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Industrial Policy Implementation: The Case of the Bus Industry in South Africa

A research project submitted at the University of the Witwatersrand, School of Economic and Business Sciences, in partial fulfilment of the Master of Commerce in Development Theory and Policy Degree.

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by

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Declaration

I declare that this research is my own work. A research project submitted at the University of the Witwatersrand, Corporate Strategy and Industrial Development (CSID) in partial fulfilment of the Master in Bachelors Commerce in Development Theory and Policy Degree. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

_____
(Signature of candidate)

_____day of_____2018 in_____

Abstract

The South African bus industry has been neglected for a very long time in the main automotive sector support programs such as the Motor Industry Development Programme (MIDP) and the Automotive Production Development Programme (APDP). The need for rehabilitation of the industry has been triggered by the increasing demand for public transport in the country which was not being met by the supply. Industrial policies such as investment incentives, public procurement and local content were introduced to stimulate the development of the industry. The study sought to assess the industrial policy implementation mechanisms of these instruments. The in depth assessment of the implementation processes of the industrial policy targeting the bus industry reveal some weaknesses with regards to the way in which the policy that governs the sector has been implemented. There are important lessons that can be learned by the government for consideration with regards to other designated sectors that are targeted for industrial policy support. The findings suggest a need for a review of the Medium and Heavy Commercial Vehicles - Automotive Investment Scheme (MHCV-AIS), improved monitoring and evaluation of public procurement and localisation policies as well as improved enforcement capability by the respective institutions.

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Abbreviations and Acronyms

AIS	Automotive Investment Scheme
APDP	Automotive Production Development Programme
CBU	Completely Built-Up
CKD	Complete Knock Down
SKD	Semi Knock Down
DTI	Department of Trade and Industry
GDP	Gross Domestic Product
FIFA	Fédération Internationale de Football Association
IPAP	Industrial Policy Action Plan
IRCCs	Import Rebate Credit Certificates
ITAC	Industrial Trade Administration Commission
ISI	Import Substitution Industrialisation
LCV	Light commercial vehicles
LCR	Local Content Requirements
MEC	Minerals-Energy Completed
MIDC	Motor Industry Development Council
MIDP	Motor Industry Development Programme
MHCV	Medium and Heavy Commercial Vehicles
NAACAM	National Association of Components and Allied Manufactures
NAAMSA	National Association of Automobile Manufactures of South Africa
NICs	Newly Industrialising Countries
NIPF	National Industrial Policy Framework
NSE	New Structural Economics
NT	National Treasury
OEMs	Original Equipment Manufactures
OES	Original Equipment Suppliers
OICA	International Organization of Motor Vehicle Manufacturers
PFMA	Public Finance Management Act
PPPFA	Preferential Procurement Policy Framework Act
RCMs	Reciprocal Control Mechanisms
SAAM	South African Automotive Masterplan

SABOA	South African Bus Operators Association
SABS	South African Bureau of Standards
SACU	Southern African Customs Union
SOCs	State Owned Companies
SAP	Structural Adjustment Programmes
SSA	Sub Saharan Africa
SATMC	South African Tyre Manufacturing Conference
SARS	South African Revenue Service

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Chapter 1: Introduction

1.1 Background

Industrialisation in South Africa dates back to the 1800s, but meaningful recordings have been made by Hobart Houghton in 1964 where he analyses the role of industrial policy during the expansion of the manufacturing industry in 1924 (Verhoef, 1998). During this period (1920s), the South African automotive industry was established and developed through state support and under a protective regime since the country's industrial development then depended heavily on import protection and subsidisation (Barnes, Black and Duxbury, 2016). High tariffs were put in place to protect the local industry and the first set of local content requirements on vehicles were put in place in 1961 (Duncan, 1997). The country had adopted import substitution industrialisation.

During the 1980s, the country had realised that inward oriented industrialisation had its challenges as firms were inefficient due to low production volumes, resulting from the small size of the local market. Growth throughout the economy slowed (Altman and Mayer, 2003). During the 1990s, the country reformed its trade policy and tariffs were reduced. The apartheid policies which restricted African entrepreneurship were also attributed for the poor performance of the industrial sector.

In 1994, the elected democratic government adopted radical reform for the country's industrial policy with the objective of opening up the economy and improving international competitiveness with respect to the manufacturing sector (Altman and Mayer, 2003). Policy instruments adopted included trade liberalisation and the introduction of sector specific support programs. Government implemented the Motor Industry Development Programme (MIDP) from 1995 to 2012, a support program designed for the automotive industry and "has perhaps been the most significant industrial policy intervention since 1994" (Barnes et al., 2016, p. 3).

In 2007, the first iteration of the Industrial Policy Action Plan (IPAP) was published by the Department of Trade and Industry (the dti). A range of sector interventions were established for leading sectors such as capital transport equipment and metals, automotives and

components, chemicals, plastic fabrication and pharmaceuticals as well as forestry, pulp and paper. These sectors received support through government subsidies and other industrial policy instruments. In return government has set performance standards for private firms relating to production units, employment and local content requirements. In the eighth edition of the IPAP, public procurement and industrial financing & incentives are identified as some the key industrial policy instruments. Public procurement with minimum local content requirements as a tool has been identified to increase aggregate domestic demand to support the local manufacturing industry through value addition and enhancement of competitiveness. The industrial financing made available is meant to secure new investment to grow the manufacturing base and employment as well as grow exports (The dti, 2017a).

South Africa has adopted industrial policy just like many advanced and developing nations. But lessons learned from Latin American countries and East Asian countries suggest that a successful industrial policy is not determined by only good policy design but the effective implementation and coordination of the policy tools. The East Asian newly industrialised countries offer some insight to the imperative aspects of an effective and successful industrial policy as observed in their automotive industry. For example, in 1971 Japan was the largest producing country of buses and trucks and industrial policy played a key role (Sato, 2017).

Industrial policy within the automotive sector has for a very long time focussed on the development of the light motor vehicle segment and thus the medium and heavy commercial vehicle (MHCV) segment had remained highly under developed. The MHCV segment consisting of trucks and buses is regarded as productive assets in the economy (AIEC, 2014) and depends highly on public procurement as it is a low volume and fragmented industry. The inability of the domestic bus industry to deliver on domestically buses for the 2010 Fédération Internationale de Football Association (FIFA) world cup was an indication of underdevelopment in this industry's value chain and the need for reindustrialisation through industry policy support. As a result, since 2012 various government initiatives have been targeted for the development of the bus industry.

The support of the bus industry is in line with the one of the visions of the National Industrial Policy Framework (NIPF), which is to promote a more labour-absorbing industrialisation path that also develops the manufacturing value chains (The dti, 2007). Furthermore, the IPAP has identified public procurement and incentives as the key industrial policy

instruments, which are both relevant and used to support the development of the bus manufacturing industry. Amongst other industries, the bus industry has been identified as a key industrial sector (The dti, 2013) which government plans to revitalise and grow (AIEC, 2016) through the roll out of the Bus Rapid Transport System in the metropolitan cities that would entail the implementation of public procurement and the provision of an industry specific grant.

The newly industrialising countries (NICs) especially those in East Asia offer key lessons for effective industrial policy implementation, by making use of reciprocity mechanisms, state capacity and autonomy, correct policy instruments and policy coordination. It is in this context that this sector specific industry case study is framed.

The study is undertaken during a time when the Automotive Production Development Program (APDP) is being reviewed and the dti is in a process of developing a post 2020 automotive master plan. In the same time the dti is considering more sectors or products for public procurement designation, implying the setting of minimum local content requirements for products that are of strategic importance and are procured by the state and state owned companies (SOCs). Furthermore, the study is undertaken in a time where there is an increased interest in promoting the use of public transport in particular the use of the Bus Rapid Transport (BRT) system in major cities of the country. Under these conditions, the study becomes critical and relevant as it allows an opportunity to reflect on the effectiveness of the industrial policy implementation in the recent years and offer lessons learned for future effective policy implementation.

1.2 Research Problem

East Asian countries offer very valuable lessons on effective industrial policy implementation that relatively rare to find, especially for the automotive sector. Studies that capture the developmental factors of an industry to acquire lessons from industrial policy are rare, while majority of studies attempt evaluate the impact of industrial policy on particular sectors. Mkandawire (2001) refers to this neglect of “backstage” analysis of industrial policy implementation as a “myopic concentration of analysis around success” which forfeits the learning process.

One of the criticisms against industrial policy is that they are easy to design but difficult to implement. This has often been said about South Africa where policies are said to look good on paper but fail in practical application or they are not used in their intended way or not used at all. In other words, what ought to be is not necessarily what it is. As cited "the mere fact that a policy is adopted or that there are regulations to back it does not translate into the successful implementation of that policy" (Senoo and Armah, 2015, p. 28). This is not a problem that is specific to South Africa. Smith (1973) argues that third world governments have the capacity to frame broad and sweeping policies, but they lack the capacity to implement. This is true across the board, including developed countries.

The automotive industry, both globally and in South Africa, has been the subject of much research, especially in the realm of industrial policy. The bus industry which is a sub-sector of MHCV and a small component of the automotive industry is largely neglected in these studies. This may also be due to the fact that the automotive industry in South Africa, in particular, for a very long time focused on the development of the light motor vehicle segment through the MIDP. What is however, important about the bus sector, unlike passenger vehicles which are consumer goods and are bought in very large volumes, is that buses are seen as productive assets which contribute to the economy by transporting people, which has wide and far reaching social implications. The MHCV segment has been receiving very little attention in terms of industrial policy. It is not only until in 2012 when the dti designated the bus sector and assigned the minimum threshold for local content on the bus body. Furthermore, in 2014 the Medium and Heavy Commercial Vehicle – Automotive Investment Scheme (MHCV-AIS) was also introduced by the government. It is thus worth evaluating the effect that the policy has had on this sector. What is interesting is also the fact that the instruments which the government is leveraging in support of for the sector, public procurement and local content, have been subject to much debate both locally and abroad (Bolton, 2006; Hufbauer, Schott, Cimino, Vieiro and Wada, 2013; Kattel and Lember, 2010). Although these industrial policy instruments have been used as vehicles to achieve a range of social objectives as well as industrial development, their effectiveness is not always found to be positive in incorporating domestic supplier development provisions such that more socio-economic benefits for local players are realised.

The interest of this study lays at uncovering the practical implementing of industrial policy by analysing the use of Reciprocal Control Mechanisms (RCMs) in the incentive offered to the

bus industry and the governance and coherence the in implementation or enforcement public procurement and local content requirements.The main focus of this study is to explore how industrial policy is being implemented in the case of the bus industry and questioning whether current implementation processes is one that encourages both industrial and policy learning so as to yield to a successful and developed bus industry with an important domestic role.

In assessing the effectiveness of industrial policy implementation in the bus industry, the study hopes to answer the following sub-questions:

- What is the extent to which "reciprocal control mechanisms" are used to monitor and assess the performance of companies benefiting from state support?
- What are the monitoring and evaluation mechanisms that the dti/National Treasury (NT) have put in place to evaluate effectiveness of what is aimed to be achieved through grants, public procurement and local content requirements?
- What is the institutional capacity for to foster effective governance over the efficient implementation of the industrial policy instruments?

1.3 Research aim and objectives

The objectives of the study are to:

- Critically evaluate the implementation or enforcement process of the MHCV-AIS, public procurement and local content requirement set for buses as these are key instruments to enhance the global competitiveness of the South African bus industry.
- Asses the use of RCMs to direct firm business activity towards achieving governments industrial policy objectives.
- To draw lessons from the implementation of industrial policy in the bus industry, that could help improve the effectiveness and efficiency of policy implementation.

The overall aim of the study is to identify areas of policy implementation achievements and areas of improvement that would contribute to a successful industrial policy.

1.4 Methodology

The study has adopted a case study approach that utilises both qualitative and quantitative tools to collect the necessary information in order to comprehend the South African bus industry performance in relation to industrial policy support. The study relied deeply on qualitative data which was collected through primary data collection in the form of structured and unstructured interviews with stakeholders from government departments, bus manufacturing firms, consultants in the automotive sector and bus procuring entities. Customised questionnaires were formulated for the respective stakeholders to validate and cross reference responses on all the aspects that cover the study objectives. A list of the interviewees that participated in this study is provided in Table 1.1.

Secondary data was sourced from various literatures including grey literature (such as news websites, government websites, etc.) due to limited material specifically on the domestic bus industry. The secondary data was intensively used in the literature review and theoretical framework in order direct the study focus on the bus industry and provide insight on industrial policy discourse which draws lessons from newly industrialised countries. Documentary information was useful for the study on the aspect of reviewing the legislative framework affecting industrial policy, public procurement and local content requirements. Government publications reviewed include regulations, policies, acts and manuals.

Table 1: Interviews Conducted

	Interviewee	**Organisation**	**Position**
1	Mr Patuxolo Nodada	BUSMARK	Chief Executive Officer
2	Mr Twala Boco	Independent	Ex-chairman for SAVABA
3	Dr Justin Barnes	Benchmarking and Manufacturing Analysts (Pty) Ltd	Chairman
4	Mr Claudio Fernandes	MAN Automotive (Pty) Ltd	Purchasing Manager: Production Material
5	Mr James Groep	City of Cape Town	Manager: Fleet and Asset management
6	Mr Zane Mheyamwa	Metrobus	Acting- Managing Director
7	Mr Sisanda Mtwazi	Department of Trade and Industry	Director: MHCV
8	Dr Tebogo Makube	Department of Trade and Industry	Chief Director: Fleet Procurement
9	Ms Cathrine Matidza	Department of Trade and Industry	Director: Industrial Procurement

10	Mr Mzwakhe Mbatha	Department of Trade and Industry	Deputy Director: MHCV
11	Ms Leanda Pietersen	National Treasury	Director: Supply Chain Management Policy
12	Mr Sam Mansingh	VDL Bus & Coach	Ex-Managing Director
10	Ms Anna Theron	Department of Trade and Industry	Director: Automotive Investment Scheme

1.5 Limitations of the study

The study focus for this research is in the supply side is mainly the bus manufacturing industry and the demand side is limited to public procurement of buses. Although bus demand is also driven by private operators, but because they are not required to adhere to the Preferential Procurement Policy Framework Act (PPPFA) which supports the achievement industrial policy objectives, they have been excluded in the scope of the research. From the supply side, the research excluded its attention from the suppliers of bus components.

With regards to public procurement of buses, the scope of the research offers a very high level analysis and does not dig deeper into what is happening in specific departments and local municipalities. Thus the research is limited and offers opportunity for further research.

Permission to conduct interviews with officials from the South African Bureau of Standards (SABS) was denied. The issue of local content verification by the SABS was a very sensitive issue for discussion during the time this study was conducted. Attempts were also made to interview officials from MarcoPolo South Africa (Pty) Ltd without any success due to the fact that the company was undergoing internal reshuffling. Other institutions which various attempts were made to get an official to interview but showed no interest includes: the National Department of Transport, City of Tshwane department of transport and MAN Truck & Bus Company.

