruickshanks (2019: personal interview) of the SAIRR noted, a country has to be attractive to investors:

> There are three interlinked factors, namely; security of asserts, cost effective reliable electricity supply and labour/trade unions coming on board and understanding what drove rewards. One motor manufacturer that has in South Africa for more than 100 years believed that if the three factors are not supported, they would not authorise a brand-new development in South Africa. They later announced that they are leaving South Africa. It was clear to them that they are not going to use the cunning proposal that South Africa is the gateway to Africa … It is apparent that the three factors are crucial and without those we cannot proceed with the development of industrialisation and the country. And

> that applies to any industry, whether it is motor industry, or any other. So, ESKOM is one of the all-important factors. And at the moment there are no apparent alternatives to the size of power demand that we have and the ability to supply it.

Chapter 6 tried to explain the contradictory policy imperatives we see here and consider the meaning for how we understand the South African state. This clearly has some implications for the question of “what is to be done?”, which is germane as post-“state capture” there are new efforts to reform ESKOM, the mess of which has also created a massive debt problem for the entire nation.

First, the researcher posited in his prognosis, echoing chapters 4 and 5, that direct state intervention could have positive effects and, in fact, without ISI and policies like MIDP, South Africa would not be a manufacturer. Second, the researcher said that ESKOM and automotive-sector restructuring come from the same raft of neo-liberal measures. However, they are not synchronised or coordinated, with the DPE/DMRE/ESKOM neo-liberal reforms not working with the DTI/automotive reforms. For example, the first group was cutting power supplies at the same time as the second group needed more and reliable power. This meant that automotive associations such as NAACAM, NAAMSA and OEMs had to scramble to manage the problems created by ESKOM. The first group was awaiting IPPs and prioritising profits by the early 2000s, while the second was working with a multi-decade programme, through the MIDP and APDP, to prepare for free markets.

While facing severe issues such as growing international competition and increased imports from rivals abroad, automotive associations had to wrestle with problems like South Africa’s declining investment credit rating and an ESKOM as one of several state-owned corporations where problems reached “tragicomic proportions” (Swilling, 2017: 30, 32-33, 47-48, 54-55). Investments also had to be made in back-up systems such as solar and gas to power access to electricity. This type of policy incoherence and misalignment of implementation, and its effects, is a shortcoming that blights the effective execution of industrial policy and echoes older incoherence and misalignment, such as the apartheid’s state’s suppression of black education at the exact time that it promoted manufacturing through ISI, which relied increasingly on the skills of black workers.

In the end, the automotive OEMs were able to avoid the worst effects of load-shedding as they were based in industrial zones, which were increasingly exempted from load-shedding by the municipalities from which they buy electricity. But this sort of solution does not address the problem. ESKOM's contribution to industrialisation historically involved a tight partnership with energy-intensive industries and manufacturing, and the fact that manufacturers had to rely on the goodwill of municipalities because ESKOM had drifted away is not cause for celebration. ESKOM, in effect, has moved away from making input costs as cheap as can be and as competitive as possible, plus providing security of electricity supply, at the time that the state and industry aimed at an expansion of manufacturing and more FDI.

The researcher argued that this showed the state was fragmented, meaning planning is not coordinated, and has uneven capacities in different parts. This means major problems arise at policy *implementation*, which can create new issues. The South African state is excellent at generating plans and more plans, but poor at carrying them out (Sizovuka & van der Walt, in press). These problems the researcher argued are not new, but could be seen in the pre-1994 government, of which a large part of the structure and employees, especially former homelands, were carried into the new state. Hence, the problems right now at ESKOM and their dissonance with what is happening in the DTI are just an example of a much bigger long-term issue.

South Africa's state is not a "predatory" state (like Zaire/DRC) or a "developmental" state as it claims (like South Korea), but combines these features as an "intermediate" type of state (like Brazil) in the terms of Evans (1989). It struggles to carry out large-scale plans that can transform the economic structure, and its bureaucracy has "pockets of excellence" and meritocracy like the DTI, right next to patronage and incompetence, as seen in the "state capture" at ESKOM. Plans are devised but poorly implemented, both in terms of coordination and basic administration. The problem is not state intervention, but badly done state intervention, and so the solution is not free markets but overhauling the state.

The above reflections is in consonance with Nkomo's caveat earlier discussed on the comparison and contrast of the apartheid and post-apartheid state of education including what should be done to bell the cat in preserving constitutional democracy. Of necessity, this requires safeguarding meritocracy, depoliticisation and de-factionalisation of the public service by completely eradicating political deployment, patronage, rent-seeking and favouritsim. The researcher argued that these have choked the well-functioning of departments and have done substantial the damage to the public service. Married to the above, the state's posture in managing the Covid-19 pandemic and attendant critical matters of the mutation or randomness of a new strain or variant of Covid-19, the procurement of large stocks of vaccines based on credible scientific information about how these would perform, their roll-out and securing open-source software to help public health authorities calls for diligent public policy execution in a highly fluid environment.

