TRADE & INDUSTRIAL POLICY STRATEGIES

INDUSTRY STUDY

Auto Manufacturing

November 2023

TIPS industry studies aim to provide a comprehensive overview of key trends in leading industries in South Africa. For each industry covered, working papers will be published on basic economic trends, including value added, employment, investment and market structure; trade by major product and country; impact on the environment as well as threats and opportunities arising from the climate crisis; and the implications of emerging technologies. The studies aim to provide background for policymakers and researchers, and to strengthen our understanding of current challenges and opportunities in each industry as a basis for a more strategic response.

This note provides an overview of the South African automotive industry.

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CONTENTS

Disclaimer

ABBREVIATIONS

AAAM	African Automotive Manufacturers Association
AfCFTA	African Continental Free Trade Area
ASCCI	Automotive Supply Chain Competitiveness Initiative
AIDC	Automotive Industry Development Centre
AIEC	Automotive Industry Export Council
AIS	Automotive Investment Scheme
APDP	Automotive Production Development Programme
ASP	Automotive Supplier Park
B-BBEE	Broad-Based Black Economic Empowerment
BEV	Battery Electric Vehicle
CSP	Customised Sector Programme
DAC	Durban Automotive Cluster
dtic, the	Department of Trade, Industry and Competition
ECAIC	Eastern Cape Automotive Industry Cluster
EU	European Union
EV	Electric Vehicle
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
HEV	Hybrid Electric Vehicle
ICE	Internal Combustion Engine
IDC	Industrial Development Corporation
IDZ	Industrial Development Zone
IPAP	Industrial Policy Action Plan
KPIs	Key Performance Indicators
KZN	KwaZulu-Natal
merSeta	Manufacturing, Engineering and Related Services Sector Education and Training Authority
MICWU	Motor Industry Combined Workers Union
MIDP	Motor Industrial Development Plan
MIOSA	Motor Industry Ombudsman of South Africa
NAACAM	National Association of Automotive Component and Allied Manufacturers
NADA	National Automobile Dealers' Association
NEVs	New Energy Vehicles
NRCS	National Regulator for Compulsory Specifications
NUMSA	National Union of Metalworkers of South Africa
OICA	International Organization of Motor Vehicle Manufacturers
OEMs	Original Equipment Manufacturers
PI	Production Incentive
PHEV	Plug-in Hybrid Electric Vehicle
RMI	Retail Motor Industry Organisation
ROA	Return on Assets
SAAM	South African Automotive Masterplan
SARS	South Africa Revenue Services
SMEs	Small and Medium-sized Enterprises
SEZ	Special Economic Zone
US	United States
VAA	Vehicle Assembly Allowance

SECTION 1: AUTO MANUFACTURING SUB-SECTOR ANALYSIS

1.1. Introduction: South Africa's auto industry[1]

The automotive industry is one of South Africa's core industries, accounting for almost 12.8% of total manufacturing output in 2022.[2] Although considered a marginal player in the global automotive industry, South Africa is Africa's leading passenger vehicle manufacturer and exporter of vehicles. In 2022, South Africa produced 555 889 units of passenger cars and light commercial vehicles, accounting for 54.4% of Africa's total vehicle production, although only 0.7% of total global production (OICA, 2023). South African-based vehicle original equipment manufacturers (OEMs) and component suppliers' manufacture predominately for the export market. According to Morris et al. (2021), approximately 70% of all vehicles produced in South Africa are exported.

South Africa's automotive industry receives support through the Automotive Production Development Programme (APDP) policy framework, which was in effect from 2013 to 2021. The local automotive industry is built on extensive support programmes starting in the 1950s. Its primary goals were to attract investment, increase domestic vehicle production, and to enhance localisation within the sector. In line with the APDP, the South African Automotive Masterplan (SAAM) (see the dtic, 2018) was implemented in 2021, covering the period from 2021 to 2035. The SAAM 2035 aims to address the limitations of the APDP and foster industry growth, as outlined by naamsa | The Automotive Business Council (2023). Section two of this report provides a more detailed analysis of the evolving policy landscape in South Africa's automotive industry and how these policies have contributed to industry development and alignment with national objectives.

1.2 Trends transforming the automotive industry

Since the introduction of the Motor Industrial Development Plan (MIDP) in 1995, the local automotive industry has experienced significant transformations. These changes include shifts in ownership structures of OEMs, expansion of exports, increased automation, and a slowdown in GDP growth within the local economy.

From 2010 to 2022, there have been substantial changes in both the global and local automotive industry. The auto industry is undergoing changes on multiple fronts, driven by globalisation, technological advancements, geopolitical factors and changing consumer preferences. The future of mobility is envisioned as electrified, connected and shared, with environmental policies and government incentives playing a crucial role in decarbonising the transport sector through the promotion of new energy vehicles (NEVs) and charging infrastructure (PwC, 2020).

Technological drivers such as artificial intelligence, 3D printing, robotics and the Internet of Things (IoT) are transforming vehicle manufacturing, global value chains and governance structures, fundamentally changing the concept of mobility (B&M Analysts, 2018). It is thus evident that the automotive industry transition presents many challenges for South Africa, specifically relating to policy regarding NEVs, South Africa's fiscal and monetary policy, low levels of investment in digitisation and Research and Development (R&D), and the country's low innovation skills capability to adapt to future technological changes. Still, the structural shift also provides big opportunities for expanding

[1] In the automotive industry, SIC codes 381-383 are used for this analysis; HS codes for trade cover vehicles and components; with HS code 8703 for vehicles; and HS codes 8706-8708 for component parts and accessories used in vehicle manufacturing.

[2] Quantec. EasyData. Interactive dataset. Industry service. www.quantec.co.za. Accessed in September 2023.

digitisation, NEV manufacturing capacity and fostering an electromobility (e-mobility) ecosystem along with promoting a circular economy for NEV and battery value chains.

Immediate challenges in the global automotive industry caused by the COVID-19 pandemic and its disruptions of supply chains, shortages of microchips, rising energy prices, and the on-going technological disruption are bound to change not only the structure and governance of global value chains and automotive production, but they will also have an overarching impact on the targets set in the SAAM 2035 for the local industry. Moreover, challenges in logistics capacity have further exacerbated the efficiency losses in vehicle manufacturing processes.