1.6 Study outline

Chapter 2 in this report provides a discussion of the debates around industrial policy between neoclassical theory and structruralist theory. These contending theories are the foundation of our theoretical framework. Chapter 3 provides a historic perspective of the South African

industrial policy path and presents a detail discussion on the main programs designed to support the automotive industry being the MIDP and APDP. Some comparison will be made with regards to how industrial policy is designed and implemented by NICs within the automotive industry and making some reference to the bus industry. Chapter 4 provides a discussion on the findings of the research. The profile of the bus industry is presented in relation to industrial policy and a discussion on the governance of industrial policy is provided. Chapter 5 is the conclusion and also offers some recommendations.

Chapter 2: Theoretical framework and literature review of industrial policy

2.1 Introduction

Industrial revolution discourses have evolved over the years. The origins or peak of modern industrial policy in South African can be traced to the period following World War II (Verhoef, 1998). Debates on industrial policy were initially centred on understanding the role of the state in supporting or directing economic growth and development. Various schools of thought emanated from various parts of the world, in an attempt to explain the requirements of economic growth and development (such as classical economics and neoclassical as well as the Keynesian and Neoliberal economics) and the role of the state in the 1950s to the 1980s. This period was characterised by impressive economic growth and development from Newly Industrialised Countries (NICs). The success of the East Asian NICs gave rise to much attention being paid to questions and debates about the role of the state and industrial policy in the 80s and 90s in different scholarly camps that were trying to explain these successes (Amsden, 2001; Chang, 1997, 1994).

In the current age of increased globalisation, trade liberalisation and the rise of global capitalism, industrial policy has become even more fashionable in recent times, more especially in the period after the 2008 financial crisis (Rodrik, 2004). This is partly due to the attempts to correct the problems of an underdeveloped industrial sector in developing countries, as well as the deindustrialisation and sluggish structural change faced by this group of vis-à-vis developed countries and high performing developing countries. However welcome the revitalisation of industrial policy; there still remain important areas of contention regarding the role of the state and the kinds of activities that it should target. There are those who can be classified as taking a neoclassical view of the state and the kinds of interventions it can use such as Justin Lin and his New Structural Economic (Lin, Kreuger and Rodrik, 2011), which argues that development should happen in line with comparative advantages. On the other hand, there are developmental state theorists such as Amsden, Wade and Fine whose theories and empirical analysis are grounded in the old ‘structuralist’ approaches of development (Amsden, 1989; Wade, 1990). An important question that we should be asking ourselves is: on whose terms is industrial policy making a come-back, and what are the policy implications.

2.1.1 Post-independence industrialisation in SSA

Prior to the colonisation of Africa, the continent is said to have been advancing, including in areas of trade. But due to colonialism which basically isolated Africa from the rest of the World in order to serve the objectives of the European colonisers, governments were stripped their powers to facilitate development and as a result the natural development of African economy was arrested (Settles, 1996). The economic structures of African countries were designed and controlled by the colonisers. African countries therefore needed policies that were intentionally designed to reform their colonial economic structures towards inward oriented economic structures.

To restore economic independence, African countries (initially Nigeria, Tanzania and Zambia) adopted Import substitution industrialisation which was also adopted by Latin American countries in the post-world war period (Mendes, Bertella and Teixeira, 2014). The state led the structural reform process by introducing foreign trade policies as well as an investment policy that saw huge infrastructure investments taking place. African governments anticipated that through industrial development, low growth and low productivity economies would be transformed into those that would be dynamic and modern (Lall and Wangwe, 1998). A further expectation was that substituting imported goods with local produce would gradually enhance self-reliance and avoid balance of payment problems. Most African countries implemented import substitution industrialisation (ISI) although it was not implemented in the same time period across the continent but its common intention was of banning export dependency structures which were based on orthodox farming methods. The use of ISI was to support the expansion and diversification of domestic production (Mendes et al., 2014; Mkandawire, 2001).

Initially, with all the efforts made by African governments to rebuild their economies between 1960 and 1970, Africa experienced impressive industry/manufacturing-led gross domestic product (GDP) growth. The average annual growth for manufacturing value add between 1948 and 1959 was 11% for the Democratic Republic of Congo, for Zimbabwe between 1948 and 1963 the growth rate was 8.7%, for South Africa growth averaged 9.9% between 1960 and 1965 (Bell and Madula, 2001; Mendes et al., 2014).

Between 1960 and 1965 the continents' GDP growth was around 4% and grew to about 5% between 1966 and 1970 (Economic Commission for Africa, 2012). Further data shows that the results of implementing ISI in SSA were not so impressive when comparing with other developing countries that have also implemented ISI. In 1960, developing countries accounted for 6.9% of value added to global manufacturing (MVA) and this share increased to 8.67% by 1976. SSA contributed one of the smallest shares to global MVA of 0.60% in 1960 and 0.71% by 1976. Nigeria and Kenya were some of the leading countries that had advanced further with industrialisation among other African countries and they established thriving industries such as energy and textile , garments, food, beverages & tobacco respectively (Mendes et al., 2014; Newman, Page, Shimeles, Söderbom and Tarp, 2016).

Results from the region were disappointing in most angles, including the share of SSA exports of manufactured goods to global industrial exports that declined from 1.12% in 1970-1971 to 0.60% in 1975-1976 (Fransman, 1982). The import substitution strategy adopted by most SSA countries can be identified as an industrial policy that had "pervasive interventions not linked to market failures in learning (and in many cases ignoring market forces in preference to non-economic objectives), haphazardly designed and poorly implemented" (Lall and Wangwe, 1998). However, (Mkandawire, 2005) takes a less critical stance of ISI in SSA by arguing that ISI brought about substantial growth and social gains in the African continent and he asserts that import substitution was an initial industrialisation phase which was necessary.

By 1980 most African countries had "trade deficits, worsening terms of trade, rising international indebtedness, huge fiscal deficits, rising subsidies to inefficient and unproductive public enterprises and steep declines in foreign reserves" (Economic Commission for Africa, 2012). This situation was also aggravated the two oil shocks in the 1970s and 1980s which saw growth in the African states crash. Between 1985 and 1987, Africa was the worst growing region.

It is against this background that the World Bank (WB) and the International Monetary Fund (IMF) offered assistance with the condition that African countries implement policy reforms prescribed under the Structural Adjustment Programmes (SAPs) in line with neoclassical approaches to development which advocated for a minimalist state intervention and more of a

free market system. The key principles of a good economic policy as proposed by the SAPs for low income countries were the adoption of an anti-industrial policy stance, liberalization of agricultural markets, financial liberalisation, opening-up of economies and the liberalization of trade (UNECA, 2011). The paradox of the SAPs was that the state was expected to lead the structural reforms, its policy space and scope was dismembered. The consequence from implementing the SAPs of 1980s to 1990 was further deindustrialisation in the continent which saw GDP growth in Africa reducing from 3.2% between 1985 & 1990 to 1.4% in 1991 to 1995 (Economic Commission for Africa, 2012). This disappointing trend persisted and could be traced also on the annual growth of SSA MVA which 3.3% in 1989/1990 to 0.7% in 1991/2 (Lall and Wangwe, 1998). After a study was conducted on the impact of the SAPs, the World Bank found that a group of countries that undertook the banks assisted adjustments their the real GDP growth and the investment ratio deteriorated (Elbadawi, Ghura and Uwujaren, 1992). This can be seen from the decline in SSA investment rates from a low 19.6% in early 1980 to 17.3% in between 1990 and 1993.

Industrial policy in Africa has been a "no go area" after the implementation of SAPs of the World Bank which have brought much devastation on most African countries structural reform and growth since the 1980s. The record of industrialisation and economic growth in Africa has been somewhat promising in the past decade. This optimistic perspective of the African continent comes at the back of a long history of poor development and economic performance between the 1980s and 1990s which have been explained to be caused by meta-structural problems such as bad climate, being land locked, ethnic homogeneity and negative cultural traits (UNECA, 2016). Chang (2013) shows that such conventional explanations are not sufficient, and in some cases can be rejected since they have not obstructed development, where these factors were prevalent. (Eicher, 1982, p. 157) contests these dominant orthodox views by arguing that Africa's poor development can be best explained to have been caused by a "seamless web of political, technical and structural constraints which are a product of colonial surplus extraction strategies, misguided development plans and priorities of African states since independence and faulty advice from many expatriate planning advisors".

In the year 2000, The Economist newspaper had an article titled "The hopeless continent" which had added to the pessimistic prognosis of the African continent. Following impressive growth rates in some Sub-Saharan economies since the year 2000, in March 2013, The

Economist published a revised article titled “Africa Rising: A Hopeful continent” which projects optimism on the continents developmental prospects. Under the same meta-structural conditions which were cited to be the reasons Africa will never see progress and development, countries such as Rwanda and Ethiopia which are landlocked have proven to be the best growth performers, without reliance on the exportation of natural resources (such as oil, gas and mineral resources) which have been the main source of growth from numerous African Countries (UNECA, 2016). However, there has been literature that has questioned the ‘African rising’ narrative by pointing out that improvements in health, education and the so-called doing business indicators have not necessarily meant commensurate changes towards structural change (Lopes, 2015).

Based on this evidence, it is convincing that the prevailing structure of SSA needs transformation through industrial policy in order to achieve economic growth through increased value addition in manufacturing, production efficiency and export dynamism.

2.2 Industrial policy debates

There are very robust contentions in the political economy around industrial policy regarding its definition to the right approaches to industrial policy for respective countries at various time periods. In this study we adopt the definition of industrial policy that defines it to include a program that is targeted at particular industries to achieve specific results that are perceived by the state to be efficient for the economy as a whole (Chang, 1994).

2.2.1 Neoclassical theory of development and neoliberal policy

The neoclassical view of economic development was based on the belief that in a free market system, resources will be efficiently allocated and markets will function optimally for as long as government’s role is limited to macroeconomic stability. This school of thought has its roots from Adams Smith’s “invisible hand” notion of believing that if markets are left to function, they will eventually lead to efficient outcomes which include economic growth, economic development and structural transformation. Structural transformation is believed to be an automatic process, as long as markets were functioning well (Lowitt, 2011). To promote economic growth, government is expected to “get out of the way” for the market to

efficiently function (Stiglitz, 1996), under free trade, private property and competition. Critics of the free market system to drive economic transformation underscore the role of government, citing that market-led development will not result in efficient outcomes such as reducing inequality, poverty and unemployment. Under this approach, government intervention is only useful insofar as it eliminates market failure and information imperfections, otherwise government intervention should be limited because of the presence of government failures, rent-seeking, capture and corruption. This is in contrast to the Keynesian approach which was popular until the 1970s, which held the opinion that growth and development should be led by the state. The Keynesians see government policy and central planning as a crucial aspect in the stimulation of aggregate demand during times of recession or high unemployment (Dang and Sui Pheng, 2015). According to Stiglitz (1996), almost none of the countries that have successfully industrialised have explicitly followed market-led or state-led growth, they were mixed economies respectively.

The emergence of neoliberal policies coincided with the desperate situation of African countries, which by the 1980s had a reversal of the numerous attempts of revived positive economic growth by implementing import substitution industrialisation strategies and state-led investments, failed to reinstate country performances. In SSA, the role of neoliberal policies in development can be best seen in the story of disappointing African development following the implementation of such policies. The Bretton woods institutions offered the global countries some bail out provided that they adopted neoliberal policies as per the conditions set in the Structural Adjustment Program (SAPs) of the Washington Consensus (Fine, 2006). The SAPs had harsh conditions which called for austerity, privatization, and market liberalization (Stiglitz, 2003). Proponents of the neoliberal policies were of the view that the SAPs would provide the needed economic discipline for the less developed global south countries and would drive them to achieve economic growth. An assumption was made that the markets in these countries work efficiently (without state intervention) if left free, thus the Washington consensus adamantly advocated for market-led growth and opposed industrial policy which was to be instituted by the state. This set of prescriptions would go on to inform much of the development trajectory of SSA in the last three decades.

Following poor development results from developing countries that had followed the strategies advocated by the Washington consensus , the Post Washington Consensus was introduced supposedly as a paradigm shift of what is needed to drive development , although

the belief that markets lead to development and economic efficiency was maintained (Stiglitz, 2008). The post Washington Consensus emphasized improvements in state institutions, through institutional reform and good governance where they are weak in developing countries and lead to market failures. These two uttermost goals of the post Washington Consensus were aimed at promoting sustainable, egalitarian and democratic development (Stiglitz, 2001).

Subsequent to evidence which indicates that countries who adopted explicit market-led reforms have been met with disappointing growth and development outcomes, thus justifying the increasing need for industrial policy as it can correct market failures (Rodrik, 2004). The role of government was thus amplified and most economists appreciated the imperative role that government can play in the development of industrial policies targeted at supporting structural transformation, growth and development (Lowitt, 2011). Contrary to the belief of the neoclassical growth theory which holds the view that countries with similar technologies would eventually converge to similar income levels regardless of the factors of production, Rodrik (2013) provides empirical evidence on the importance of advancing industrial policy and supporting the development of a large manufacturing sector. Rodrik's theorising however, can be criticised since it promotes developing countries to institute a process of "self-discovery" to identify new products and markets where their domestic economies can have a competitive advantage (Rodrik, 2004). He also reduces the role of the state to coordinating private sector activities. This is akin to the New Structural Economics of Justin Lin (2011) which also advocates for developing countries to follow their comparative advantage by focusing on labour intensive light-manufacturing industries in commodity rich sectors. In the debate between Justin Lin and Ha-Joon Chang, (Lin and Chang, 2009), Lin takes the stance that for a country to successfully upgrade its industries; it should not defy its comparative advantage. In a counter argument, Chan indicates following the comparative advantage process for industrialisation should be seen as a baseline for development. He advocates that for a country to be competitive, it may need to defy the comparative advantage notion, enter into new industries by accumulating factor endowments and technologies.

In the new approaches to development discussed above, the role of government in driving industrial policy is amplified, contrary to what neoliberalism and the Washington Consensus permitted. However, the recognition of role of industrial policy is permissible insofar as it corrects the existence of market and coordination failures (Pack and Saggi, 2006; Stiglitz,

1996). Such approaches as that of Stiglitz, Rodrik and Lin do not constitute sufficient theoretical rationale for industrial policy because of their narrow view of the role of the state in building comparative advantages in developing countries.

2.2.2 Structuralist theory of development

The importance of the industrial sector, especially manufacturing as the "engine of growth" has been empirically advocated by Nocolas Kaldor (1966). He put forth numerous reasons for the important role that manufacturing has in GDP growth. There is much empirical evidence to support the claims cited by Kaldor such as the great backward and forward linkages that manufacturing has with other sectors; the positive correlation between industrialisation and per capita income; productivity in manufacturing sector is higher than that of agriculture; the transfer of resources from manufacturing to services has a structural burden whereby the GDP per capita slows down over time; economies of scale opportunities are greater in manufacturing than agriculture; manufacturing embodies technological progress which can be diffused to the service sector, and with rising GDP per capita, the share of agriculture expenditure in total declines while the share of expenditure in manufacturing increases (Szirmai, 2011). Exemplary countries that have enjoyed economic spur following the introduction of manufacturing technology include Great Britain and China.