Throwing money blindly at a problem is not always a plausible thing to do. So in the considered view of the researcher, bold and focused leadership is needed to take decisions on solid vision, while cognisant of associated risks and good corporate governance to get the state working. Linked to the above, Naidoo (2010) argued that the state should take action to ensure that policies chosen for implementation can in fact be implemented, and this would include increasing popular participation in delivery.

7.3. POLICY PROPOSALS

7.3.1. Fixing the state

The Governor of the South African Reserve Bank, Lesetja Kganyago (2019) noted that we

> … don't have balanced and sustainable growth in South Africa. With an annual GDP growth rate of 1%, we barely have any growth… Government's debt to GDP ratio is moving steadily higher, and with bailouts for state owned enterprises, there are real risks we will soon have one of the debt levels amongst our emerging market peers

The urgency is widely felt to get things right. In this drive to keep South Africa afloat, there is a temptation to simplistic analyses that lead to simplistic solutions. There are two main ones at present, one stressing the need to reverse “state capture” and the other the need to unbundle and possibly privatise parts of ESKOM.

But, I have argued, the problems go much deeper. Ending “state capture” will help keep the system afloat longer but does not fix the boat. The reality is that changing personnel, does not amount to changing institutions and it does not deal with the larger failures we see in South Africa’s record of badly coordinated, badly planned and badly administered policies. For example, ESKOM is not coordinated with industry, and itself reports to a range of other bodies. It is one of several state corporations that have separate shareholder and policy ministries. For instance, Transnet and SAA’s policy departments are the Department of Transport, meanwhile their shareholder department is the DPE.

Prior to the corporatisation of ESKOM in 2001 into a Pty Ltd., notes Ted Blom (17 May 2019 email), ESKOM was heavily influenced by the Electricity Council which consisted of representatives of major industries. Dr Khoza, former ESKOM Chairman noted (interview, 15 May 2019) that

> ESKOM was seen as state-owned enterprise, it reported to the Department of Minerals and Energy, but this reporting was sort of weak in that ESKOM was set up as an industry entity until the late 80s. It is not a utility. It was almost like an industry. So, most of the industry decision were made by ESKOM as it relates to where to invest, what kind of generation to invest in and what type of tariffs. ESKOM made most of the decisions. Similarly, the conversation with industry like the mining between ESKOM and the industry was seamless. It was not mitigated or supervised by government. So, in that sense ESKOM was driving economic industrial policy and therefore intersected with the industry.

Obviously, this had problems, for example, ESKOM action/pricing favoured heavy industry and neglected township communities. It was in response, partly, to this bias that new lines of accounting were set up. But in the process effective coordination with industry fell away. It would be useful to rather have integration, plus a system of checks and balances, so that both residential and industrial users have a real input into ESKOM that goes beyond paying bills and approaching NERSA for relief. As Deon Joubert of ESKOM (10 May 2019 email), “ a one-stop shop model” also holds significant risks as it greatly diminishes healthy checks and balances. But what has to be ended is the situation where “the SA policy environment has to a large degree been paralysed for a long time due to political factions, and appointment of people on the basis of political connections and state capture corruption agendas rather than firstly on the basis of competence and capability.” The divide between a shareholder ministry and a policy ministry can be addressed by more systemic communication and consultation. The issue is that “those ministries obviously should be talking with each other” while focussing on their core jobs (Professor Eberhard, interview, 17 July 2019).

Policies do not converge around a centre that can drive disciplined execution. This posture consequently leads to ruptures or mismatch of implementation of government policies with different emphases and timelines. In essence, defining the centre or strategic intent would help shape and contribute intellectually and contribute to evidence policy-making in this country.

Therefore, there is a need for a national and broad public policy response that could be considered to strengthen ESKOM’s contribution to the automotive industry and South Africa's post-apartheid industrial policy. This will require major reforms in the state apparatus itself, which go beyond simply personnel changes to uprooting corruption. The state needs a super-ministry to coordinate economic activities, as part of a larger meritocratic state apparatus in which the bureaucracy is insulated from political interference and “state capture,” and in which top positions are based on demonstrated education, expertise and relevant experience; the state must be streamlined, with fewer Ministerial portfolios and senior management roles in the civil service, the centralisation of tenders and accounting, better integration of related departments, and an end to consequence-free corruption and maladministration. Serious maladministration should be a criminal matter, rather than left to the discretion of party leaders to address, as developmental failures result by their nature in human rights abuses, and suffering, by the majority of the population.