Considering that South Africa heavily relies on importing high-value and capital-intensive components, the depreciation of the rand will lead to higher manufacturing input costs and increased costs of imported vehicles. Consequently, this puts pressure on companies to raise prices, which could be difficult for consumers given the current economic conditions in the local economy. Furthermore, the domestic industry is grappling with several challenges, including damages caused by the effects of loadshedding and the KwaZulu-Natal (KZN) floods in 2022. These challenges encompass the need to redefine and innovate business models, as well as develop competitive strategies that are resilient, strategic, flexible and capable of minimising risks for manufacturers.

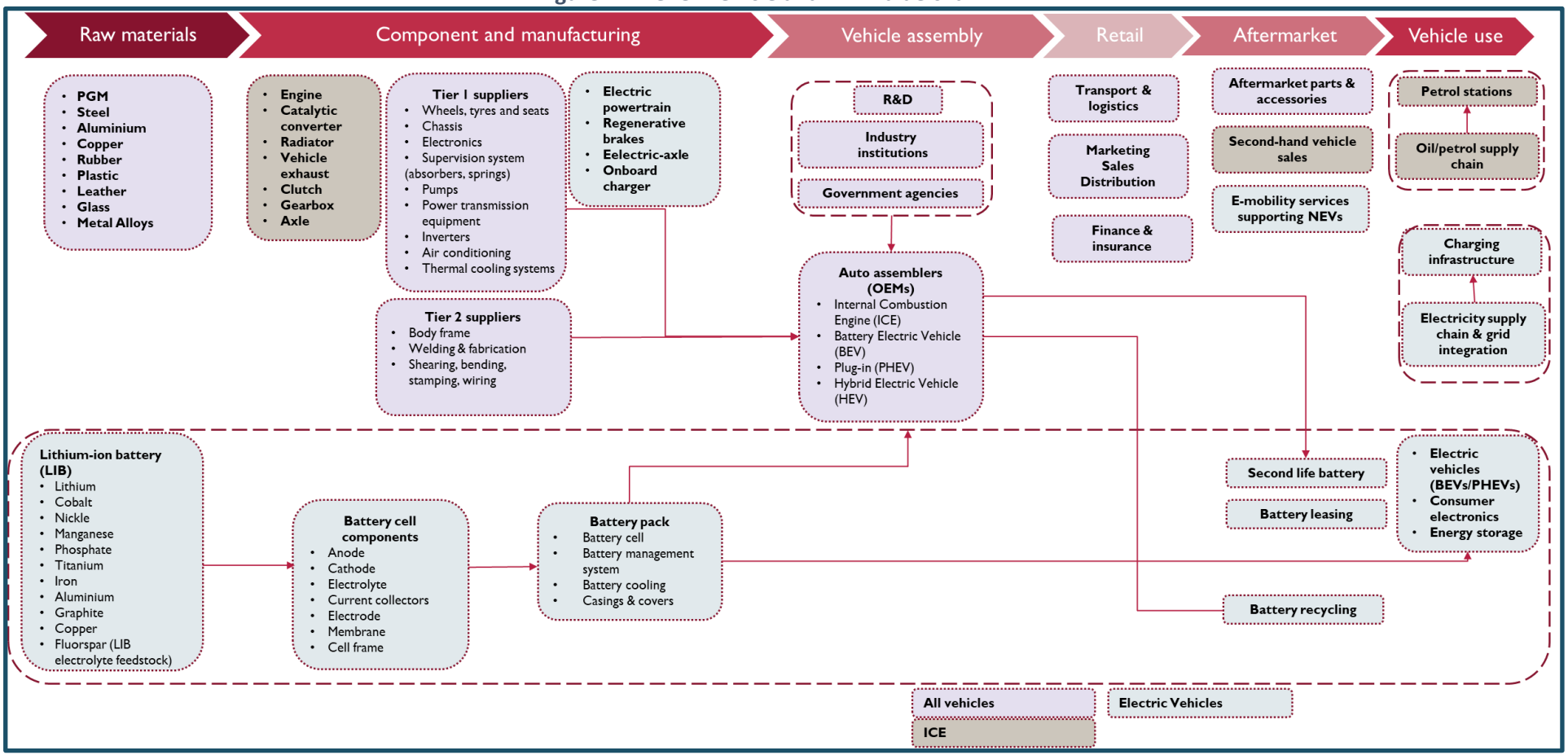
With the aim of providing a comprehensive understanding of the automotive industry, this background study in section one of the report will focus on a value chain analysis and examining industry-level trends. This analysis will encompass various aspects such as vehicle production and sales, the industry's contribution to GDP, imports and exports of vehicles and components, and income generation through ownership and employment. The rest of the paper is organised as follows: section two explains the governance structures and stakeholders with the aim of identifying the departments with responsibility for the industry, the relevant mandates and Key Performance Indicators (KPIs), as well as the key policy debates shaping the industry. Section three highlights the main constraints on the local industry, including a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis.

1.3 An overview of the structure of South Africa's automotive industry

The automotive value chain covers multiple segments, starting from raw material mining and extending to retail, aftermarket services, vehicle use and component recycling (see Figure 1). According to naamsa | The Automotive Business Council (2023), South Africa had an estimated 197 Tier 1 suppliers in 2022, with around 75% of them being foreign-owned. In addition, there were over 200 Tier 2 and Tier 3 suppliers in the country. In the automotive industry, Tier 3 refers to suppliers of raw materials, whereas Tiers 1 and 2 are component suppliers. Tier 1 suppliers typically supply components directly to OEMs, while Tier 2 suppliers serve as suppliers or subcontractors for Tier 1 suppliers. South Africa's component manufacturing sector is primarily composed of local, medium-sized enterprises, with some owned by black entrepreneurs. It is worth noting that while many of these Tier 2 and Tier 3 suppliers are not specifically focused on the automotive industry, the automotive industry does account for a large portion of their operations (Montmasson-Clair, et al., 2020).

Figure 1 also demonstrates the presence of shared components between NEVs and internal combustion engine (ICE) vehicles. The transition towards NEVs and away from ICE vehicles is likely to bring about change in both component and vehicle manufacturing value chains.