Another important reason cited by Kaldor on the importance of manufacturing in fostering growth and development is related to its ability to achieve increasing returns to scale. This is also supported by empirical evidence under structuralist theories (that are in favour of industrialisation), who suggest that manufacturing offers an opportunity for capital accumulation which is one of the sources for growth (Szirmai, 2011).

Critics of industrial policy point out the incapability of government to facilitate structural change that would lead to inclusive economic growth and development. In fact, numerous developing countries that implemented the structuralism approach to development failed. State intervention in structural change was blamed for distorting market signals, being incapable of "picking-winners", inducing corruption and rent-seeking activities and the protection of infant industries that never matured (Krueger, 1974; Krugman, 1993). In sum,

industrial policy or state intervention was blamed for distorting prices which resulted to inefficient functioning of markets (Altenburg, 2011).

Haque (2007) offers some imperative and valuable insight in understanding the essence of industrial policy, particularly in the points of concern raised by proponents of the orthodox school of economics. The first counter argument against the state distorting market signals, he points out is that prices are in reality distorted since the hypothesis of perfect market is none-existing. Markets are said to actually work too well with the prevailing prices and are uncoordinated towards structural changing the economy. Industrial policy is then necessary to "get the prices wrong" (Amsden, 2001), to channel markets into sectors such as manufacturing which have high positive spill over effects conducive for long term economic growth and economic development. The assertion that government is incapable of "picking-winners" can be justified by the lack of understanding of industrial policy by critics. The selection of industries to be targeted for industrial development is an experimental and learning process for respective developing countries. The selection is made after the consideration of market conditions, factor endowments and country capabilities. The role of government in structural transformation is to make it conducive for identified industries to become globally competitive. The existence of a South African automotive industry is one typical example. Furthermore, successful state-supported industrial policy requires a state-market coherence which (Evans, 1995) called "embedded autonomy". The concept mainly means that successful industrial policy implementation or sector targeting requires close contact between the state and private sectors while maintaining some isolation or independence from the influence of the private sector. It thus calls for high skilled bureaucrats who can fully comprehend industrial policy implementation, the full value chains of targeted industries and the policy impact on the domestic and global economy. So, government cannot be criticised for picking winners in a developmental state as it does not drive industrial policy solely.

2.3 Pragmatic industrial policy and the challenges of doing industrial policy

The process of selecting which industries to target for support is a learning curve for each respective developing country. Successful industrial policy targeting for a specific industry in one country may not necessary be successful in another country as there are numerous

structural barriers to be considered such as the climate, geography, culture, history, political economic environment and bureaucratic capabilities. It is suggested that the role of government should not be targeting certain industries for promotion but rather creating conditions that permit a country to become particularly good at producing specific products (Haque, 2007).

There are arguments on both side of the literature on whether government can and needs to target industries in which a country has a comparative advantage or competitive advantage (Lin and Chang, 2009). In the same vein there are arguments that a good industrial policy should be able to "pick-winners", these would be the industries or products that could compete in international markets rather than losers (Rodrik, 2004, p. 34). Under industrial policy these winners would enjoy incentives for exporting while the losers would be excluded from these incentives. Performance-based incentive policies are thus more effective as they direct economic activity towards achieving industrial policy goals (Amsden, 2001).

Furthermore, once it is clear which industries will be targeted for industrial upgrade, the implementation of industrial policy will require very strong political will and an effective state. It is also suggested that in order for flexible and smooth industrialisation to take place the should be an improvement in human capital, financial and political institutions in the country (Lin and Chang, 2009). Rodrik (2004) goes even further by listing design principles for industrial policy. Some of these principles are: incentives should be provided only to "new" activities; there should be clear benchmarks/criteria for success and failure; there must be a built-in sunset clause; public support must target activities, not sectors; the implementing agencies must be monitored closely by a principal with a clear stake in the outcomes and who has political authority at the highest level; the agencies carrying out promotion must maintain channels of communication with the private sector; optimally, mistakes that result in "picking the losers" will occur; and promotion activities need to have the capacity to renew themselves, so that the cycle of discovery becomes an on-going one.

Most developing countries are said to have gotten industrial policy design process right, the challenges that contributed to some of their failures relates to policy implementation which requires the existence of sound institutions, bureaucratic capacity and effective governance frameworks (Mbathe, 2016). There are a number of concerns raised by sceptics of industrial policy to say that state supported development is susceptible to corruption and rent seeking.

Industrial policy tools used include the disbursement of incentives to private sector and this is can trigger rent seeking activities (Khan and Jomo, 2000) . Rodrik (2004) defends this by arguing that once the institutional setting is right, specifying the industrial policy process becomes more important than putting focus on identifying the ultimate policy outcome. Amsden (2001) identifies the use of RCMs to discipline firm behaviour in the interest of competitiveness and efficiency as well as ensuring that state support to firms is used productively.

Industrial policy debates have somewhat been modified to reconsider the development path of developing countries in the presence of World Trade Organisation (WTO) and global value chains. The WTO rules have become progressively harsh for developing countries as trade barriers are being further lowered, thus making it hard for developing countries to access new markets or competitively participate in global value chains. The governing of foreign trade by prohibiting local content requirements also has a negative impact on developing countries who are still trying to protect their local infant industries by setting minimum levels of local content (Haque, 2007). Developing countries are advised not to be quick to consent into the WTO as well as bilateral or multi-lateral trade agreement which may offer reduced policy space for structural transformation and development. Developing country states may need to be more creative in the implementing industrial policy and maneuver around WTO rules.

2.4 Industrial policy tools/ instruments

Industrial policy tools used by various countries depended on the government strategy to target specific sectors or broadly support the development of various sectors. East Asian countries that have successfully implemented industrial policy have used a mixed set of instruments and tools. Lall and Teubel (1998) distinguish between three heterogeneous industrial policy tools that are broadly categorised as: horizontal industrial policies which cut across industries (i.e. trade policy and labour market regulations); vertical industrial policy target specific sectors (i.e. automotive support programs) by using incentives or sector specific subsidies to promote the “national champions”; and structural industrial policy which are designed with the aim of promoting a shift in the structural composition of economic activity (i.e. public procurement and spatial economic zones).

The choice over which type of industrial policy to adopt is not obvious as it impacts or is connected to other policies such as trade policy, fiscal policy and/or monetary policy. Thus, no policy operates as an island; many other micro policy factors have to be considered. The debate over universal versus sectoral industrial policy tools is extended by Chang (2009) as he argues that even the broad sweeping or horizontal policies have a discriminatory factor in favour of certain industries. For example, policies that are targeted at export promotion will mainly benefit industries that have an intensive export market. In sum, Lall, (2007) explains that the countries that have implemented successful selective industrial policies had utilised similar thought process and tools that were implemented in other countries where industrial policy was implemented unsuccessfully. He then asserts that the secret to successful industrial policy implementation lies in the combination of those policies and their effective implementation. This brings our next discussion to some of the instruments used, and relevant in the case of the South African bus industry.

2.4.1 Reciprocal Control Mechanisms (RCMs) as the linchpin of industrial policy

In theorising about industrial development in East Asian countries, Amsden (2001) showed how they were able to diversify their economies from being peasant agricultural-based into vibrant industrial economies in the world that would today have major contributions in global trade in numerous sectors. Countries in the "rest" (China, Japan, Taiwan, South Korea, Thailand, etc.) adopted a new economic model in order to compensate for their skill deficit. This economic model was based on a set of institutions that imposes discipline on economic behaviour on firms that received industry support.

The "reprocity" principle meant that firms receiving government support for manufacturing or exportation were subject to monitorable performance standards that were redistributive and results oriented. Amsden (2001) elaborately shows how East-Asian country governments adopted industrialisation and transformed by the efficient implementation of RCMs. Of the many performance standards, that were implemented, the most notable include export targets, local content requirements, investment time-table obligations, regional location criteria, etc. An example of an effective RCM would be the awarding of an investment subsidies to a firms to allow them firm in the learning phase to catch up, accompanied by a set of performance standards within a specified timeframe. These type of investment subsidies can

be perceived as “learning rents”, which can play a role in the acquisition of skills, knowledge, competitiveness, and ultimately growth and development for the sector (Khan and Jomo, 2000).

The implementation of RCM offers valuable lessons on effective industrial policy implementation that could or should be adopted by industrial policy implementers of today. Key features that could be noted from the Asian countries that implemented RCMs include; the setting of RCMs that were clear, measurable and attainable; state support that was time-bound and the accompaniment of effective state capacity.

2.4.2 Public procurement as an instrument of industrial policy

As an industrial policy tool, public procurement is introduced in most developing countries to upgrade markets and promote the production of goods and services that are considered to be of strategic interest in a particular country. Public procurement has been adopted by many countries as a strategic instrument of industrial policy targeted at achieving specific economic development and social outcomes. This is evident from East Asian successful industrial policy which entailed a ”prolonged process of public procurement activity” (Kattel and Lember, 2010, p. 4; Warner, 2011, p. 11). Through public procurement, governments can have two roles; that of a purchaser of goods and services in the market and simultaneously regulate the market by using its purchasing power to achieve social justice (McCrudden, 2004).

Public procurement plays a critical role in an economy and it can be used to achieve many public objectives such as supporting domestic suppliers or local economic development (Snider and Rendon, 2010). Various countries, international and regional organisations employ public procurement systems to achieve various goals. For example, in Japan public procurement is adopted for the purpose of growing Small and Medium Enterprises (SMEs).

Public procurement has been used by numerous governments to combat the effects of the 2008 global financial which slowed trade, reduced revenues and increased unemployment (Asian Development Bank, 2011). Public procurement is so significant such that it is estimated that to account for approximately 15-22% of GDP in Asia (Asian Development Bank, 2011). This is indicative that a public procurement policy can make a considerable

impact on a nation or industry. Public procurement may contribute to the following key areas: job creation and employment; strengthening the industry, stimulating innovation and small market enterprise involvement.

To stimulate economic activity in a country or pursue the development, the state undertakes to invest in the country by procuring various products and services. The state through public procurement has power to influence the allocation of resources in a market economy. This power can be witnessed through the implementation of "buy local" policies. Preference for domestic sourcing over foreign is practised in the public procurement space, sometimes despite cost and quality consideration (Shingal, 2015). Another lever used by government to deepen the local economic base is the implementation of local content requirements.

While procurement is good tool to achieve various government objectives, successful implementation requires consistency in policy implementation, accountability, supportive structures and organised processes. In South Africa, the 2011 Preferential Procurement Policy Framework (PPPFA) Act is aligned to the Broad Based Black Economic Empowerment (B-BBEE) Act its code of good practise. It is targeted at providing business opportunities to Historically Disadvantaged Individuals (HDI) and Small, medium and micro-sized enterprises (SMMEs). However, due to the lack of proper knowledge, skills, capacity and non-compliance previous attempts have proven to be largely unsuccessful in addressing alleviating the triple crisis poverty, unemployment and inequality (Ambe and Badenhorst-Weiss, 2012).

2.4.3 Local content rules and their role in industrial development

Local content policies are implemented for various reasons which include increasing value add, correcting market failures & externalities and for social reasons (Tordo, Warner, Manzano and Anouti, 2013). Local content requirements also encourage for inward foreign direct investment (Lahiri and Ono, 2016). This offers the opportunity to increase local-value addition and the creation of employment opportunities. All these meet the aim of industrial policy objectives. The term local content is defined by Warner (2011, p. 11) and cited by Senoo and Armah (2015, p. 31) as the "composite value contributed to the national economy from the purchase on bought-in goods and services".

"Local content requirements are provisions (usually under a specific law or regulation) that commit foreign investors and companies to a minimum threshold of goods and services that must be purchased or procured locally." (UNCTAD, 2014, p. 3). In selected developing countries, firms are owned by foreign investors. The supply of goods and services they offer to the local market is largely imported. In industries where the state has a significant demand, through public procurement, the state can use the local content policies to direct foreign owned firms to invest more in the local industry by sourcing locally. This can be seen as a kind of import-substitution industrialisation element.

A major motivation for adopting local content policies in developing countries is the safeguarding of the balance of payment (UNCTAD, 2014) . Developing countries lack the technology to develop certain industries or products (especially the strategic industries) and thus rely on importing. Imports cost developing countries given that the foreign currency is normally stronger; as a result this negatively affects the trade balance of strategic industries.

Local content requirements may take many different forms. These include setting a minimum threshold requirement (which is normally expressed as a percentage) on locally sourced materials; setting a minimum threshold on the amount of locally sourced expenditure or man-hours for the use of services; implicit/explicit requirements where firms incorporate local content development into their projects and strategic planning; and the requirement for firms to locally establish facilities or production units for the purpose producing goods that are currently imported (UNCTAD, 2014).

2.5 The development of industrial policy in South Africa

Industrial policy in South Africa can be traced back to the 1920s, with promotion of steel. In subsequent years, the industrial strategy was characterised by "import-substituting model – heavy tariffs, generally escalating with the degree of value added, coupled with preferential purchasing and the occasional picking of "winners" (Barnes, Kaplinsky, Morris, 2003). Industrial policy in the 1960s to 1980s was characterised by the advancement of targeted selected industries through selective policy instruments, similar to those adopted by East Asian countries.

The history and experience of state-led industrial policy in South Africa is captured by (Fine and Rustomjee, 1996), through the term Mineral Energy Complex (MEC). The MEC is defined as a "core set of industrial sectors which exhibit very strong linkages with each other and relatively weaker linkages with other sectors" (Fine and Rustomjee, 1996, p. 91). The MEC was characterised as a framework of structural transformation that is rooted in capital and energy intensive mineral extraction and processing. Due to limited diversification spurring from the core MEC sectors during the late apartheid period, manufacturing contribution and GDP slowed from mid-1970s. The mining sector has played a role in the South African economy and the development of an industrial sector. Sectors such as automotives developed in the 1960s (Barnes et al., 2003) and the first automotive industry targeted local content programme was introduced.

Post 1994, having to adopt an economy that had an industrial structure that was concentrated around highly capital intensive industries (more specifically to manufacturing) that were inefficient, the democratic government had to continue on the trajectory of industrial development inherited from MEC sectors, including automotives.

Formal industrial policy was introduced in South Africa in the form of the National Industrial Policy Framework (NIPF) in 2007/8 as well as the first iteration of Industrial Policy Action Plan (IPAP). The NIPF is a policy framework that sets out South Africa's industrialisation trajectory with a vision that incorporates diversification of the economy beyond traditional commodities, intensified industrialisation that moves the country toward being a knowledge economy, promotion of industrialisation that is labour absorbing and broad based to include the historically disadvantaged people into the mainstream economy (Department of Trade and Industry, 2007).