As Edigheji (2007: 48) advisedly points out that in developing countries, the state requires “knowledgeable and insulated bureaucratic elites” who have the professional skills and capabilities to conceptualise long term solutions for the country’s development in accordance with Weber’s meritocracy. This is compatible with the three implications for South Africa that forged developmental states in East Asia outlined as: commit, insulate and connect. A developmental commitment means prioritise, set the broad goal and be consistent based on the support built by virtue of the legitimacy of the project for shared growth. Insulation means recruit, protect, remunerate and prioritise merit-based recruitment and performance-based track throughout the public sector.

A two-fold-connection is involved. The first connection is within the state while the second is between the state and non-state actors on government and industry to develop policy and build in performance standards to achieve results (Weiss, 2010:17-20). This also means avoiding bureaucratic turf battles, multiple and contradictory lines of accountability, consequence-free systems that do not reward excellence or punish failure, and a short-term “current affairs” approach to the fate of the national economy in a globalising world. The balace, in South Africa’s “intermediate” state type must be moved towards the “developmental” type, with “predatory” tendencies halted.

7.3.2. Fixing ESKOM

There is clearly a need for a national and broad public policy response that could be considered to strengthen ESKOM’s contribution to the automotive industry and South Africa's post-apartheid industrial policy in general. ESKOM has made fundamental contributions to industrialisation, but is in crisis. The solution that is being widely proposed is one of unbundling and opening up to the private sector and IPPs – very much what was proposed 20 years ago, but stalled with the rise of Zuma. For example, President Cyril Ramaphosa has stated:

> ESKOM is just too important to fail and will not be privatised. It holds the fortunes, at an economic level and the social life of our country, in its hands. We are restructuring it so we can allow the private sector to be our partners.” (Chabalala, 2019).

This has been welcomed by some, given how ESKOM has failed. For others, it is also needed as power systems have changed with the rise of renewable and decentralised power systems. Eberhard (2018) argues that “old vertically-integrated state-owned utility model is no longer fit for purpose,” as the “electricity sector is no longer considered a natural monopoly, and it is possible to have competition in generation and in customer choice.” Professor Rod Crompton (26 May 2019 email) argues that “the utility death spiral is a global phenomenon, ESKOM is not exempt.” This is because “the technology and market rationale (and business model) that existed for state owned vertically integrated monopolies are not appropriate for today’s technologies and markets”.

Organised labour is split on the issue. For example, Africa, Leesha Koobair (22 June 2019 email) the Strategy and Development Specialist for Motor Industry Staff Association (MISA) affiliated the moderate Federation of Unions of South Africa (FEDUSA) was cautiously supportive. Koobair argued that “by lowering barriers to entry and having access to other electricity suppliers and foreign direct investment will facilitate labour mobility, and education...drive entrepreneurship and productivity.” On the other hand, NUMSA opposes privatisation in principle, as it defends state ownership, and fears job losses among its members at ESKOM.

My study puts the issues in another light. Can the state manage ESKOM? Can it manage an ESKOM split into distribution, generation and transmission sections, or engage effectively with IPPs? The issue of unbundling or not or prevailing or not is not a magic bullet. While the basic problems around capacity and policy remain in the state, we can expect that no matter what road is taken, problems will continue. ESKOM’s restructuring through unbundling will not solve the basic problems as it is purely like dispensing an antidote that would fail to cure the deeper sickness of the patient. There are systemic structural that need to be solved, that “state capture” just made worse.

It is essential that public policy on electricity supply and is located in a larger push for policy coherence, integration and alignment and effective implementation. There needs to be a new structured interface between departments in the state, and between these and industry (and labour). ESKOM is a very technical business but has “political” mandates to ensure cheap and reliable electricity for end users and drive development (Hill, 2009). It is not good having unbundling if ESKOM cannot get the basics right, let alone get autonomous components to interact in a way that promotes the public interest, or somehow attract private investors to take on the unattractively debt-ridden components (Muller, 2019).

There also needs to be serious attention to changes that are happening. The appointment of the Presidential Commission on the Fourth Industrial Revolution (4IR) which assists government in taking advantage of the opportunities presented by the digital industrial revolution raises the need to have reliable power – but also shows that industry will change. ESKOM has to have an agile and effective business model to deal with this changing reality it also has to deal with the reality that power systems are moving towards renewable power, and that it is now increasingly feasible to have locally decentralised power supplies instead of reliance on one giant firm.