Figure 1: The ICE vehicle and NEV value chain



Source: Montmasson-Clair et al., 2020, Author.

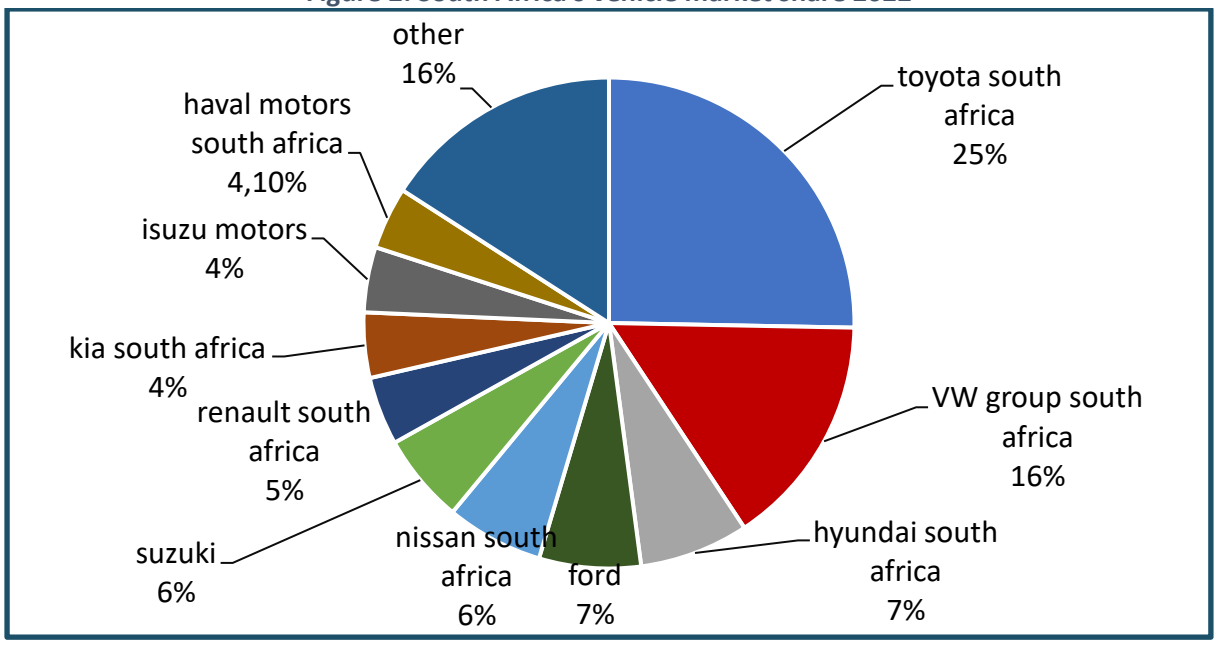
South Africa has a strong and well-established assembly industry comprising seven local OEMs. These OEMs operate within special economic zones (SEZs), which offer tax incentives and supportive policies, providing them with favourable conditions for their manufacturing operations. The strategic placement of these seven OEMs in Gauteng, the Eastern Cape and KwaZulu-Natal ensures their close proximity to their suppliers and to Transnet Port Terminals.

Table 1: Key automotive features 2022

KEY AUTOMOTIVE FEATURES	GAUTENG	KZN	EASTERN CAPE
Number of OEM plants	BMW SA Nissan SA Ford SA	Toyota SA Motors	VW Group SA Mercedes-Benz Isuzu Motors Ford SA (engine plant)
Medium, heavy, extra heavy commercial vehicles and bus companies	Babcock, Ford, Hyundai Automotive, Iveco, JMC, MAN Truck & Bus, MarcoPolo, Powerstar SA, Scania, Sinotruk, Stellantis, Tata Trucks, UD Trucks, and VECH South Africa	Bell Equipment, MAN and Toyota	FAW trucks, Isuzu Motors, Daimler Trucks SA and Buses, VW Group SA
SEZ/ Industrial Development Zone (IDZ)	Tshwane Automotive SEZ, Automotive Supplier Park in Rosslyn, Pretoria	The Dube TradePort SEZ	Coega IDZ in Gqeberha and the East London IDZ
Number of automotive component suppliers	200	80	150
Light vehicle production by OEMs in the province as % of total 2022 light vehicle production of 524 895 units	30.4%	23.1%	46.5%
Light vehicle exports by OEMs in the province as % of total 2022 light vehicle exports of 350 944 units	33.7%	12.8%	53.5%

Source: naamsa| The Automotive Business Council, 2023

Figure 2: South Africa's vehicle market share 2022



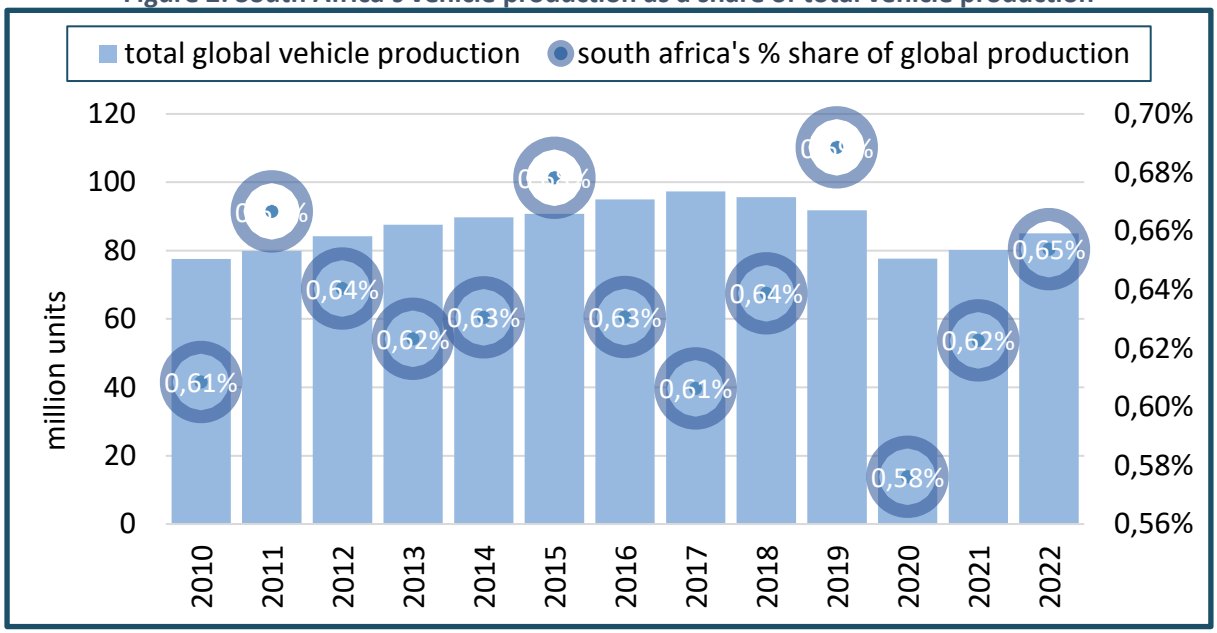
Source: naamsa| The Automotive Business Council, 2023