The IPAP sets out in detail the key action plans and timeframes for industrial policy. The action plans are updated regularly, emphasising the necessity to structurally change the economy from being commodity depended to a more diversified economy characterised by increased value-addition and export intensity (The dti, 2017a). A range of sector interventions are identified in the IPAP for leading sectors such as capital transport equipment and metals; automotives and components, chemicals, plastic fabrication and pharmaceuticals; and forestry, pulp and paper. These sectors have been beneficiaries of government subsidies and other support measures. In return government has set performance standards for private firms

relating to employment and local content requirements. The DTI has taken the approach to implement both broad and sector specific industrial policies. Transversal policy instruments and strategies used include public procurement (which incorporates local content requirement for selected sectors), industrial financing, development trade policy, special economic zones and regional industrial clusters, African regional industrial development and science, technology and innovation. The key sectors targeted for growth and development in 2017 are capital transport equipment and metals; automotives and components; chemicals, plastic fabrication and pharmaceuticals; forestry, pulp and paper; and plastics, pharmaceuticals, chemicals and cosmetics.

Chapter 3: Industrial Policy in the Automotives sector and other developing countries

3.1 Structure of the Automotive Industry

The automotive industry is a global and a highly labour and capital intensive industry characterised by highly complex technology in its production processes as well as the actual products being vehicles and components. It has been identified to be one of the key driving sectors in economies due to its linkages with numerous other economic sectors, hence the focus and support it receives from respective country governments. The industry is made up of the supply side as well as the demand side which are briefly explained (MPL consulting, 2005) .

The automotive industry supply-side is made up of broad four segments which include the

- Original Equipment Manufacturers (OEMs) comprising of passenger, light commercial vehicle and medium and heavy commercial vehicles (inclusive of buses and trucks). The OEM is mainly the leader of the automotive value chain.
- Original Equipment Suppliers (OES) who are automotive component manufacturers that supply parts and accessories directly to the OEM.
- The independent aftermarket includes automotive retail shops that sell automotive parts and accessories which can be original or remanufactured replacement parts or accessories. They also provide services directly to the consumer such as installing motor parts or servicing vehicles.
- The first, second and third tier suppliers provide automotive components and accessories to OEMs, OES and the independent aftermarket.

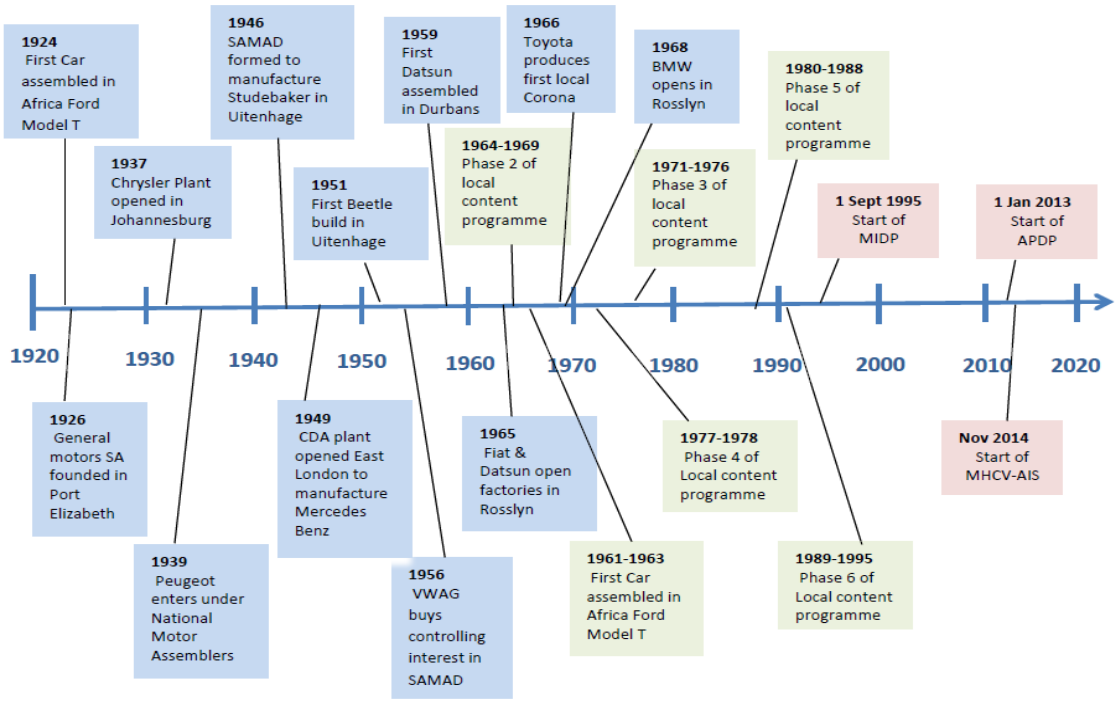
The demand side is made up of end users of vehicles who need them for personal or business use. The automotive industry is a global demand driven sector which constantly requires OEMs to produce vehicles, systems and components at low cost, consistent and high quality levels at short and reliable cycle times (Afsharipour, Afshari and Sahaf, n.d.). The industry is therefore characterised by innovation and technology improvement to meet the constantly changing needs of vehicle users.

3.2 Industrial policy in the South African automotive sector

The South African Automotive industry has been receiving government support that can be traced back to the 1920s under the import substitution industrialisation (ISI) program. The industry received much protection in the form of 100% import tariff for built-up vehicles, 15% for automotive parts & components and through various phases of local content programs (Black, 2007). The amount of protection offered to the industry and the anticipated increase in local vehicle demand resulted in foreign multinationals setting up production plants in the domestic market in order to be able to supply the local market which had reached 120,000 vehicles by 1960. Ford and General Motors established their assembly plants domestically in the 1920s by assembling Completely-Knock-Down (CKD) kits of vehicles imported from abroad. By 1970, there were about 12 vehicle assembly plants operating in the country (Black, 2007).

Government introduced the first phase of local content in 1961 to address the negative impact on the balance of payment that was brought about by a high import penetration of automotive parts and components. The local content required was initially measured in terms of mass and this made it easy for manufacturers to meet the local content requirements and continue importing most components. In 1989, the method used to measure local content was transformed from using mass to monetary value. Vehicle exports were subsidised in the form of a rebate of an excise duty of 50 cents in the rand. Although the ISI program was successful at establishing and growing the automotive industry in terms of increased production volumes, it failed to address wide proliferation of models and vehicle makes that made the industry uncompetitive and also negatively impacting the component sector scale of production (Black, 2007).

Figure 3.1 Historical Perspective of the Automotive Industrial Policy of South Africa



Source: the dti, 2016

3.2.1 Motor Industry Development Program (MIDP)

Traditional free market structural reforms introduced between 1994 and 2007 have proven to have been unsuccessful in fostering meaningful growth and development in most developing countries. But the South African economy was an exception as it experienced reasonably good growth. Quarterly GDP growth averaged 3.7% between 1994 and 2007 (Stats SA, 2017). The introduction of formal industrial policy in 2007 was expected to stimulate the economy into a positive growth trajectory but annual GDP growth remained confined to below 3.2%. The 2008/09 global recession has stifled the growth prospect of the economy. The manufacturing sector is believed to be a major source of economic growth and job creation but in the recent years the country has been de-industrialising as manufacturing contribution has declined from 21% in 1994 to 13.3% in 2016 (World Bank data, 2017). Notwithstanding this information, the automotive industry has continued to have a critical role in the economy and dominate the country's industrial policy space.

The longest and one of the most researched vertical industrial policy interventions to have existed in South Africa post-apartheid is the MIDP. It was introduced in 1994 and it said to be one of the most significant industrial policy interventions because of its influential

incentive structure and significant positive industry impact it had (Barnes and Black, 2013). The architecture of the MIDP although it was customised to suit the South African context, it drew lessons from the 1985-1992 Australian Passenger Motor Vehicle Manufacturing Plan. Both were characterised by an import-export complementation and phased tariff reduction structure for vehicles and automotive components. The introduction of the MIDP was indicative of a policy shift from a focus on increasing local content by substituting imports to export oriented production and improving the international competitiveness of the domestic industry. The key objectives of the MIDP were: to improve South Africa's automotive industry's international competitiveness, industry's highly skewed trade balance and vehicle affordability in the domestic market; to stimulate manufacturing growth for vehicles and components, through exports; and to stabilise industry employment levels (Barnes and Black, 2013).

The MIDP is said to have been successful in developing the South African automotive industry as there is evidence of a more efficient industry structure, increased production and quality improvement and the modernisation of plants (Barnes et al., 2016). On the contrary the MIDP has been interpreted to have been a failure due to the declines in employment that were realised and a trade deficit that has worsened over the years (Flatters, 2005; Nkunzi, 2014). An undesirable outcome from the MIDP was the easy access to import credits which led to the increased importation of vehicles and components to levels that were unexpected. With the absence of a curbing mechanism for the increasing importation of components and vehicles, the situation could still be traced even within the APDP where the industry's trade balance is still negative.

3.2.2 Automotive Production Development Program

The APDP was introduced in January 2013 as a replacement automotive policy of the MIDP and is expected to be implemented until 2020. The APDP is production volume-driven support unlike the MIDP which was an export-driven support. The vision of the APDP was to double vehicle production to 1.2 million by 2020 and increase the country's global market share to over 1% as well as broadening and deepening of the domestic component manufacturing basket associated with vehicle production in South Africa. The support instruments used in the APDP include: the import duty which uses tariff structuring, the

vehicle assembly allowance(VAA) which is used as a rebate mechanism, the productive incentive (PI) which also uses a rebate mechanism and the automotive investment scheme (AIS) which offers a cash grant.

Since implementation of the APDP, vehicle production in the country has increased from 545 775 units in 2013 to an estimated 592 145 units in 2017 (NAAMSA, 2018a). The set 1.2 million production target would certainly not be met. Reasons that could be sighted for the underperformance could include the impact of 2008/2009 global financial crisis, sluggish economic growth in the recent past years as well unforeseen circumstance such as strikes. A more realistic production target for 2020 could be 850 000 vehicles when prevailing global realities are being considered (NAAMSA, 2015).

In terms of local value addition, in 2013 the level of local content for vehicles was 43% and by 2017 it was 39%. The absence of an agreed upon local content target as well as a standardised formula to calculate local content could have led to the relaxation of OEMs or the industry as a whole to work towards a certain level of local content. From a policy perspective, having a local content target for the industry could benefit the various tiers of the domestic component industry, reduce the trade deficit of the industry and increase the economic contribution of entire automotive industry.

During its implementation the APDP requirements for participation and guidelines for certain instruments have been amended. Initially, the requirement for vehicle manufacturers had to produce more than 50 000 units in a year in order to participate in the program. This has since been revised to 10 000 units, with the intention of attracting new vehicle producers into the domestic market. To promote performance based support to the industry, the volume asset allowance guidelines were amended to offer support on a sliding scale depended on volume, commencing at 10% for 10 000 units to 18% at 50 000 units. For the manufacturers of catalytic converters, their production incentive benefit had been fixed in 2017 to 65% and the initial plan to continuously phase it down was revoked (AIEC, 2014).

In its architecture the APDP has drawn lessons from East Asian countries that have developed and heavily industrialised their automotive sector successfully. The industrial policy design of the APDP has been customised to suit the South African environment and consider the low industrial base, low value addition, low production volumes, periphery

country context and global value chain dynamics of the automotive industry. The policy focus of the APDP is to increase value addition and the scale of vehicle and component production, which is different from that of the MIDP which was to increase exports (AIEC, 2014).The elements used in the APDP include: the import duty which uses tariff structuring, the vehicle assembly allowance which is used a rebate mechanism, the productive incentive which also uses a rebate mechanism and the automotive investment scheme (AIS) which offers a cash grant.

The MIDP was primarily designed to promote the export of vehicles while the APDP was designed to promote increased production. Both were more aligned to support light motor vehicles sector more and component industry. The MHCV which is made up of buses and trucks had received minimal industrial policy support. It was only in December 2014 when a sub-component of the AIS was introduced in the form of MHCV-AIS, it thus remains a fairly recent support mechanism for the MHCV. The discussion on the MIDP and APDP is necessary as the successes and failures registered by these programs can help us locate our discussion on the bus sector in the context of such policies.

3.2.3 Automotive Industry Profile

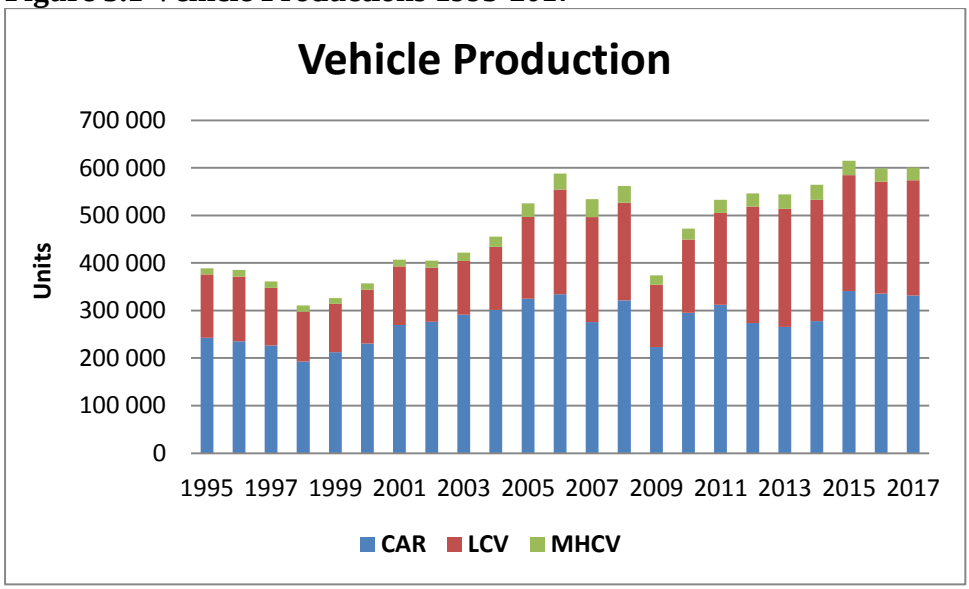
In Africa, South Africa has one the most advanced automotive industry. The country had 58.5% share of the continents vehicle production in 2016 and 0.63% globally (AIEC, 2017). The automotive manufacturing industry accounts for 33% of the country's manufacturing output and contributed 4.7% to the Gross Domestic Product (GDP) in 2016.

The performance of the automotive industry will be analysed from 1995 to 2016. The year 1995 is a year after South Africa gained its independence and became a democratic country and the year the Motor industry Development Program (MIDP) was introduced and ended in 2012 to be replaced by the Automotive Production Development Program in 2013 which is still effective to date.