The automotive sector is evolving towards electric vehicles and away from the internal combustion engine. To this end, incentives could be programmed for adapting to this change leading in demanding green vehicle and reducing emissions. This can be a key area for ESKOM/ DPE and auto/ DTI cooperation, but will not be possible while the larger structural problems of the fragmented state remain. This is to be located in an ongoing concern with job creation. There needs to be a balance between employment growths whilst not trivialising the 4IR. This is rightly perceived by labour as a threat to jobs, especially in our low-skill society. In the words of Vusumuzi Mkhungo (Interview, 10 June 2019) of NUMSA:

> Innovation, technological development and the much vaunted Fourth Industrial Revolution has reduced the number of headcount because they put robots where you find that there were 8 people working in that area. Once you apply the robot, the robot can only live, maybe with three people. Ultimately, 5 people are offloaded from employment…

Here too thought needs to be given to linking job creation, renewables and fairness.
Due consideration should be given to draw lessons and experience from the international perspective on manufacturing process based on countries such as South Korea, France, Italy, Germany, Australia, Britain, India, Japan, United States, China and Malaysia. These countries are inextricably involved in solar panels manufacturing, solar power generation and development and are by far the largest growth market for renewables. Drawing lessons from the ESKOM Sere Wind Farm coupled with South Africa's sunshine, resources and infrastructure, it is recommended that ESKOM plies

its trade in solar panel manufacturing to do more in generating environmentally-friendly energy to improve the country's relatively poor renewable energy performance. At present, most renewables used in South Africa are imported. Local manufacturing – even if starting with attracting OEMs and using local content – could provide a massive boost to the economy, in terms of ensuring power reliability, manufacturing growth and a clean environment, with its attendant health benefits.

In light of the reality that ESKOM is in a deep financial crisis and is unable to pay the interest on its R440 billion debt, plying its trade in solar panel manufacturing could also create an additional revenue stream for the company. This researcher would like to argue that solar panel manufacturing footprint could boost ESKOM's operational efficiency, financial sustainability and long term stability in more ways than one.

Data presented earlier seems to suggest that ESKOM is responsible for supplying affordable, accessible and reliable electricity to as many customers as possible. The dichotomy of the results amongst affordability, accessibility and least risk option in the context of customers beginning to generate their own energy could be attributed to the gap in the disciplined execution of energy policy as outlined in the Integrated Resource Plan (IRP). In is in this realm that some environmentalists and non-governmental organisations are aspiring for low carbon, and sustainable energy security. In support of the environmentalists, Yelland (2018) outlines fifty actions to address ESKOM to steady the ship and steer the utility in the right direction in which he argues that the cornerstone of environmental sustainability include the (a) plan for ESKOM's role in meeting South Africa's international CO2 emission commitments, (b) decommissioning and/or ensuring environmental compliance of all non-compliant coal-fired power stations in the ESKOM fleet and (c) reducing ESKOM's water dependency through a move to low water use generation technologies. One believes it is appropriate and relevant to point out that, in a South African context, ESKOM generates its revenue from tariffs, borrowings and equity injection by the government.

Data presented in the earlier chapter seems to suggest that ESKOM's monopoly is not guaranteed and would be diluted by the emergence of renewable energy, solar energy, wind and gas technological business process reengineering in the electricity supply sector in accordance with the IRP 2010. At the heart of the operating business model is the global consciousness of climate change, thanks to the incessant media coverage coupled with shortages of oil or more costly electricity in some regions of the world, results in a very aware consumer. And because consumers are more aware, integration of this into business ethos, philosophy and products will attract business in the future (Silke, 2011:154). It can be argued that as a result of the operating business model, ESKOM has a significant contribution to make by ensuring the continuity of electricity supply to all South African citizens.

But this also needs to be located within the context of serious, long-term, effectively implemented plans for South Africa’s power supply and (re-)industrialisation. Organs of state should cooperate with one another and must complement each other in managing high levels of public infrastructure. The data presented on ESKOM highlight the need for managing large, complex national infrastructure with a 25- or 30-year long term view. Phirwa Jacob Maroga (interview, 15 May 2019), former ESKOM chief executive puts it thus:

> I mean it is like we did, we use to have energy, integrated energy planning for 25 years. For instance, with IRP you must start being clear. You know in the next 15 years I must have these power stations. And from now onwards I must do this and be meticulous, because if you don’t do that, you’ll never catch the shortage of public infrastructure. Its long term, you need to plan it upfront, do the engineering, the budgeting, upfront.
>
> Then we need to also look at how we maintain it. And the maintenance also has a huge cost which must be factored into the initial planning. So, at the moment the lot of public infrastructure that is build, the maintenance part is not paid for. In fact in some cases you build infrastructure, 18 months later, certain things do not work. The biggest issue post 1994, it’s the issue of public infrastructure. You know China, these highly successful countries, when it comes to this public infrastructure, they are very detailed in their plans.
>
> I mean if this thing continues to falter, you can’t do anything with the economy. So now when it cuts across, I mean, for instance the e-tolls now are not operating. But someone must pay for that. So those things if they are not done, public infrastructure is going to be a problem.