In 2022, Toyota emerged as the leader in South Africa's vehicle market, commanding a substantial market share of 25%. Following Toyota, the Volkswagen Group of South Africa secured the second position with a market share of 16%. Hyundai and Ford each held a market share of 7%, while Nissan and Suzuki accounted for 6% of the market, see Figure 2.

1.4 Vehicle production in South Africa's automotive industry

Between 2010 and 2022, global vehicle production experienced a continuous rise from 2010 to 2017, followed by a decline thereafter. Factors such as the COVID-19 pandemic, semiconductor shortage crises, and geopolitical tensions between Ukraine and Russia have impacted the automotive industry, affecting raw material sourcing, component production, vehicle production and sales (naamsa| The Automotive Business Council, 2023). In 2022, global vehicle production saw a 6% increase, reaching 85 million vehicles compared to the 80.1 million units produced in 2021, shown in Figure 2:. Despite this growth, vehicle production remained 7.7% lower than pre-pandemic levels when 92.1 million units were produced in 2019.

Figure 2: South Africa's vehicle production as a share of total vehicle production



Source: International Organization of Motor Vehicle Manufacturers (OICA), various years.

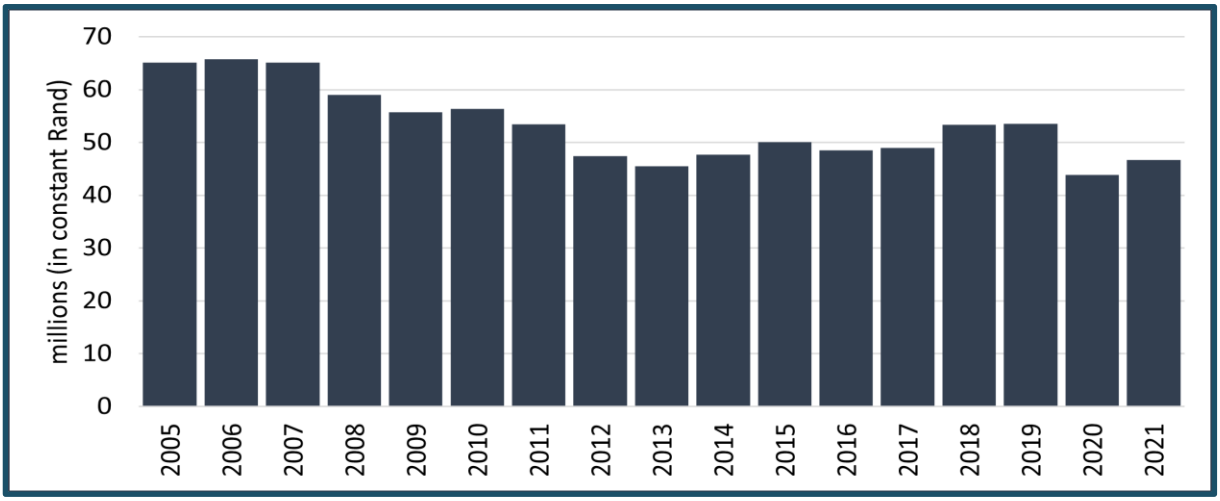
From 2016 and 2018, South Africa's vehicle production, and consequently its share of total global production, declined from 2015. Despite a slight increase in 2019, with 632000 vehicles produced compared to the previous year's 611000 vehicles, the COVID-19 pandemic subsequently caused a reduction in vehicle production in 2020. While South Africa has made progress in recovering vehicle production, the local industry has not yet reached production levels observed pre-COVID 19.

South African vehicle production experienced a growth of 11.8% from 2021 to 2022, with the number of units produced increasing from 500000 to 556000. South Africa ranked 22nd in terms of vehicle production and contributes 0.65% to global vehicle production in 2022, up from 0.62% in 2021. Although South Africa currently contributes less than 1% to global vehicle production, as depicted in Figure 2:, the country had set targets in the SAAM 2035 to produce at least 1.4 million vehicles by 2030. However, these targets have faced significant challenges due to disruptions in global supply chains, a slowdown in domestic economic growth, and the rise of imported cars on domestic and regional markets.