Figure 3.1 below shows the performance of the industry in terms of production. The automotive industry of South Africa has performed well in terms of vehicle production over the study period, with notable declines in 1998 and 2009 resulting from the global economic

slowdown and global economic recession respectively. The number of vehicles produced increased from 389 392 units in 1995 to 599 004 units in 2016. Throughout the years production has been dominated by passenger vehicles which accounted for an average of approximately 60% of total vehicle production since 1995, although this share has remained below 60% since 2011 as the share of light commercial vehicles (LCVs) marginally increased. In 2007 LCV production had reached a high of 220 753 units, thereafter due to the global economic downturn production plummeted to 131 177 units in 2009 and subsequently recovered to reach a peak of 255 629 in 2015. The share of production by the MHCV segment has remained below 10% of total vehicle production. Within the study period, the highest volume of production accounted for by the MHCV segment was recorded in 2007 with 37 719 units. This segment has since struggled to recover to pre-crisis production levels; production since 2009 has remained below 32 000 units. Total vehicle production reached 601 178 units in 2017 (NAAMSA, 2018a), which remained way below than the initial APDP target of reaching 1.2 million vehicles produced by 2020.

Figure 3.1 Vehicle Productions 1995-2017

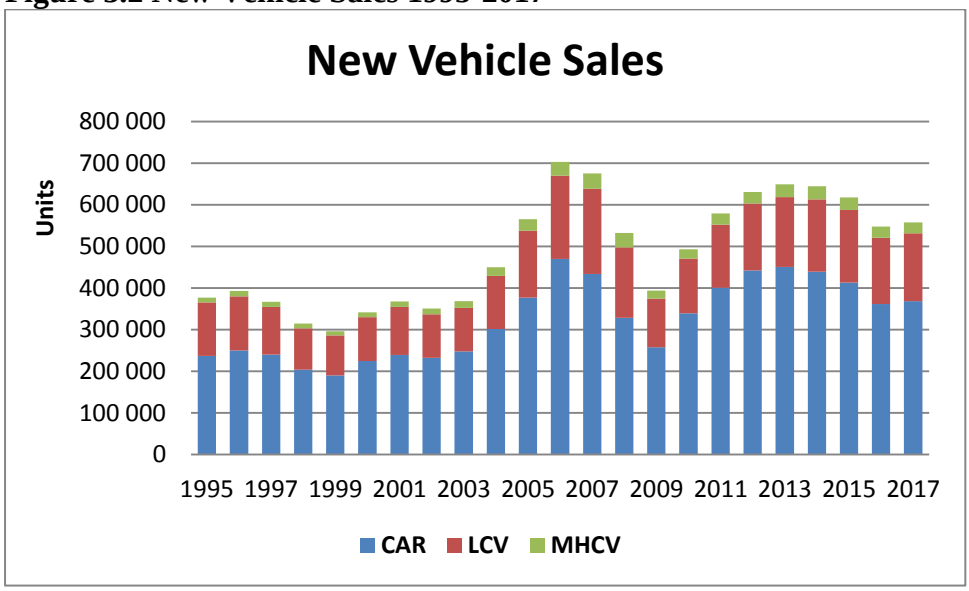


Source: NAAMSA/Lightstone Auto

Figure 3.2 depicts the trends in the new vehicle sales market of South Africa. In the period between 1995 and 2003 vehicle sales averaged to 352 638 units. Having experienced lower interest rates[1] and strong economic growth between 2004 and 2007, new vehicle sales increased to reach a peak of 702 610 units in 2006. This outstanding industry performance was short lived since vehicle sales began to decline from 2007 to reach a low of 393 405 units

by 2009, thus suggesting a 44% drop from the units sold in 2006. The years 2010 to 2013 became recovery years in terms of units of vehicles sold in the country but due to poor economic growth, new vehicle sales declined to reach 547 547 in 2017 (NAAMSA, 2018a).

Figure 3.2 New Vehicle Sales 1995-2017

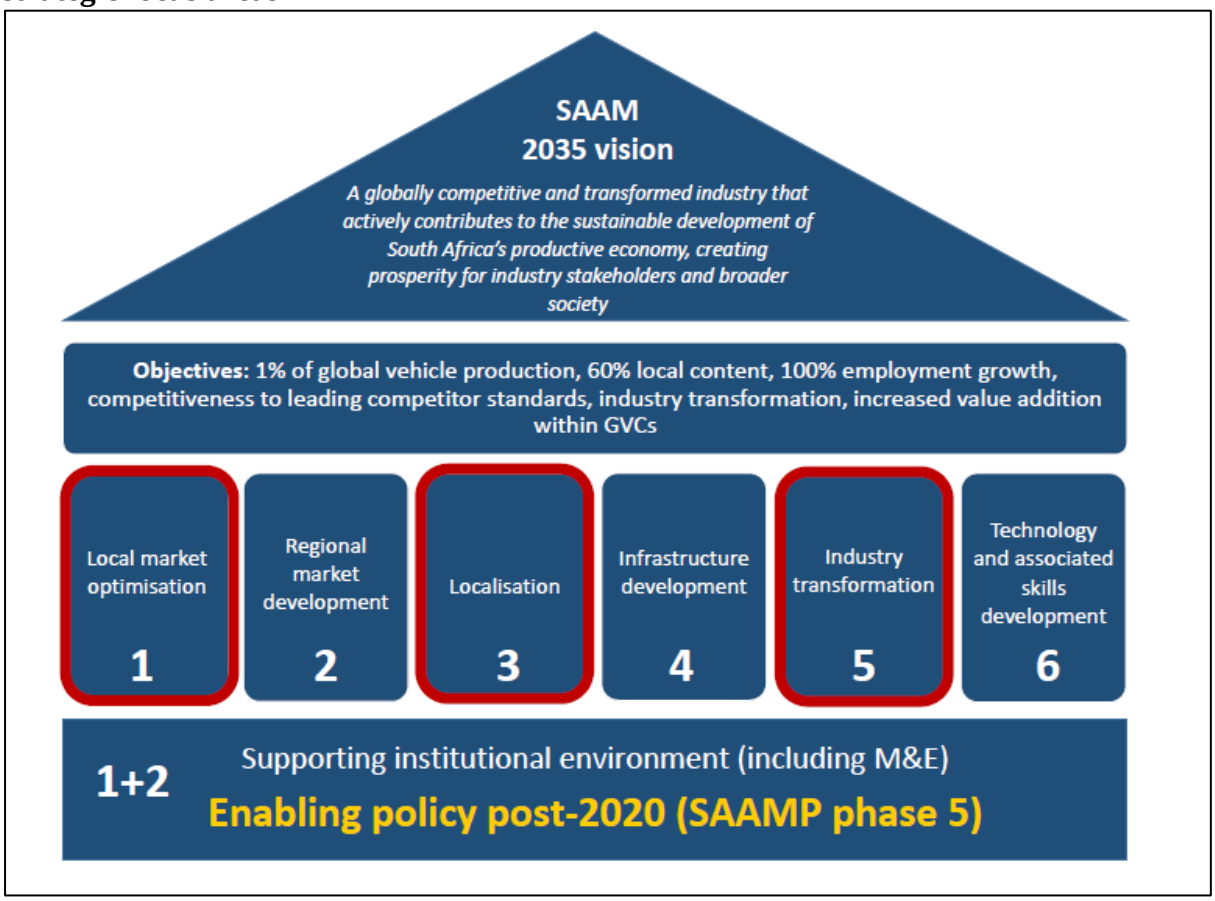


Source: NAAMSA/Lightstone Auto

3.2.4 Post 2020 South African Automotive Master Plan

In April 2016, the South African automotive industry regulatory environment and supporting policies were put under review with the aim of supporting future industry growth in line with the 9-point plan and the National Development Plan. The South African Automotive Master plan (SAAM) process which includes the development of an automotive master plan as well as the development of policies will ensure the vision of the industry is realised. The vision of the South African automotive industry it to ensure that the South African automotive industry is globally competitive by 2035, it contributes to the sustainable development of South Africa's productive economy and creates prosperity for industry stakeholders and broader society (Barnes, 2017). The dti initiated these process with the aim of developing a new automotive support program, post 2020, that will support the future of the industry in line with the 9-point plan and the National Development Plan (The dti, 2017a). During 2018, the DTI will seek to finalise the SAAM and submit relevant proposals to Cabinet for consideration. Figure 3.2 shows the SAAM vision, objectives and strategic focus areas.

Figure 3.3 South African Automotive Master plan's 2035 vision, objectives, and strategic focus areas



Source: Barnes, 2017

The South African government has adopted globally acceptable features of a good incentive programs or industry support program since the automotive support programs such as the MIDP and APDP have performance standards set, sunset clauses for program implementation, built in reviews, monitoring and periodic evaluation exercises (Salazar-Xirinachs, Nübler and Kozul-Wright, 2014).

3.3 The Public Procurement Framework of South Africa

This section would provide a discussion on public procurement as well as local content in South Africa for the main reason that these are two policies that have much relevance in the industry (bus) under enquiry. Public procurement has been estimated to contribute approximately 22% of GDP (Audet, 2002). Thus, the South African government "has a significant purchasing power that it can use to stimulate economic development and industrial innovation and transform public service" (The dti, 2013b, p. 42). To leverage on the

significance of public procurement in the country, government has used it as a tool for correcting socio economic imbalances but of importance in the context of this study is its use for industrialisation.

3.3.1 Legislative framework of Public Procurement

The public procurement system used in South Africa is in line with international best practise, more specifically to leverage government buying power to achieve its socio-economic objectives such as skills development, employment opportunities and economic empowerment for black people (Beukes, 2011). The apartheid government had used a procurement system that was for the exclusive enrichment of the white minority who managed and owned the corporate sector (Tangri and Southall, 2008). Discriminatory practises ensured that Blacks, Coloureds and Indians were deprived all rights to be economically active and participate in the public procurement system.

Post 1994 with the Democratic government, public procurement reform took place. This reform was aligned to the New Public Management (NPM) school of thought. Amongst others, the characteristics of NPM are decentralization, improved financial management and separation of politics and administration (Gruening, 2001), the introduction of finance management acts in the public sector as well as associated regulations to guide processes to be followed. Under the democratic government, the public procurement system is decentralised amongst the various government departments, agencies and entities. Financial management is improved through amendments of Public Finance Management Act (PFMA) regulations. There is some ambivalence in the way that South Africa adopted New Public Management as new public institutions grapple with challenges relating to service delivery and public accountability (Chipkin, 2011).

South Africa's public procurement system has been granted constitutional status. In the IPAP (2016), public procurement is the first identified industrial policy instrument for promoting economic growth, industrial development and innovation. Section 217 (3) of the Constitution states that the "National legislation must prescribe a framework within which the policy referred to in subsection (2) must be implemented." In response to this constitutional imperative, the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) has be

enacted. Section 2 (1) of the Act states that it is mandatory that every organ of state develops a procurement policy and implements it in line with the framework indicated in the Act. The main aim of the PPPFA is to enhance the participation of HDIs and SMMEs. The act disregards the lack of resources, skill and capacity that may exist within these groups.

Public procurement practises are guided by numerous legislations in the South Africa. Primary acts that are enacted to regulate public procurement identified by Bolton (2006) include: the Preferential Procurement Policy Framework Act (5 of 2000), hereafter referred to as PPPFA; Public Finance Management Act (1 of 1999) hereafter referred to as PFMA; Broad-based Black Economic Empowerment (Act 53 of 2003, as amended by Act No 46 of 2013) popularly known as BBBEE; Local Government: Municipal Finance Management Act (56 of 2003) hereafter referred to as MFMA; Promotion of Administrative Justice Act (3 of 2000); the Local Government: Municipal Systems Act (32 of 2000, as amended by Act 44 of 2003) hereafter referred to as Municipal Systems Act; Development Board Act (38 of 2000); and the Promotion of Equality and the Prevention of Unfair Discrimination Act (4 of 2000).

Given the magnitude of government spending in the economy, the South African government identified the public procurement of locally manufactured products as a lever to foster industrial development in the country. The PPPFA regulations were amended in 2011, to empower the dti designate products, sectors and sub-sectors for local production with stipulated thresholds for minimum local content for respective products (IPAP 2017-2020, 2017). Through the public procurement policy, government aims to minimise import leakages, increase both aggregate demand and supply in the domestic economy. To give effect to compliance to designation, regulation 9(1) of the PPPFA amended regulations requires all state organs to purchase only locally produced products with the prescribed level of minimum content.

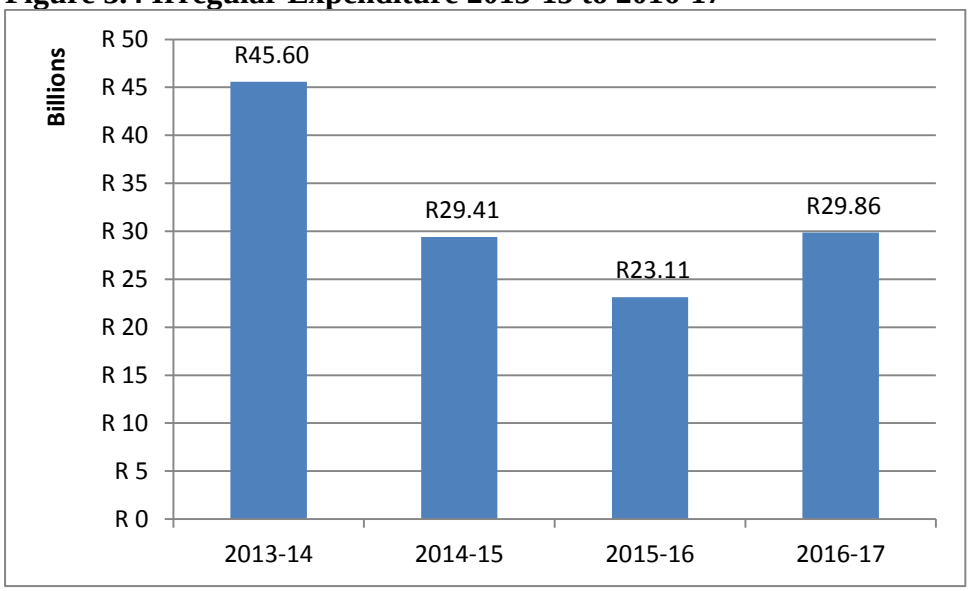
To determine which sectors or products to be considered for designation, the dti conducts a detailed analysis which includes studying the maker structure of industry, the magnitude of government expenditure on the specific product/industry, the capability or maturity of the industry to take on an increased domestic demand as well as economies of scale. When the research result suggests that designation would likely lead to industrial development of the product and the associated industries in the value chain, then the dti engages the NT to consider designation of the product. When the designation proposal is supported NT then the

dti designates the product and NT issues the instruction note to all state organs to implement according to the stipulated minimum local content.

3.3.2 Implementation challenges and successes in public procurement

Government had designed public procurement policy with good intentions to achieve social objectives but since implementation, the policy has been susceptible to corruption and the misuse of state resources due to the financial transactions involved. Evidence of poor compliance with PPPFA in terms the irregular expenditure incurred by government departments and state owned enterprises is reported by the Auditor General of South Africa (AGSA). In 2016/17 irregular expenditure had increased to over R45.6bn, an increase of about 55% from the previous financial year which recorded irregular expenditure of R29 billion (AGSA, 2017). Sectors to have been reported with the highest irregular expenditures include health, transport and education. Since the bus industry fall under the transport sector it would be interesting to see whether the procurement of buses across the government and state owned companies has complied with PPPFA.