7.4. CONCLUSION

What is South Africa aspiring to achieve? This will be done if the country defines the centre of the energy space by conceptualising public policy posture that is receptive to private-sector principles in response to South Africa aspirational sociey. This is, in the end, a fundamentally moral, ethical and political question: What is the good society? Is it the predatory society, as seen in the “state capture” era, or ruthless exploitation, as seen in apartheid? Or is it a world where technology serves human dignity and all are treated fairly? And if, so, how do we achieve this lofty goal?

In pondering the state architecture and trajectory to be traversed, it is apt to adequately respond to the Leninism century’s old eponymous question, “What is to be done?” In many ways, the single most germane quest for effective transformation of the state is consensus building among and within all treadles of South African society, namely organised business, civil society, labour and government.

What is the way forward? This is not a multiple-choice question. It is essential to construct a developmental state that instutionalises meritocracy that suits development priorities, the public good and the multiparty system. This requires ethical politics and vision. The safeguarding, upholding and protection of ethics and good governance are the cornerstones that leaders are expected to build on to ensure transparency, accountability and sound management. As Albie Sachs (1992) noted, the “secrecy which has facilitated every kind of deceit and corruption must give way to a system of guaranteed openness … Corruption and nepotism thrive on secrecy and arbitrariness”.

What is needed is representivity, competence, impartiality and accountability (Sachs, 1992). But also needed is vision. At the award of an honorary Doctorate of Law from Fort Hare University, South Africa in 1998, Julius Kambarage Nyerere stressed that “sometimes history and circumstances confer on some individuals and countries unavoidable responsibility”, and that much responsibility lay now with the “South African leadership … We need your Vision and Vitality and Renewed Hope for Africa” (Nyerere, 1998). Likewise, Mosala (1998) argued “the challenge … is first and foremost an intellectual challenge”.

There is no denying that the South African state is in a downward spiral, but it does not have to continue. The pendulum must swing in policy and practice towards the appointment of competent, capable and skilled professionals in government and SOEs, and the excellence and integrity of public institutions and the private sector. Skills, accountability and dedication, rather than political loyalty, is key, and so is reconfiguring the state itself. This is a Herculean challenge, but grasping the nettle, driven by the courage of conviction, will ultimately birth the society South Africa seeks to construct. For if there is one feature worth nurturing in an evolving constitutional state, it is the unity of purpose and unity in action to safeguard, uphold and execute public-good policies in all spheres.

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ANNEXURE 1

INTERVIEW GUIDE/SCHEDULE FOR RESPONDENTS

SECTION A: BACKGROUND

Background

My name is Nkosana Sibuyi. I am conducting an academic research study and am attached to Rhodes University. This research study [full dissertation] is for the Doctor of Philosophy [PhD] in the Department of Sociology, Humanities Faculty [Rhodes University] [Makana/Grahamstown Campus]. The title of the research study is: *The Effects of Competing Policy Imperatives in Post-Apartheid South Africa: An analysis of the effects and larger significance of ESKOM restructuring on the South African Automotive Industry, 2005-2014.*

The research design and methodology of the study entails this questionnaire as part of the data collection methods. Respondents are selected from people who are **knowledgeable and are recognisable thought leaders** on the subject of the inquiry. On this basis of the purposive sampling technique, you have been chosen to assist me as the researcher to understand and hopefully contribute to the important national discourse on how policy developments at ESKOM affect the economy in general, and the motor industry in particular. You are respectfully and kindly requested, in your capacity as knowledgeable thought leader in this subject of inquiry, to participate in the audio-recorded face-to-face interview or to respond to the questions in the questionnaire below and send it to Nkosanasm@gmail.com. Should you be uncomfortable with some questions or unwilling to participate, kindly advise me so. In addition, you are or will be at liberty to withdraw if your expectations or concerns about your participation in this research were never anticipated.