1.5 Contribution to GDP

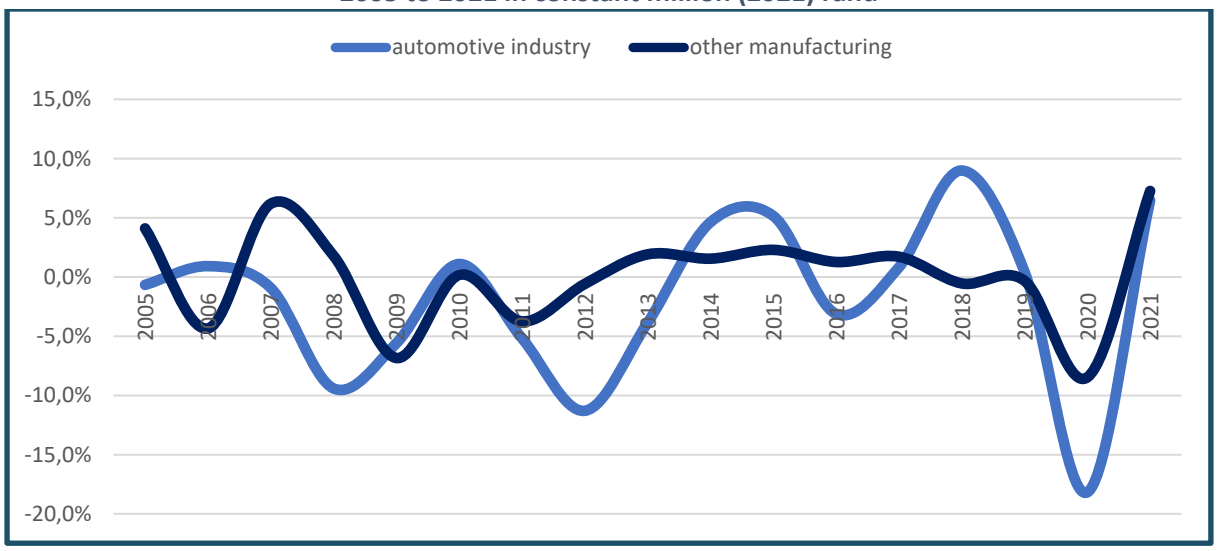
As shown in Figure 4, between 2005 and 2007, the automotive industry's value added, measured in constant 2021 prices, experienced growth by an average of 0.2% annually, before being affected by the global financial crisis in 2008. Specifically, the year 2006 recorded the highest gross value added (GVA) within this period, amounting to R65.7 million. However, since the economic downturn in 2008, the share of automotive value added has gradually declined. Despite this decline, the gross value of output within the automotive sector displayed some improvements in 2018-2019. GVA increased from R59 million in 2008 to R53.6 in 2019, and subsequently dropped to R46.7 million in 2021. In comparison to other manufacturing sub-sectors, Figure 5 shows that the automotive industry makes an important contribution to GDP in terms of GVA. The industry showed strong performance in 2015 and 2018 relative to other manufacturing sectors.

Figure 2: GVA in automotive industry, 2005 to 2021 in constant million (2021) rands



Source: Calculated from Quantec. EasyData. Interactive dataset. Industry service. Accessed at www.quantec.co.za in June 2023.

Figure 3: GVA in automotive industry compared to other manufacturing sub-sectors, 2005 to 2021 in constant million (2021) rand

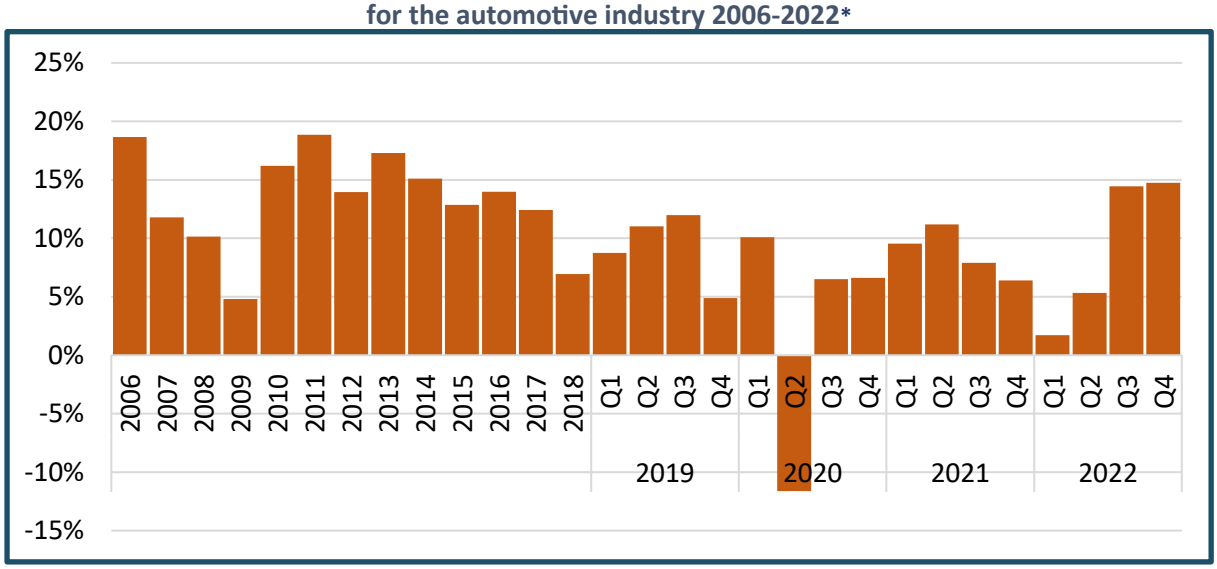


Source: Calculated from Quantec. EasyData. Interactive dataset. Industry service. Accessed at www.quantec.co.za in June 2023.

Over time, there has been a long-term downward trend in return on assets (ROA) within the automotive industry. The industry's profits have demonstrated volatility over the years, and for the

past five years, ROA in autos has remained below 15%. The impact of COVID-19 on vehicle sales led to a significant decrease in ROA during the second quarter of 2020. In the first quarter of 2022, the automotive industry experienced a decline in the average ROA to 2%, compared to 6% in the previous quarter. To accurately evaluate the ROA for the automotive industry, it will be important to examine it within the broader context of other sub-sectors in manufacturing.