Figure 3.4 Irregular Expenditure 2013-15 to 2016-17



Source: AGSA, 2017
Values exclude outstanding audits of some SOCs

The reasons for non-compliance with PPPFA are many but (Ambe and Badenhorst-Weiss, 2012) indicate some of the challenges faced in implementation process of public procurement in South Africa. These include

- lack of proper knowledge, skills and capacity
- non-compliance with Supply Chain Management (SCM) policy and regulations
- inadequate planning and the linking of demand to the budget
- accountability, fraud and corruption
- inadequate monitoring and evaluation of SCM
- unethical behaviour
- too much decentralisation of the procurement system
- ineffectiveness of the black economic empowerment (BEE) policy

Although South Africa has adopted global standards for public procurement, there appears to gaps in realising the full benefits of this policy tool. The existence of these implementation challenges would constantly hinder the achievement of objectives set by government through the implementation of public procurement. The government is aware of these challenges, has acknowledged them in the various iterations of the IPAP and has gone as far as indicating actions to be taken in order to improve the effectiveness of the policy. In the recent years NT has made numerous strides to improve the public procurement processes, its monitoring as well as compliance. Briefly, these include:

- The development of the Central Supplier Database (effective from 01 April 2016) which would serve as the single source of key supplier information for organs of state.
- The development of the eTender publication (effective from May 2015) which is a portal that provides access to all tenders advertised by PFMA compliant public organisations and SOCs (National Treasury, RSA, 2012).

3.3.3 Local Content Requirements

Local content policies have contributed to the development of the automotive industries in several developed countries as well as NICs. The reasons for imposing LCR range but include the protection of local industries, employment creation, boost exports, enhancing local innovation capacity and supporting the broader economic development of a country (Siwage Negara, 2016). Under ISI, importation of SKD or CKD kits contributed to country negative trade balances, thus the introduction of local content policies helped to address this ill and also contribute to a larger automotive industrial base.

South Africa adopted this policy and it indeed contributed to the development of the industry even though it came with cost inefficiencies due a fragmented industry. By 1977, the local content had reached 66% in South African manufactured vehicles (Black, 2007). Most African countries that continued with SKD/CKD assembly that had close to no value addition and lacked political will to implement LCR remained behind with small scale assembly plants and an underdeveloped automotive industry. Having realised the importance of promoting local content in the development of the automotive industry, Morocco has recently in its latest industrial policy (Plan for Industrial Acceleration-PIA:2014 to 2020) included the expansion of local content as one of the objectives (Vidican-Auktor and Hahn, 2017).

Local content requirements have been reinstated in South Africa for products or sectors that have been designated. The Preferential Procurement Regulations (2011) made provision for the dti to designate sectors in accordance with national and industrial policies. Accordingly, government departments and state owned companies are required to advertise bids with specific bidding conditions included. Bids that require the services or goods of designated products should include the condition that only goods that meet the minimum local content threshold for local production and content would be considered for the tender.

To date, the dti has designated 19 sectors for domestic production with set thresholds for minimum content. The adherence to the minimum threshold for local production has been used as pre-qualification criteria for bidders during the adjudication process of tenders. Table 3.1 shows the sectors or products that have been designated with their respective minimum thresholds for local content as percentage.

Table 3.1 Sectors and products designated for local production for the public sector

	Designated Sector Category/description	Designation Date	Minimum local content thresholds		Designated Sector Category/description	Designation Date	Minimum local content thresholds
1	**Rail rolling stock**	16-07-2012		**13**	**Steel conveyance pipes**	28-09-2015	
	Diesel locomotives		55%		Spiral submerged arc welding (bare)		100%
	Electric locomotives		60%		Spiral submerged arc welding (galvanised)		100%
	Electric multiple units		65%		Spiral submerged arc welding (lined and coated)		80%
	Wagon		80%		Spiral submerged arc welding (galvanised, lined and coated		80%
2	**Bus bodies**	16-07-2012		**14**	**Power line hardware and structures**	28-09-2015	100%
	4x2 Commuter bus, 36-seater and more		80%	**15**	**Transformers**	28-09-2015	
	6x2 Commuter bus, 56-seater and more		80%		Class 0		90%
	4x2 City bus, 21-seater and more		70%		Class 1		70%
	6x2 City bus, 50-seater and more		70%		Class 2		70%
	6x2 Semi-luxury coach, 50-seater and more		80%		Class 3		45%
3	**Canned/processed vegetables**	16-07-2012	80%	**16**	Class 4		10%
4	**Clothing, textiles, leather & footwear sector**	16-07-2012	100%		**Two-way radios**	30-06-2016	
5	**Solar water heaters (tank & collector**	19-07-2012	70%		Portable radio		60%
6	**Set-top boxes**	26-09-2012	80%		Mobile radio		60%
7	**Certain pharmaceutical products ****	07-11-2012	Per tender	**17**	Repeater		60%
8	**Furniture products**	15-11-2012			**Solar PV components**	30-06-2016	
	Office furniture		85%		Laminated PV modules		15%
	School furniture		100%		Module frames		65%
	Bases and mattresses		100%		DC combiner boxes		65%
9	**Electrical and telecom cables**	08-05-2013	90%		Mounting structure		90%
10	**Valves and actuators**	06-02-2014	70%	**18**	Inverter		40%
11	**Working vessels**	01-08-2014	60%	**19**	**Rail signalling system**	30-06-2016	65%
12	**Residential electricity meters**	01-08-2014			**Wheelie-bins**	18-08-2016	100%
	Pre-paid		70%				
	Post-paid		70%				
	Smart		50%				

Source: The DTI, 2017

For the bus industry the minimum threshold for local content has been set at between 70% and 80% (IPAP, 2017/18-2019/20). Government hopes that adherence to public procurement of products that have LCR would support job creation, economic growth, reduce South Africa's trade deficit and attract foreign direct investment.

Chapter 4: Findings and Discussions

4.1 Introduction

This chapter provides a profile of the South African industry by indicating the major players as well as the overall performance of the industry over the MIDP and APDP periods. The findings to the research questions that address the objectives of the study are also presented. This section critically documents some of the burning issues relating to the bus industry that relate to government support as well as public procurement designation.

4.2 South Africa's Bus Industry Profile

The bus industry belongs to the MHCV segment of the automotive sector. MHCVs are considered to be productive assets and capital inputs to the economy (AIEC, 2017). Buses are being used to transport the public in the working, tourism and social economy. The bus industry of South Africa is primarily driven by public transport demand. Of the 25 000 buses operating in South Africa, 76% are involved in formal public transport activities and the remaining 24% are found in commerce and industry (SABOA, 2016). Although bus transport is not the most common use mode of transport in the country (unlike taxis), there are numerous government plans indicating increased bus transport demand in the near future. These strategic government plans can be found in the Public Transport Strategy and Action Plan 2007 to 2020, the National Road Passenger Plan and the National Policy on Scholar Transport.

The bus industry in South Africa is perceived as an infant industry, hence the level of protection of 20% ad valorem duty. Manufacturing of buses in the country is characterised by the importation of the drive train components that attracts zero import duty (AIEC, 2017). This is because there is not enough scale economy to produce components such as engines, transmissions, drive-axles and gearboxes locally. With this in mind, the bus body has been identified for localisation and having the potential to support value addition domestically.

The study is limited to the analysis of bus industry, with buses being defined by the National Land Transport Transit Act (NLTTA) of 2000 as "motor vehicle designed, or lawfully adapted, by a registered manufacturer in compliance with the Road Traffic Act, 1989 (Act

No. 29 of 1989), to carry more than 35 persons, excluding the driver". Buses referred to in this study weigh more than 8500kg, thus minibuses and midibuses are excluded.

Public transport in the bus industry offers direct employment to 34,200 persons (SABOA, 2016). Through back and forward linkages the bus industry supports chassis manufacturers, fuel companies, tyre companies, glass and spare part companies, insurance companies etc. that are also in some way dependent on the industry for employment (SABOA, 2016).

4.2.1 Structure of the Bus Industry

The manner that bus industry is structured poses some challenges in the reporting of production and sales information. This is because there are various ways that industry players interact. For example, Scania can assemble the drive train and handover the bus body building to be done by Busmark, then when the bus is sold it can be reported as a sales figure for Scania. Thus in analysing the data in this section, it may be worthwhile to note and consider these industry dynamics.

Having defined a bus above, we now discuss the manufacturing of buses in the country. The bus manufacturing industry of South Africa is heterogeneous in such that there is both completely knock down (CKD) and semi-knock down (SKD) assembly taking place. The distinction between these two terms can be explained as follows: CKD involves the assembly of production components that are totally unassembled, meanwhile SKD includes the assembly of production components that have had a great deal of preassembly having taken place (OICA, n.d.) .Bus assembly in the country comprises of both locally sourced and imported components.

The importation of the bus chassis is duty free, thus almost all bus manufacturers import and assemble the chassis locally, as it is perceived to cheaper to do so. The lack of domestic suppliers for components such as engines, gearboxes and front & rear axles forces bus manufacturers to import. Furthermore, due to the various bus manufacturers respectively having preferred brands for their major components, the likelihood of having a viable local manufacture for parts like engines and gearboxes becomes almost impossible, without relying on imports, even though the country has the necessary skills and technology (Mr Boco

interview, 24 August 2017 and Mr Nodada interview, 23 August 2017). Thus there is no complete built up (CBU) manufacturing of buses in the country.

Within the South African bus manufacturing industry, the following three types ("Bus Manufacturing," n.d.) of bus manufacturers can be identified:

- Chassis manufacturer - builds the under frame for body-on-frame construction
- Body manufacturer - builds the coachwork for body-on-frame construction
- Integral manufacturer - builds entire buses, often using no under frame at all

The following table classifies the bus companies represented in the South African market accordingly:

Table 4.1 Selected major players in South African bus industry 2017

Chassis assemblers	Bus body builders	Integral bus manufacturers
GMSA/Isuzu Trucks	Busmark	MAN
Tata	Marcopolo	Iveco
VDL Bus & Coach	Putco	Volvo Group Southern Africa
Mercedes-Benz	Irizar	
Scania	BUSCO Marketing	
	Neobus	
	MCV	

Source: Own Research

The domestic bus manufacturing industry is small and fragmented. The bus assembly volumes are small and distributed across quite a number of industry players. Most of the bus companies are foreign owned.

4.2.2 Bus Sales

To give some context to the size of the bus industry, an analysis of bus sales is provided. The main suppliers of chassis are Man, Scania, Mercedes-benz and Iveco and they collectively account for 88.8% of the domestic market, as indicated by the bus sales data shown in table 4.2.

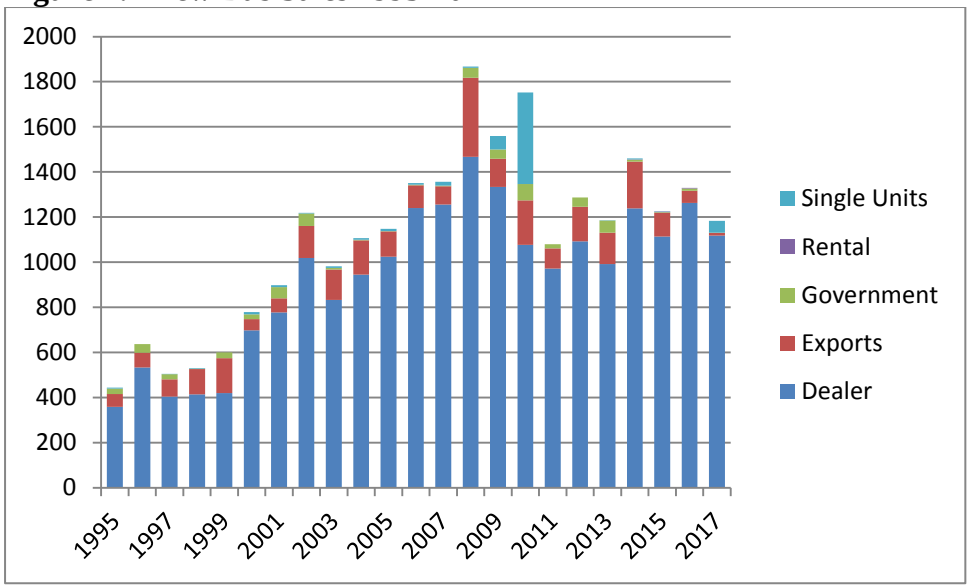
Table 4.2 Bus Sales by OEM 2016

MANUFACTURER	2016 unit Domestic Sales	2015/2016 Year on Year % change	Market Share
MAN	483	-1.2%	37.9%
SCANIA	277	4.1%	21.7%
MERCEDES-BENZ SA	220	-2.7%	17.2%
IVECO	153	1812.5%	12.0%
VOLVO GROUP SOUTHERN AFRICA	60	-6.3%	4.7%
TATA	56	16.7%	4.4%
GMSA/ISUZU TRUCKS	23	53.3%	1.8%
VDL BUS & COACH SA	4	-33.3%	0.3%
TOTAL	**1276**	**13.7%**	**100.0%**

Source: Lightstone Auto (2017)

In 2016, a share of 60.3% of the buses sold were domestically manufactured, meanwhile the remaining 39.7% consisted of bus imports from countries such as Brazil, Italy, South Korea and Sweden. In 2016, a surge of Iveco buses entered into the market as indicated by the year on year growth of 1812.5%. Overall, bus industry sales increased by 13.7% in 2016 and thus suggesting a fairly good business environment. The Business Monitor Online predicts that new bus sales in South Africa will grow to around 1085 units annually until 2020.

Figure 4.1 New Bus Sales 1995-2017



Source: Lightstone Auto (2017)

Figure 4.1 indicates the new buses sales by main channel from 1995 to 2017. It is evident that annually most buses (about 82%) are sold directly to dealerships. Direct bus sale to Government bus average 1.9% of total bus sales in the past 10 years. Although this share

seems small, it can be explained by the fact that anyone can bid for a bus tender and some public entities can buy buses through a dealership, thus the sales data does not capture the final user which could be government.

The share of buses sold directly to government was highest in 1996, 2001 and 2013 (6%, 5.6% and 4.6%, respectively). In actual volumes, the largest direct government procurement of 72 buses was recorded in 2010 resulting from the large bus fleet demand to support the 2010 FIFA World Cup that was hosted in the country. Government bus purchases in 2012 and 2013 were boosted by the roll out of the BRT system in the City of Johannesburg.

The demand for buses (especially government driven bus demand) can be expected to increase in the near future, following approved government plans which include: the Public Transport Strategy and Action Plan of 2007 to 2020, the National Road Passenger Plan and the National Policy on Scholar Transport. These plans can be viewed to be supportive of the development of the domestic bus manufacturing industry and its related value chains.