The interview should take about 60 minutes. To verify and/or confirm the details kindly contact the supervisor of this research study as follows: Prof. Lucien Jacobus Wheatley van der Walt, Tel: 046 6038172, or email: l.vanderwalt@ru.ac.za

RESPONSES WILL BE APPRECIATED BY: DATE PROVIDED

SECTION B: BIOGRAPHICAL DATA

Name of respondent	
Company/institution/organisation	
Role or position the company/institution/organisation	
Previous position(s)	
Number of years working in the company	
Training/education	
Nationality	
Race	
Gender	
Age	
Respondent number [for researcher's use only]	

SECTION C: BACKGROUND QUESTIONS: RESPONDENT

Thank you for giving up your time. I greatly appreciate it. In starting, can I ask you a few background questions?

Background questions: The manufacturer

1. How long has your company been active and operational in the South African automotive industry?
2. Can you tell me about the firm's role in the South African economy?
   CHECKLIST: Rand value of investment in firm; number of employees, turnover per annum; firm's value as percentage of industry; firm's income as percentage of industry export volume; export volume as percentage of industry total.
3. Who are the main investors in the firm?
   CHECKLIST: Are there investors besides the parent firm?

4. What are your main products?

5. What are your main markets?
6. What industry associations is your firm part of?
7. How has the firm performed since the mid-2000s/ 2004?

SECTION D: INDUSTRIAL POLICIES – MOTOR INDUSTRY DEVELOPMENT PROGRAMME (MIDP) AND AUTOMOTIVE PRODUCTION AND DEVELOPMENT PROGRAMME (APDP)

The South African government is formally committed to promoting industrial development and to attracting both foreign and local private investment. It has a particular interest in the auto industry. In this section, I would like to explore your firm's experience of South African industrial policies.

1. What are the main industrial policies affecting your industry from 2005 to 2014?
2. The South African state has long operated a Motor Industry Development Programme (MIDP), which is today the Automotive Production and Development Programme (APDP). This is based in the Department of Trade and Industry, or the DTI.
   a. How, exactly, does the MIDP/APDP impact your firm? I would appreciate it you could focus on the period 2005 to 2014 where possible.
   b. For the same period, could you indicate how your company has responded to the MIDP/ APDP policies to:
      - promote local content? Explain
      - promote economies of scale? Explain
      - promote exports? Explain
   c. Have these policies affected your firm positively, negatively or both? Please explain.
      CHECKLIST:
      - Positives
      - Negatives
      - Impact on output
      - Impact on competitiveness
   d. Has MIDP/APDP affected your willingness to expand your business? Please elaborate.

e. Has MIDP/APDP affected your ability to expand? Please elaborate.
f. How can MIDP/APDP be improved? Please elaborate.
g. Do you think South African automotive industry can survive without MIDP/APDP support?

3. The MIDP/APDP is a flagship programme of the DTI. I am interested in understanding how a large firm, like yours, interfaces with the DTI.
   a. How, exactly, does your firm interact with the DTI? I am particularly interested in how the two parties communicate and negotiate.
   b. If problems arise with the DTI, or your firm has concerns with specific DTI actions or policies, what steps can you take to address these concerns?
4. The DTI's policies for the auto industry are widely presented as a success story as with respect to productivity, investment, competitiveness and employment creation. What do think? Why?

SECTION E: ESKOM AND THE AUTO INDUSTRY

Another major way in which the South African government affects private industry, including the auto sector, is through its role as the primary electricity provider, the state-owned ESKOM. ESKOM is primarily located in the Department of Public Enterprises. In this section, I would like to explore your firm's experience of South African government electricity supply.

1. What are the main government policies dealing with electricity supply that affected industry over the target period 2005-2014?
2. Where does your company buy electricity from? ESKOM (direct), municipality, or other (please specify).
3. How was your firm affected by ESKOM load shedding 2005-2015?
   CHECKLIST: Effect on investment; effect on employment, output, revenues; added costs, e.g. generators, ability to meet targets.
4. What steps did your firm take to alleviate the impact of load shedding on your organisation?
5. Has load-shedding affected your willingness to expand your business? Please elaborate.
6. What explains, in your view, the failure of the state, at the time, to provide a reliable and adequate electricity supply?

7. ESKOM has pushed for higher electricity tariffs over the last 20 years, and has often been successful in its applications for such, to the National Electricity Regulator of South Africa (NERSA).
   a. Can you explain the tariffs that apply to your sector and your firm?
   b. Can you indicate how your company's electrify tariffs have changed from 2005 and 2014?
   c. What percentage of your current production and manufacturing cost is attributed to electricity cost?
   d. How has rising tariffs affected your firm?
   e. Why, in your view, are electricity tariffs rising?
   f. Do you think the auto industry can survive without a cheap, reliable electricity supply?
8. Have electricity supply issues affected your willingness to expand your business? Please elaborate.
9. Have electricity supply issues affected your ability to expand? Please elaborate.
10. The last few years have revealed substantial governance problems at ESKOM. How have these affected firm, if at all? Please explain.