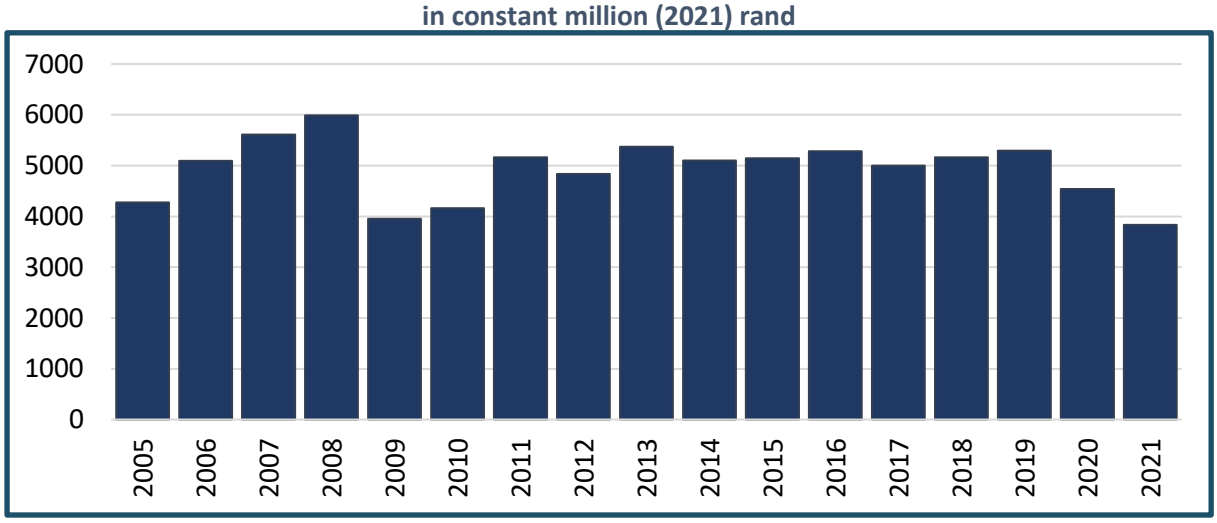
Figure 4: Return on assets (net profit as percentage of fixed assets) for the automotive industry 2006-2022*



Source: Calculated from Statistics South Africa (StatsSA). Annual Financial Statistics (AFS). Data accessed via Quantec. EasyData. Interactive dataset. Macroeconomic service. Accessed at www.quantec.co.za in July 2023.
Note: *Data used for ROA uses Quantec estimates, therefore it is not official data.

The pace of investment in the automotive industry, as indicated by Gross Fixed Capital Formation (GFCF), has been sluggish. From 2005 to 2008, investment in the industry saw an increase of an average of 12% annually. However, with the onset of the global financial crisis, investment declined in 2009 to R3.9 billion with a slight improvement in 2010 to R4.2 billion. Investment rose by 2.5% to R5.3 billion in 2019 from R5.2 billion in 2018. However, due to the pandemic, investment plummeted to R4.5 billion or -14.3% in 2020 and further declined to R3.8 billion in 2021. Surprisingly, the current GFCF levels are lower than those observed during the financial crisis. Investment levels demonstrated a relatively stable rise between 2011 and 2019 but failed to fully recover to pre-financial crisis levels.

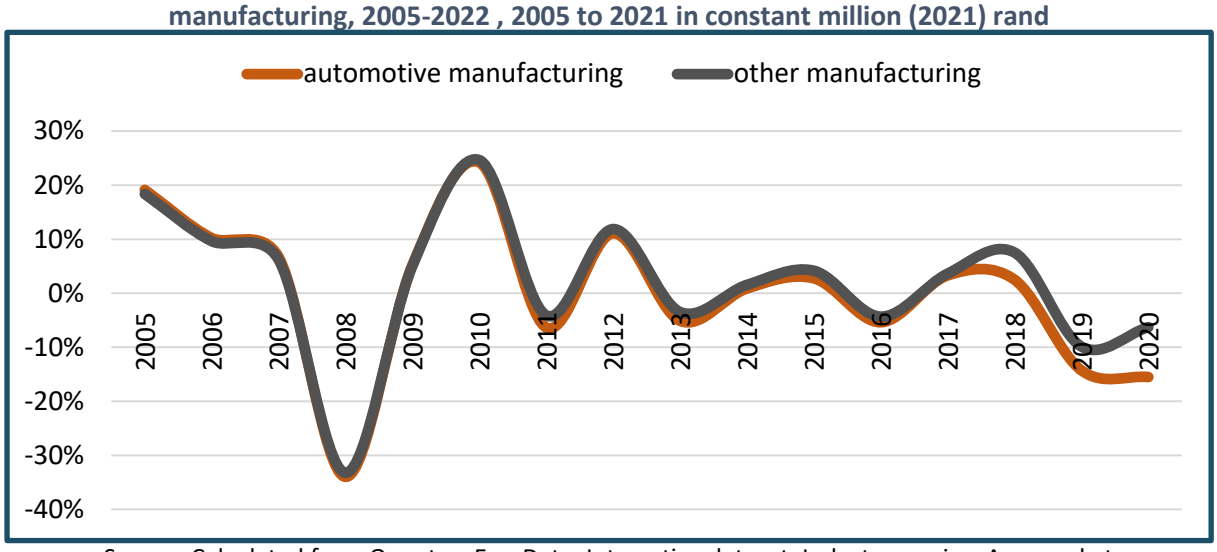
Figure 5: Gross fixed capital formation in the automotive industry 2005 to 2021 in constant million (2021) rand



Source: Calculated from Quantec. EasyData. Interactive dataset. Industry service. Accessed at www.quantec.co.za in July 2023.

There was a clear correlation between investment in other manufacturing sectors and GFCF in the automotive industry, but starting from 2019, the two began to diverge (see Figure 8).

Figure 6: Gross fixed capital formation in the automotive industry as a percentage of total manufacturing, 2005-2022 , 2005 to 2021 in constant million (2021) rand