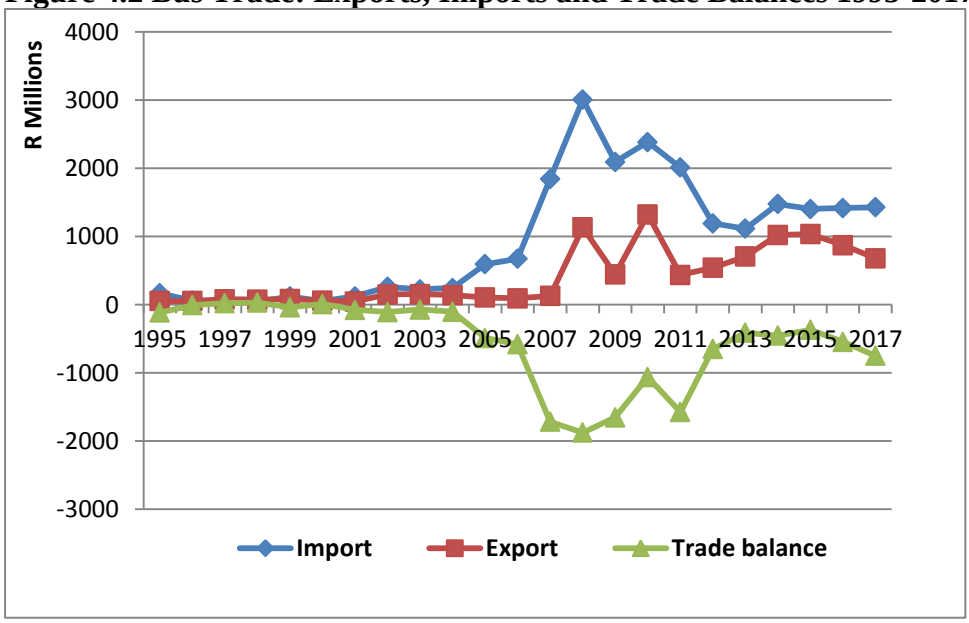
4.2.3 Bus Trade

The bus industry operates in a global market and the performance of the domestic manufacturing industry is affected by decisions made by multinationals with head offices that are outside South Africa. According to OICA, in 2017 the South African bus industry accounted for only 0.36% of global bus production which stood at 316 258 units. Countries with the largest bus production in the world include China, India and Brazil whom have respectively produced 178 385, 42 392 and 20670 units in 2017.

An analysis of figure 4.2 suggests that South Africa is a net importer of buses. The reasons for this are many but of note is that independent bus operating companies at times require highly sophisticated luxury coach buses which are cheaper to import than to buy domestically (Mr Boco interview, 24 August 2017). An analysis from the year 1995 which is the year the MIDP was introduced is supportive of the argument that in the 10 years of the MIDP the bus industry was excluded in the program for support; hence the trade performance had not change significantly. Between 1995 and 2005, the level of bus imports and exports remained fairly stable, with the number of imported buses being constantly higher than exports.

Notable changes can be seen from the year 2006 onwards, whereby the value of imported buses increased significantly from R673 million to R3 billion between 2006 and 2008 respectively. The increase in the purchase of buses can be related to prevailing positive economic growth at that time.

Figure 4.2 Bus Trade: Exports, Imports and Trade Balances 1995-2017



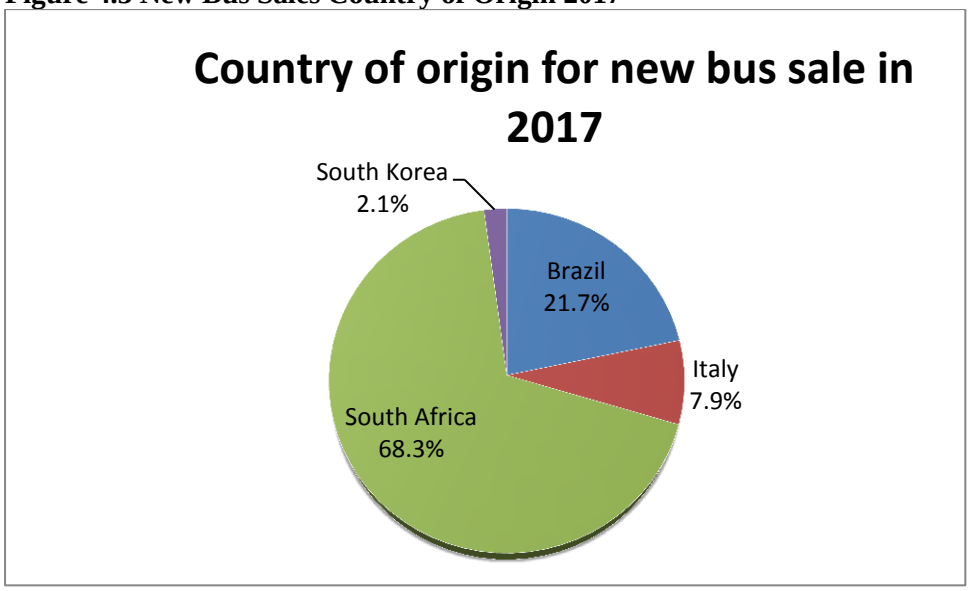
Source: Quantec

The increase in bus imports in 2009 and 2010 can be attributed to the increased bus demand for the 2010 FIFA World Cup tournament. The spike in the number of exported buses in 2008 could be explained by global economic conditions which were favourable for the demand of South African buses due to currency appreciation The trend of higher values and number of bus imports has continued through to 2017, thus contributing to a negative trade balance for the bus industry which has expanded in 2017 to R748 million. This situation then provokes some thoughts on the relevance or effectiveness of industrial policy for the bus industry. Bus bodies were designated for public procurement in 2012 and the MHCV-AIS was introduced in 2014. Based on the sales and trade data, it appears as if industrial policy has only helped to sustain the existence of the domestic bus industry and not to grow it to be globally competitive.

In terms of the origin of buses sold in the country, figure 4.3 depicts the main country sources by shares, respectively. The largest share of new buses is sourced domestically, this is indicative of a matured and capable domestic bus industry to meet the domestic market as

well. Tariff protection can also be attributed to a thriving domestic bus industry. A significant share (21.7% in 2017) of buses were being sourced from Brazil and the reason behind this includes the pricing of domestically produced buses being more expensive than imported ones (Dr Barnes interview, 24 August 2017), thus Brazilian buses remain a huge threat to the local bus producers.

Figure 4.3 New Bus Sales Country of Origin 2017



Source: Lightstone Auto (2017)

Given the above analysis of the performance of the domestic bus industry, the interventions targeting the development of the bus industry seem to be weak to impactfully restructure the domestic bus industry to one that is globally competitive. The bus industry strives mainly due to the demand for public transport in the country. Mr Fernandes of MAN suggested the opinion that the domestic bus industry is market driven and industrial policy play little to no role in the operations of the industry. He indicated that the MHCV-AIS was of no use to the company (Mr Fernandes interview, 8 September 2017).

The analysis above brings us to the next section which assesses the governance of the policy tools targeted at developing the bus industry. An interrogation of the relationship between government and the intended beneficiaries of MHCV-AIS and public procurement designation would be of value in order to understand the power dynamics and political economy at hand.

4.3 Governance of instruments

4.3.1 MHCV-AIS monitoring and evaluation

The successful development of an industry, to one that is globally competitive requires effective industrial policy design, efficient usage of policy instruments to support supporting increased firm capabilities and the capability of the state to enforce compliance and monitor progress against policy objectives (Khan, 2015).

The MHCV-AIS is primarily managed by the Incentive Development and Administration Division (IDAD) in the dti. The division's tasks include the disbursement of incentives as well as the review, monitoring and evaluating of the incentives programmes.

The objectives of IDAD include;

- supporting industrial development that would enhance productivity and bolster competitiveness through designing, administering, monitoring and evaluating of the manufacturing incentive programmes based on industrial policies and sector strategies developed by providing financial support in labour intensive sectors on an on-going basis: and
- to contribute to the accelerated growth of the manufacturing and internationally traded services over the long term through the provision of incentives for industrial infrastructure development (The dti, 2017b).

Other governance agencies charged with managing the MHCV-AIS policy instrument and are part of the adjudication committee which evaluates applications for the grant include:

- the Automotive sector desk in the Industrial Development Division of the dti
- the International Trade Administration Commission of South Africa (ITAC)
- the National Treasury
- the Industrial Development Corporation (IDC)

The core function of the automotive sector desk is to design and implement policies, strategies and programmes for the development of the automotive industry. Their role in administering implementation of the MHVC-AIS could be said to be one of providing tacit knowledge of the automotive industry. ITAC's role is to establish efficient and effective

systems for administering international trade through conducting customs tariff investigations, trade remedies and providing import and export controls.

The NT provides its oversight role through the PFMA as it applies to all government departments. In the scheme of things, regarding the grant, NT could be said to be playing a role of observing sound financial allocation of public finances to support industrial development. The inclusion of IDC in the adjudication committee could be for its business acumen, especially when comes to assessing business plans and the viability.

Successful industrial policy implementation requires institutional capacity to implement, monitor and evaluate the impact of policy instruments. Institutions are required that can reduce the cost of enforcement as well as monitoring by having transparent and reporting rules in place (Hansen Hansen, Buur, Mette Kjær and Therkildsen, 2016). In the case of the MHCV-AIS, the monitoring that takes place is based on OEM performance against what has been indicated in their business plan that was submitted when applying for the grant. For funds to be disbursed, the AIS guidelines indicate that at each claim stage (which can be after commencement of the investment commissioning or commercial production) claimants are required to furnish numerous documents such as audited financial statements and project monitoring report, proving that funds will be used for the intended purpose (The dti, 2014). In each stage of the claiming period, the OEM would be evaluated whether it is performing according to indicators (such as employment, production, and investment) included in its business plan. Theoretically, this approach is similar to that adopted by the Korean Development Bank (KDB) in the 1970s.

The KDB developed a control system to ensure that funds disbursed to its clients were used for their prescribed purpose. This system ensured that even though a project has been approved, the disbursement of the funds were not made immediately and not in full but proportional payments were made to allow the bank to be able to monitor progress of the project (Amsden, 2001). The proportional disbursement of claimed payments is also an effective tool that helps to restrict rent seeking behaviour from firms who may utilise the grant to only increase profits as noted by (Khan and Jomo, 2000).

Findings from the interviews revealed that since the dti introduced this specific incentive to support the development of MHCVs, no evaluation has been conducted on the effectiveness

of the grant in meeting the dti's IPAP objectives or its contribution in meeting the country's developmental goals. In other words, since the introduction of the 2014 MHCV-AIS, no one knows the number of jobs that have been created with the support of MHCV-AIS (Ms Theron interview, 14 September 2017).

Furthermore, the MHCV-AIS guidelines state that 'In order to evaluate the impact of the programme, the dti requires that, for a period of two (2) years after completion of the claim period, the client completes the project monitoring report annually. This requirement forms part of the terms and conditions of the AIS.' Officials interviewed from the dti were requested to share the impact analysis report for the MHCV-AIS and the response was that in the absence of an evaluation of the grant the impact analysis report has also not been conducted yet.

According to the programme guidelines, grant beneficiaries have to be appraised; verified and adjudicated, thus it is expected that they will contribute in the achievement of the industrial policy objectives (The dti, 2014). The programme guidelines indicate that projects that are to be approved for the grants indicate the projected employment to be created by the investment. The MHCV industry is more labour intensive than other automotive industries in terms of assembly, and it is believed that the more active the industry the more employment opportunities that could be created (AIEC, 2017). The expectation from a policy maker point of view would be that the few investments projects approved for funding through MHCV-AIS would translate to noticeable or quantifiable increases in employment, unit production, exports and so forth. An analysis of secondary data published by the industry association (NAAMSA, 2018b) revealed that the have not been any significant increases in employment, exports and production units within the MHCV segment since 2014.

Amsden (2001) suggested the implementation of RCMs to induce good performance by industry. RCMs were embedded in NICs industrial policy whereby a subsidy was linked to a performance standard. An analysis of the design of the MHCV-AIS indicates the inclusion of RCMs whereby the guidelines indicate targets such as the increasing production volumes from 2000 to 2500 units, the creation of at least 20 new jobs and increasing turnover by 20% in the first year of production are imposed in order to direct industry towards achieving industrial policy objectives (The dti, 2014).

A deeper interrogation into the implementation of the program and the stagnant industry performance revealed that since the inception of the MHCV AIS in November 2014, only 6 projects have been approved, of which only one was an investment project from the bus industry and the others were 2 investment projects by component manufacturers supplying the MHCV industry and the other 3 projects were from truck manufacturers (Ms Theron interview, 14 September 2017). When asked why there has been so little appetite of the MHCV-AIS, Ms Theron could not provide any reason but indicated that she was certain that industry is aware of the incentive. On the other hand, Mr Nodada, Mr Mansingh and Mr Fernandes were respectively asked why their companies have never applied for the MHCV-AIS. And the responses were as follows:

"*..the MHCV-AIS mainly benefit the OEMs."* (Mr Nodada interview, 23 August 2017)

*"Our volumes are too low to make any major investment in the domestic market and benefit from the MHCV-AIS." (*Mr Mansingh interview, 15 September 2017)

"*…the MHCV-AIS is useless for us….*" (Mr Fernandes interview, 8 September 2017)

The responses provided are indicative of an industrial policy instrument that does not meet the needs of the industry or attracting new investment. This may suggest a review of the MHCV-AIS to ensure that it is designed in such a way that its uptake by industry.

An email discussion with a key stakeholder in the industry revealed that section 7.1.1 of MHCV-AIS guidelines states that for truck manufacturers, "*The cab may be imported in an assembled and trimmed condition into South Africa until 31 March 2016*." He indicated that most players in the MHCV space fail to meet this requirement in order to access the MHCV-AIS, due to the fact that it would cost an OEM more to invest in cab trimming versus the potential grant to be received from the dti.

Based on this finding, the issue of stakeholder consultation was investigated to try understanding whether industry was consulted before the incentive was designed. Mr Mbatha from the dti, confirmed that the industry was consulted prior the development of the MHCV-AIS. The internationalisation of the bus industry seems to have not been carefully considered when the program was designed and the dti has included this requirement in its guidelines pre-maturely. From industry it clear that it is not viable for the domestic MHCV industry to be involved in cab assembly and trimming due to the process resulting in a diseconomy of scale.

The interaction between the dti and industry with regards to the MHCV-AIS provides interesting insights. The dti offers incentives to the industry with a conscious of achieving developmental goals and industrialisation, whilst industry focusses on the bottom line which is making profits. There are clearly fragmented goals and tensions of interest between the two, however it is the role of government to create a market friendly environment where industry can operate efficiently and thus contribute to government industrial policy objectives.

4.3.2 Public procurement and local content monitoring and evaluation

Public Procurement

Within its design, public procurement requires governance of a nexus of buyers and bidders. Important governance factors to be considered in the design and implementation of public procurement include the relationships between public and private sector as well as the institutional structure affecting implementation of public procurement (Kashap, 2004). Successful implementation of public procurement is dependent on whether its implementation is centralised or decentralised, since the degree of compliance with the acts, regulations, instruction notes affecting public procurement would vary between these two institutional setups. Furthermore, understanding the compatibility of the institutional compulsions to enforce successful industrial policy implementation over the various structures of the state and in a political economic society is important (Khan and Blankenburg, 2009).