    CHECKLIST: Maladministration; rapid leadership changes; erratic supply, problems in getting new stations online; debt; poor revenue collection; corruption.
11. Does ESKOM provide a predictable environment for the local auto industry? Please elaborate.
12. ESKOM and the Department of Public Enterprises (DPE) are obviously key forces affecting your industry. I am interested in understanding how a large firm, like yours, interfaces with ESKOM, and with the DPE.
    a. How, exactly, does your firm interact with ESKOM? I am particularly interested in how the two parties communicate and negotiate.
    b. If problems arise with the ESKOM, or your firm has concerns with specific ESKOM actions or policies, what steps can you take to address these concerns?
    c. How, exactly, does your firm interact with DPE? I am particularly interested in how the two parties communicate and negotiate.

d. If problems arise with the DPE, or your firm has concerns with specific DPE actions or policies, what steps can you take to address these concerns?
e. How can ESKOM improve its support for your industry? Please elaborate.
f. How can the DPE improve its support for your industry? Please elaborate.

SECTION F: COMPETING POLICY IMPERATIVES

One thing that strikes me, on the basis of what you have told me, is that there seems to something of a contradiction between the activities of the DTI (via APDP/ MIDP) and the DPE (via ESKOM). On paper, they are both committed to promoting industrial development and attracting private investment. In practice, the DTI programme seems to be undermined by DPE/ESKOM issues.

1. What do you think of this issue? Please elaborate.
2. How would you like to see such issues resolved?
3. What other challenges do you face from the state, besides those already discussed?

In closing

1. Is there anything else that you would like to add?
2. Is there anything that you would like to ask me?
3. Is there anyone else in your firm that you would recommend that I interview on these issues?
4. Is there anyone else in your industry that you would recommend that I interview on these issues?
5. Would you be interested in a copy of the final PhD?

Thank you again for your time.

ANNEXURE 2

INTERVIEWS CONDUCTED

No	DATE	INTERVIEWEE	ORGANISATION	POSITION
1	22 March 2019	Mr Jabulani Selumane [through face-to-face interview]	BMW, Midrand	Fastening System Engineer
2	9 April 2019	Mr Nick Chapman [responded to the research questionnaire]	Volkswagen Group of South Africa	Plant Engineering Manager
3	12 April 2019	Dr Reuel Jethro Mbhayimbhayi Ntshovakanyi N'wamagenge Khoza [through face-to-face interview]	Dzana Investments, 104 Leslie Ave, Fourways, Sandton, 2191	Director [ESKOM Chairperson, 1997-2005]
4	12 April 2019	Dr Jarrad Wright [through face-to-face interview]	CSIR, Meiring Naude Rd, Brummeria	Principal Engineer
5	18 April 2019	Dr Norman Lamprecht [responded to the research questionnaire]	NAAMSA	Executive Manager
6	23 April 2019	Mr Thuto Motloung; Tasvika Zvavamwe, Vincent Charles Hlatswayo and Noel Swartz [through face-to-face interview]	Ford Motor Company of Southern Africa, 400 Alwyn St, Samcor Park, Pretoria, 0184 Simon Vermooten Road, Silverton, Pretoria	Supplier Technical Assistance Site Engineer, Electrician, Energy Technician and Plant Engineer
7	3 May 2019	Mr Mpho Makwana [through Skype interview]	ArcelorMittal South Africa Limited	Chairperson (Interim Chairperson and CEO (3rd Quarter 2009) and as Chairperson of ESKOM Holdings Limited SOC from 10 June 2010 until his term as Director concluded on 27 June 2011, after serving on the board for nine years)

No	DATE	INTERVIEWEE	ORGANISATION	POSITION
8	6 May 2019	Mr Roger Lilley **[responded to the research questionnaire in his personal capacity]**	EE Publishers - Publishers of EngineerIT, Energize, Vector and PositionIT magazines	Editor
9	10 May 2019	Deon F. Joubert **[responded to the research questionnaire]**	ESKOM Holdings Soc Ltd	Corporate Specialist (Finance and Economic Regulation)
10	15 May 2019	Mr Gavin Luhdo **[responded to the research questionnaire]**	Ford Motor Company of Southern Africa	Incentive Manager
11	15 May 2019	Mr Jacob Phirwa Maroga [through face-to-face interview]	Department of Public Works, 256 Madiba St, Pretoria Central, Pretoria, 0001	Acting Head: Property Management Trading Entity (PMTE), Department of Public Works [ESKOM Group Chief Executive, 2007-2009**.** Worked 14 years for years for ESKOM]
12	17 May 2019	Mr Ted Blom **[responded to the research questionnaire]**	GNCC Capital	Interim CEO [Advisor: Mining and Energy Advisory – Regulatory, Strategy, Cost Cutting and Governance Advisory]
13	22 May 2019	Mr Lauritz Laurie Dippenaar [through face-to-face interview]	Centre for Development Enterprise [CDE] NICHAL, Janic House 193 Bryanston Dr, Bryanston, Johannesburg, 2001	Chairperson Businessman, investor, philanthropist and banker [Chairperson, FirstRand (Pty) Ltd, 2008-2017]
14	24 May 2019	Ms Zanele Ndlovu and Mr Gert Kruger [through face-to-face interview]	Nissan South Africa Proprietary Limited, Ernest	Manager APDP and Regional Director Customs and Trade, Africa, Middle East, India