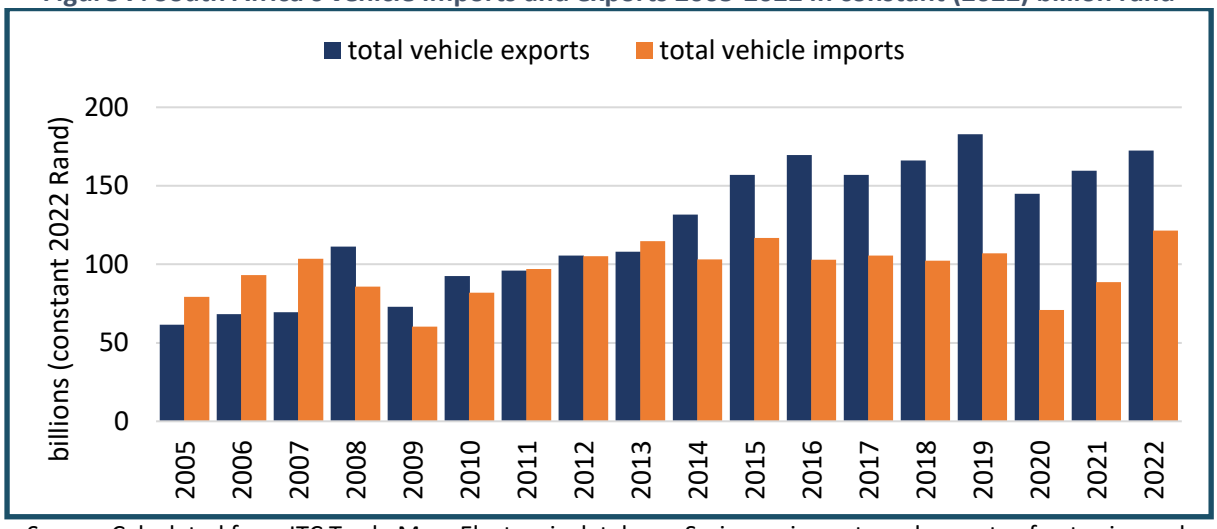


Source: Calculated from Quantec. EasyData. Interactive dataset. Industry service. Accessed at www.quantec.co.za in August 2023.

1.6 International trade

From 2005 to 2007, South Africa had a negative trade balance with a higher volume of imports than exports in vehicle manufacturing. However, the dynamics of the South African automotive industry have shifted since then. Exports have increased rapidly, surpassing the growth rate of imports. In 2022, the export value of vehicles rose by R12.9 billion or 8.1%, reaching R172.5 billion compared to R159.6 billion in 2021. Notably, exports witnessed substantial growth between 2015 and 2019, reaching a record high of R182.8 billion. In contrast, the growth of imports stagnated during the same period. The COVID-19 pandemic impacted both imports and exports, resulting in a notable decline in imports, which decreased from R106.9 billion to just R70.9 billion in 2020, marking a sharp decline of 32.8%. Exports, in contrast, saw a relatively moderate decrease, declining by 20.7% from R182.8 billion to R144.9 billion.

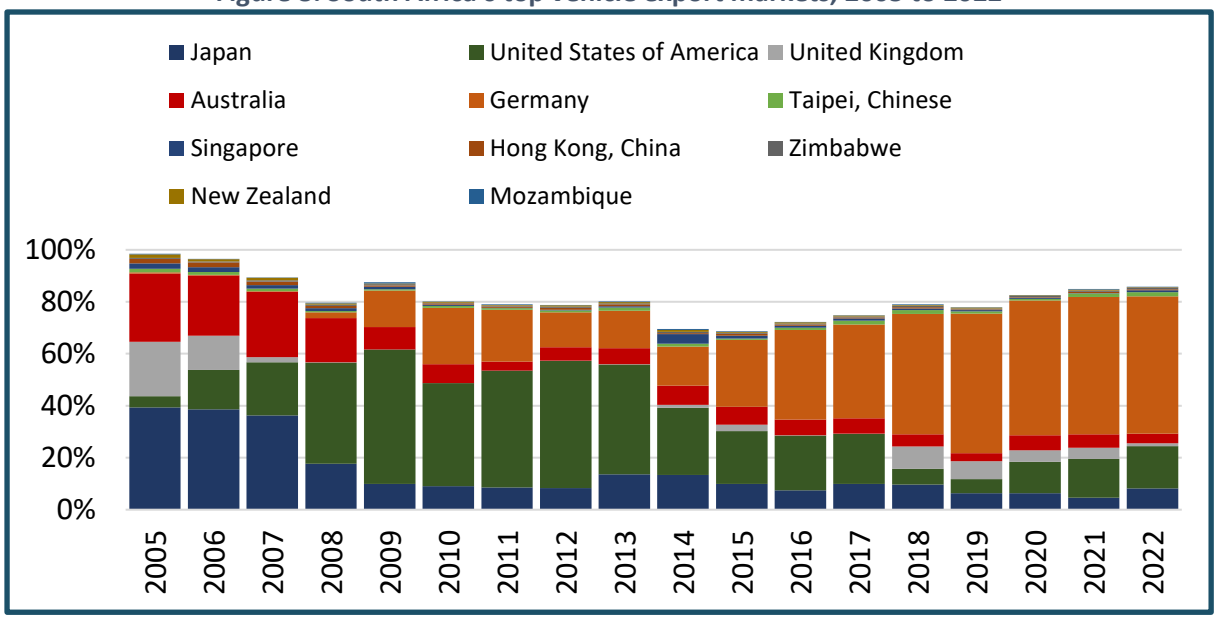
Figure 7: South Africa's vehicle imports and exports 2005-2022 in constant (2022) billion rand



Source: Calculated from ITC Trade Map. Electronic database. Series on imports and exports of autos in rand. Downloaded from www.trademap.org in August 2023.