In South Africa, the NT is the sole custodian of the PFMA and PPPFA and is thus charged with designing, managing and administrating its compliance. The NT issues regulations, instruction notes, circulars and the guide for accounting officers to enforce compliance in the procurement of goods and service for public use. The dti's involvement in public procurement is using it as a lever to drive industrialisation through designation.

The public procurement structure in South Africa is very fragmented in such a way that monitoring and evaluation is a challenge. The fragmentation can be observed within each of the 40 national departments, which have their respective state owned companies and

agencies, in addition to about 257 local municipalities with various procurement requirements (MDB, 2000).

Before the e-tender portal was introduced, no system was in place to effectively monitor and evaluation the overall impact of public procurement on buses. The decentralisation structure of public procurement has rendered it to be a weak policy instrument in driving industrial policy, given poor capabilities to monitor and evaluate its performance. When interviewed on 4 September 2017, Dr Makube had the following to say: "*If departments and municipalities coordinated or centralised the process of buying buses, the implementation of PPPFA could yield the desired results by promoting local value addition and increase the scale of production in the bus industry. It would also be easier to monitor and evaluate the impact of public procurement.* "

This point is also advocated by (Fawcett, Ellram, Ogden, 2014) as indicating that centralised public procurement leverages scale to reduce costs meanwhile decentralised relies on local knowledge to build relationships. Ms Pietersen from National Treasury was asked whether all buses procured by government follow the PPPFA regulations and she had this to say:
"All government departments and state owned entities are supposed to adhere to the PPPFA when procuring buses, but in reality not all do" (Ms Pietersen interview, 25 August 2017).

Decentralisation of the procurement process of buses without any process flow systems of information between NT and the rest of the state has weakened the policy somewhat in terms of what it intends to achieve. Between the dti and NT which are the department who are supposed to champion the public procurement policy, none of them conducted an impact analysis of the policy especially on the designated sectors, suggesting the lack or absence of monitoring and evaluation of the policy.

Local content

The bus body has been designated for public procurement, with minimum local content threshold of 70% to 80%, depending on the bus size. The mechanism used to ensure compliance with the local content policy, requires careful coherence and coordination of various government institutions that have different roles in the process of enforcing

compliance. In an interview on 11 September 2017, Ms Matidza roughly mapped out how the local content policy is governed. She indicated that:

- the NT is responsible for issuing the instruction notes that guide accounting officers and authorities on the procedure to be followed when procuring buses which have been designated for public procurement with the dti offering guidance and training to officials who intend on issuing tenders for the procurement of buses to ensure that the correct information is included in the tenders and the correct process are followed;
- the procuring entity (mainly municipality) issues a tender advertisement which stipulates the local content threshold required for the bus bodies, which becomes the pre-qualification criteria for evaluation;
- after all bid documents are evaluated according to PPPFA regulations, the tender is awarded; and
- the SABS's role in this process is to verify whether the appointed bidder would certainly deliver on buses that meet the local content threshold. This verification can take place after the award of the tender and during production of buses.

One of the challenges with local content implementation is the lack of institutional capacity to enforce, monitor and evaluate the impact made by policy as well as the governance of economic activity (Warner, 2011). This is somewhat true in the case in the South Africa. The monitoring of compliance with the local content requirement is the responsibility of the SABS, but due to governance tension it is unable to perform this role effectively. According Mr Boco, the bus industry is self-regulatory when it comes to local content.

Furthermore, interviews with representatives from the bus manufacturers have indicated that the current minimum threshold of 80% is so easily achievable and that the domestic industry could even go as high as 100% local content on the bus body. When interviewed on 23 August 2017, Mr Nodada suggested that "*local content of about 20% can be introduced for the chassis and its hang on parts*".

In the absence of monitoring and evaluation of local content in the bus industry, the dti had reviewed the minimum threshold to set the target higher in order to simulate further localisation in the value chain.

Localisation as an instrument adopted by the South African government to achieve its industrial policy goals comes with economic benefits and some administrative costs associated with verification or auditing and monitoring of local content (Warner, 2011). Governments implement local content policy with good intentions such as creating jobs, supporting domestic producers and increasing value add. The inability of government to quantify the unintended policy consequences of local content regulation may result to poor or ineffective policy implementation. Regulating local content comes at a cost to government and government needs to be aware of the impact that regulation would have on government revenues (Warner, 2011).

In the current policy environment, it is unclear what the cost of enforcing local content and this lack of information may jeopardize successful implementation. With that said it could also be a contributing factor to the poor regulating, verification and monitored of local content as a policy instrument in South Africa. Efforts to contact the SABS failed, thus information on how much it costs them to verify local content is unknown. Bus bodies have been designated in 2012 and since then numerous bus contracts have been awarded but only one contract has been audited or verified for local content by the SABS (Ms Matidza interview, 11 September 2017). Marcopolo was awarded the tender to provide bus bodies for the Rea Vaya BRT (De Bruyn, 2009) and it was the only company that was audited and verified.

The reasons for poor regulation of local content include but not limited to budgetary constraints to perform the function of verifying or auditing local content at company level (Ms Matidza interview, 11 September 2017). In this regard it appears as if there has been oversight during the design for the local content requirement instrument. This has resulted to an institutional weakness in the enforcement and monitoring of this policy instrument. Poor monitoring of local content can lead to local content activities being merely "window dressing" policy instruments (Buur, Therkildsen, Hansen and Kjær, 2013). In the context of South Africa, the absence of quantifiable evidence supporting an effective local content leads to doubts whether the policy is effective, thus the institutional capacity is again questionable.

In the South African case, the instruction notes for designated sectors are very clear how each procurement transaction should be handled but there seems to be a disjuncture between policy and implementation. Section 7.2 of the instruction note for the procurement of buses

states that the dti should be notified of all successful bidders, the value of the awarded contract and be provided with the contract documents and certificates for the purpose of conducting compliance audits with the intention of monitoring the implementation of the industrial development strategies. At this stage of local content implementation it is unclear who should or is monitoring all the bus contracts awarded to for the purpose of assessing if the set industrial policy objectives are being met. it is also unclear the extent of the impact that the introduction of minimum local content requirement has had in the bus industry. It has been almost five years since buses were designated and there is no empirical evidence that can be provided on record to prove if the instrument is successful or not.

One of the challenges with local content implementation is the lack of institutional capacity to enforce, monitor and evaluate the impact made by policy as well as the governance of economic activity (Warner, 2011). This is somewhat the case in the South African context. Local content enforcement seems to be fairly effective as all government departments and entities are aware of the instruction notes pertaining to buses and other sectors that have been designated. It is in rare cases will certain municipalities not adhere to the PPPFA and the Auditor General would be in a position to notice such discrepancies. To improve on the current enforcement, the up calling of the verification processes for local content is necessary. The SABS or procuring entity should be capacitated to monitor whether the winning bidder adheres to the local content requirement from the production to completion of the contract.

To improve on the current policy implementation processes, the dti could also put more effort to evaluate the impact made by local content, by doing so the department will be able to identify areas of improvement in the design or implementation of local content regulation even in other sectors as well as understand whether the desired objectives are being achieved or not and thus creating a platform for policy improvement. Lessons should be drawn from the designation of one industry as this would allow for improved local content implementation in other sectors. The lack of evaluation for local content could result in the continual ineffective implementation of this instrument.

4.3.3 Contradictions of tender processes

When interviewed on 24 August 2017, Dr J. Barnes pointed out that the procurement policy in the country is well designed and enforced, but it tends to fail due to its inability to hold the lower levels of government accountable for complying with the PPPFA. Primary insight has revealed that even though all entities intending to procure buses are obliged to include local content as a requirement, the has been instances where this requirement has been neglected, resulting in the dti having to instruct some entities to withdraw the tender advert and redraft to include local content. Prior to the e-Tender portal which was introduced in May 2015, the dti had no formal system or mechanism to trace all bus tenders issued to check whether they include the local content requirement. This then could be seen as weakness from the side of the dti in the capacity to monitor compliance within the designated sectors. The dti's powers are also limited to designating sectors or products and exclude disciplining non complying institutions. Thus, there were some cases where buses have been procured without following the formal tender processes and compliance with local content and no one has been punished.

The fragmented coordination of local content implementation is furthermore traced in the process of verification or auditing of the local content levels. The SABS is charged with the task of verifying whether all companies awarded with the contract to supply buses meet the minimum threshold. But in practise, numerous bus contracts have been awarded over the recent years and only one contract is confirmed to have been verified for local content. The discrepancy in the tender process allows room for corruption which stifles industrial policy goals and objectives.

To emphasise the concern on tender processes, relating it especially with the public procurement of buses, an inquiry was launched by the trade and industry committee in parliament to review compliance with localization and local public procurement policy (Azzakani, 2018). One of the topical issues discussed in the inquiry related to the lack of clarity in the verification of local content of bus bodies.

4.3.4 Fragmentation in policy across institutions and agencies

Public procurement has been identified to potentially benefit the bus industry by securing domestic demand to maintain resuscitate and develop manufacturing activities. The Public

Transport Strategy and Action Plan 2007 to 2020 and the National Road Passenger Plan have been indented to stimulated government driven demand for buses and were in favour for bus body designation.

Whilst the dti hopes to use public procurement to leverage government expenditure to drive industrialisation, this policy instrument is highly exposed to corruption which could lead the dti's policy objectives not being achieved. To fight corruption, treasury has introduced the e-tender portal and the central database of approved suppliers on its website. These initiatives and the focus on perfecting the tender processes are indicative of the high capacity levels within the Treasury in ensuring more efficient and cost-effective public procurement. But, because procuring of public goods and services is decentralised, not all spheres of government have the common conscious of using public procurement for industrial development and meeting macro-economic objectives. Ashman, Fine and Newman (2010) argues that the problem for "effective implementation of public procurement "is not so much lack of capacity, but more its creation, distribution and deployment as a reflection of political priorities.

All stakeholders interviewed agreed that all bus procurement should follow the PPPFA regulations, but in practise there are some municipalities who go against the regulations and undermine the formal process and thus weaken public procurement as a lever to achieve industrial policy. Rose-Ackerman (1999), argues that procurement reform is necessary, but it is not sufficient, in dealing with procurement scandals which implicate politicians who tend to profit from their inside knowledge and connections. This fact is reaffirmed by Moeti, Khalo, Mafunisa, Nsingo and Makondo (2007) indicating that most of the fraudulent and corrupt activities in government transpire through poor procurement management and control. Evans (1995) describes such an environment as the results of predatory states, whereby personal gain is extracted at the expense of society and undercutting development or going against developmental goals and objectives.

Chapter 5: Conclusion and Recommendations

In this chapter the findings from the interviews and secondary data would be summed up, furthermore recommendations would be provided where opportunities for the industry could be explored and how government can create an improved industrial policy that would stimulate economic activity within the bus industry value chain.

The research findings have indicated that industrial policy implementation in the case of the bus industry provides a learning experience for South Africa rather than being a success story. The inability of the MHCV-AIS to be accessible to the bus industry or stimulate investment suggests that in its current form it is a misfit for bus industry development. The dti may need to review the program and engage industry in order to design a program that has industry buy-in.

Pertaining to the monitoring and evaluation of public procurement, NT can be commended for introducing the eTender portal and the customer supplier data base as it would improve monitoring whether all advertised tenders comply with the PPPFA. This initiative can also be seen as policy improvement initiative that would also promote transparency in the tender processes. Furthermore, government would need to establish a systematic process of monitoring the impact or economic benefits accruing from public procurement of buses, one that links tenders from all levels of government and SOCs. To enforce compliance with PPPFA, National Treasury needs to introduce punitive measures to entities that deviate from the PPPFA regulation and instruction notes.

The lack of verification activity by the SABS needs to be addressed. The SABS cannot be expected to audit firms or operate without a sound budget allocation to render this service. This suggests institutional incapacity which results to an industrial policy that is inefficient. It is thus necessary that the dti and NT engage the SABS to get a sense on cost to be incurred for verification since the absence of verification would the local content policy would seem like “window dressing”. Furthermore, the dti should consider increasing the minimum local content on buses since the study findings have suggested that the bus industry is matured and capable of delivering on higher levels of local content. Also, the designation of selected components of the chassis should be considered, those that could contribute to a minimum local content of about 20% of the chassis.

Industry Opportunities

Opportunities that could be explored to expand the domestic bus industries include the production of e-buses, the promotion of regional integration and development of the black industrial class.

Current buses assembled in the country are mostly powered by diesel. The recent increased global interest in reducing carbon emission caused by the transport sector has opened up opportunities for new technologies and alternative energies to be used in the bus sector as well. The introduction or swift shift from the assembling of diesel powered bus to e-buses (hybrid, battery-electric, fuel cell or compressed natural gas powered) could result in a reduction of engine imports and potentially reduce the continued trade deficit of the auto sector. Although the uptake or demand for e-buses can be anticipated to be slow within Africa due to infrastructure and the purchase price, South Africa can grab the opportunity of being the regional leader in the assembling of e-buses and adopting a public procurement policy which supports e-buses. Governments of various developed and developing countries are considering using electric buses for public transport. Countries such as China and India are leading in terms of demand for electric buses and one can expect the uptake to increase when more countries adopt cleaner public transportation. South Africa can take part in the global market which offers huge growth potential by exporting e-buses. One of the leading electric and hybrid bus manufacturers BYD has already made plans to start manufacturing buses in the country from 2018 (Venter, 2016).

Bus manufacturing is a low volume industry and regional integration offers the potential solution for increasing production volumes and making the domestic industry competitive. Forging market access especially in the regional arrangements such as Southern African Development Community and Southern African Customs Union where automotive production is still underdeveloped could be beneficial for South Africa. The regional integration proposed here could also support the development of regional value chains which would support the region collectively and redress the threat of de-industrialisation (TIPS, 2009). The only challenge that may exist for South Africa when pursuing regional integration to capture increased production volumes is that because bus manufacturing is labour intensive other African countries also aspire to develop their domestic bus assemblies as its somewhat easier and less technical than the high capital and technology intensive passenger vehicle manufacturing.

Demand for buses within the region exists when one considers that majority of the population relies on public transport but the challenge is that in some countries, government policy is not strong enough to ensure that the domestic manufacturers are given preference to supply buses. Put differently, industrial policy is driven by selected government departments instead of it being a country wide objective where even local municipalities and the private sector participates in meeting the objectives. States in the region should meet and develop regional strategies that would benefit all countries within the region depending on the respective capability and capacity.

Lastly, to develop the domestic bus industry, the dti should consider linking the black industrial scheme with automotive incentives. By doing so, industrial policy would support industrial upgrading that benefits domestic firms and thus reverse the deindustrialisation trajectory that may gain momentum if nothing is done to deepen the domestic value chain.

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