No	DATE	INTERVIEWEE	ORGANISATION	POSITION
			Nissan SA Main Plan, Oppenheimer St, Rosslyn	
15	26 May 2019	Prof. Rod Crompton **[responded to the research questionnaire]**	Wits Business School, University of the Witwatersrand	Director of the African Energy Leadership Centre [- full-time Board member at the National Energy Regulator of South Africa (NERSA) for 11 years. - Deputy Director-General at the Department of Minerals and Energy where he was responsible for hydrocarbons and energy planning for nine years. - Worked at the Department of Trade and Industry and was managing director of the Minerals and Energy Policy Centre. - Has served on the boards of the Minerals and Energy Education and Training Institute, CEF (Pty) Ltd, PetroSA (Pty) Ltd, Soekor (Pty) Ltd and iGas (Pty) Ltd]
16	03 June 2019	Renai Moothilal [responded to the research questionnaire]	NAACAM	Executive Director
17	04 June 2019	Dr Dennis Henry George [Through Face to Face Interview]	Difeme Holdings Pty Ltd, Northcliff Federation of Unions of SA (FEDUSA)	Executive Director [Former FEDUSA General Secretary]

No	DATE	INTERVIEWEE	ORGANISATION	POSITION
18	04 June 2019	Professor Sampson Mamphweli [responded to the research questionnaire]	Centre for Renewable and Sustainable Energy Studies, Stellenbosch University	Director
19	10 June 2019	Vusumuzi Mkhungo [through face-to-face interview]	National Union of Metal Workers of South Africa (NUMSA), 153 Lilian Ngoyi Street. Corner Gerard Sekoto Street, Newtown	Auto and Tyre Sector Coordinator
20	21 June 2019	Prof. Justin Raymond Barnes [through Skype interview]	Toyota Wessels Institute for Manufacturing Studies/University of Pretoria, GIBS	Executive Director
21	22 June 2019	Ms Leesha Koobair [responded to the research questionnaire]	Motor Industry Staff Association [MISA] attached to the Federation of Unions of South Africa (FEDUSA)	Strategy and Development Specialist
22	24 June 2019	Mr Ian Cruickshanks [through face-to-face interview]	South African Institute of Race Relations (IRR) 2 Clamart Rd, Richmond, Johannesburg, 2092	Chief Economist
23	25 June 2019	Mr Rob Jeffrey [through face-to-face interview]	Independent Economic Risk Consultant 1 Kingswood Cres, River Club, Sandton	Independent Economic Risk Consultant
24	26 June 2019	Mr Brian Sechotlho [responded to the research questionnaire]	National Energy Regulator of South Africa (NERSA) 526 Madiba St, Arcadia, Pretoria, 0007	Executive Manager: Electricity Regulation
25	30 June 2019	Mr Kgathatso Tlhakudi [responded to the research questionnaire]	Department of Public Enterprises	Deputy Director-General: Manufacturing Enterprises

No	DATE	INTERVIEWEE	ORGANISATION	POSITION
			80 Hamilton St, Arcadia, Pretoria, 0007	
26	9 July 2019	Mr Coenraad Bezuidenhout [responded to the research questionnaire]	FTI Consulting	Managing Director: Strategic Communications (Head of Strategy and Insights, SA Executive Director: Manufacturing Circle, January 2012 – September 2015
27	**17 July 2019**	Prof. Anton Eberhard [through Skype interview]	University of Cape Town	Director of Management Programme in Infrastructure Reform and Regulation (MIRA), Graduate School of Business
28	**26 July 2019**	Mr Khorommbi Bongwe [responded to the research questionnaire]	Department of Energy	Chief Director: Integrated National Electrification Programme
29	**12 November 2019**	Ms Mpho Mafole [responded to the research questionnaire]	Department of Trade and Industry	Assistant Director: Automotive (IDD)