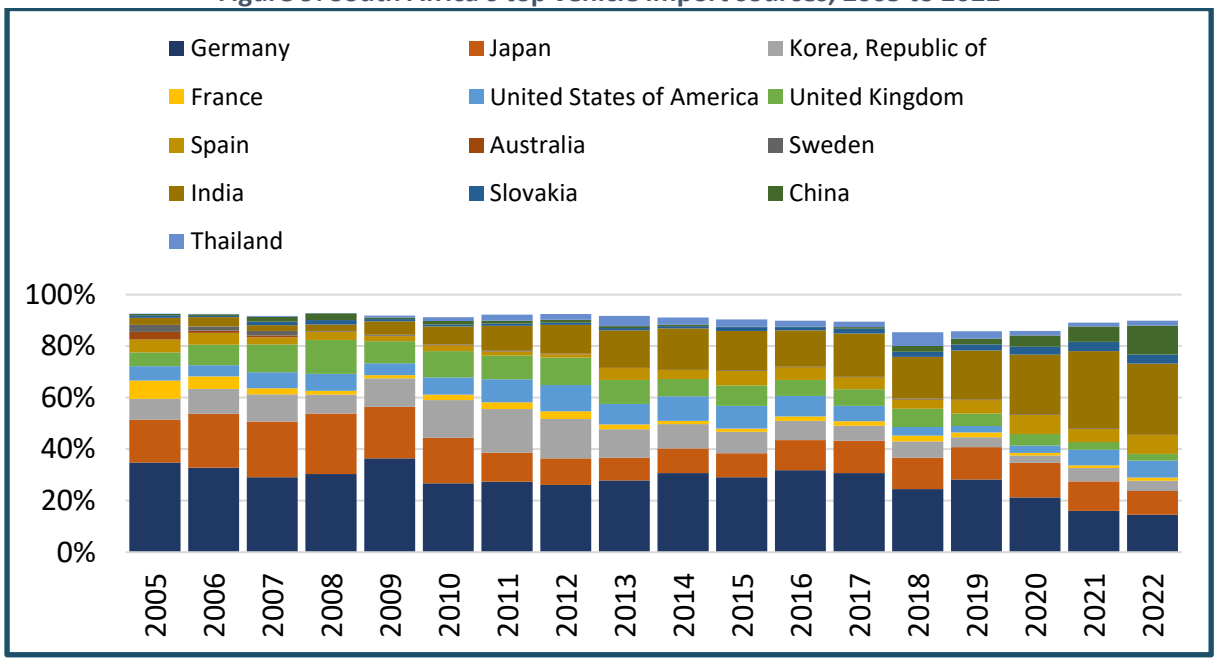
As mentioned, approximately 70% of the vehicles manufactured in South Africa are sent to European and United States (US) markets. The main destinations for South Africa's vehicle exports include Germany, the US, the United Kingdom and Australia. In 2022, Germany, the US and Japan were responsible for about 77% of all vehicle exports from South Africa. While vehicle exports to Germany have been steadily increasing over time, exports to the US and Australia have declined. It is worth noting that only 14.7% of all vehicle exports from South Africa were destined for African countries in 2022, being Zimbabwe, Zambia, Mozambique and eSwatini (Figure 10). In 2022, vehicles sold in South Africa were mainly imported from India, China, Germany and Japan (Figure 11).

Figure 8: South Africa's top vehicle export markets, 2005 to 2022



Source: Calculated from ITC Trade Map. Electronic database. Series on exports of autos in rand. Downloaded from www.trademap.org in August 2023.

Figure 9: South Africa's top vehicle import sources, 2005 to 2022

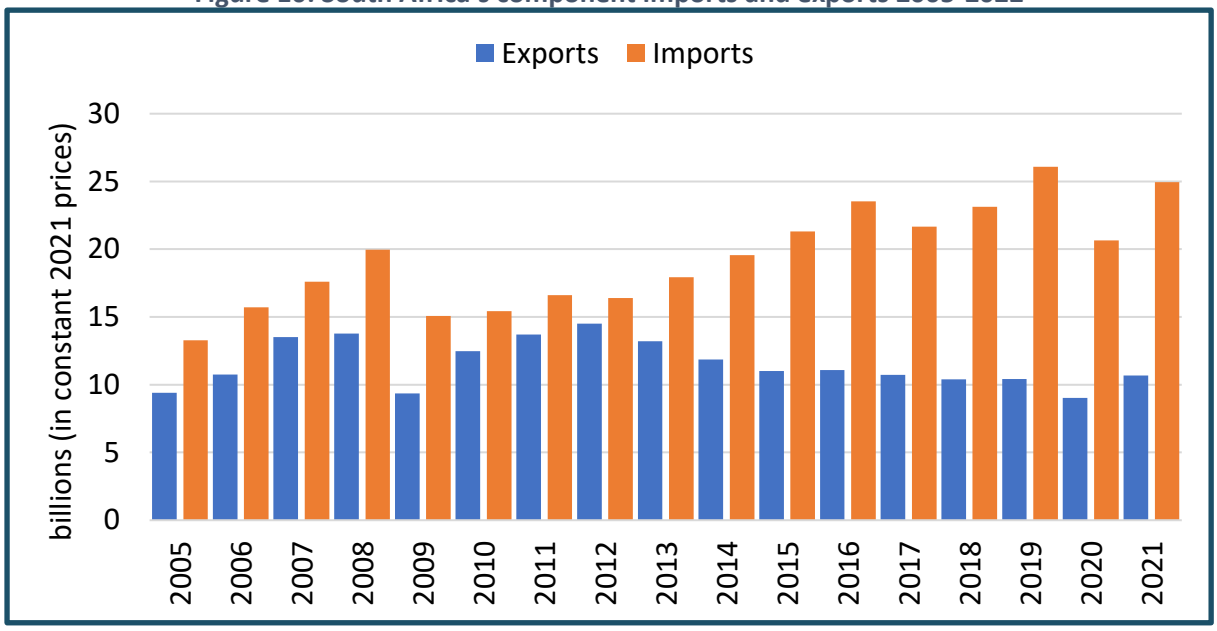


Source: Calculated from ITC Trade Map. Electronic database. Series on imports of autos in rand. Downloaded from www.trademap.org in August 2023.

South Africa's vehicle exports are heavily concentrated in countries that are transitioning to NEVs and other eco-friendly vehicle types. This shift in these markets towards NEVs carries significant implications for South Africa's automotive industry. These implications will be further explored in the dedicated section of the paper analysing the debates in the industry as well as the effects of climate change on the industry.

South Africa's components show a negative trade balance. With component exports, South Africa's main exports consist of specific components predominantly sent to Europe and the US. In 2021, automotive component exports experienced a rise from R54.5 billion in 2020 to R69.2 billion, indicating an increase of R14.7 billion or 27%. Among the component export basket, catalytic converters are the largest product group, accounting for 50.4%, followed by engine parts at 7.3% and tyres at 4.5%. The success of catalytic converters can be mainly attributed to the beneficiation of platinum and the support received from the APDP.

Figure 10: South Africa's component imports and exports 2005-2022



Source: Calculated from ITC Trade Map. Electronic database. Series on imports and exports of auto components in rand. Downloaded from www.trademap.org in August 2023.

1.7 Employment

According to StatsSA data using the Quarterly Employment Statistics (QES) survey, in 2022, the automotive industry, including both vehicle and component manufacturing, employed 102 730 workers in total, accounting for the majority share the total transport equipment labour force and almost 1% of South Africa's labour force. In 2022, approximately 65 060[3] workers were employed in component manufacturing, while 37 670 were employed in vehicle manufacturing (Figure 11).[4] Most

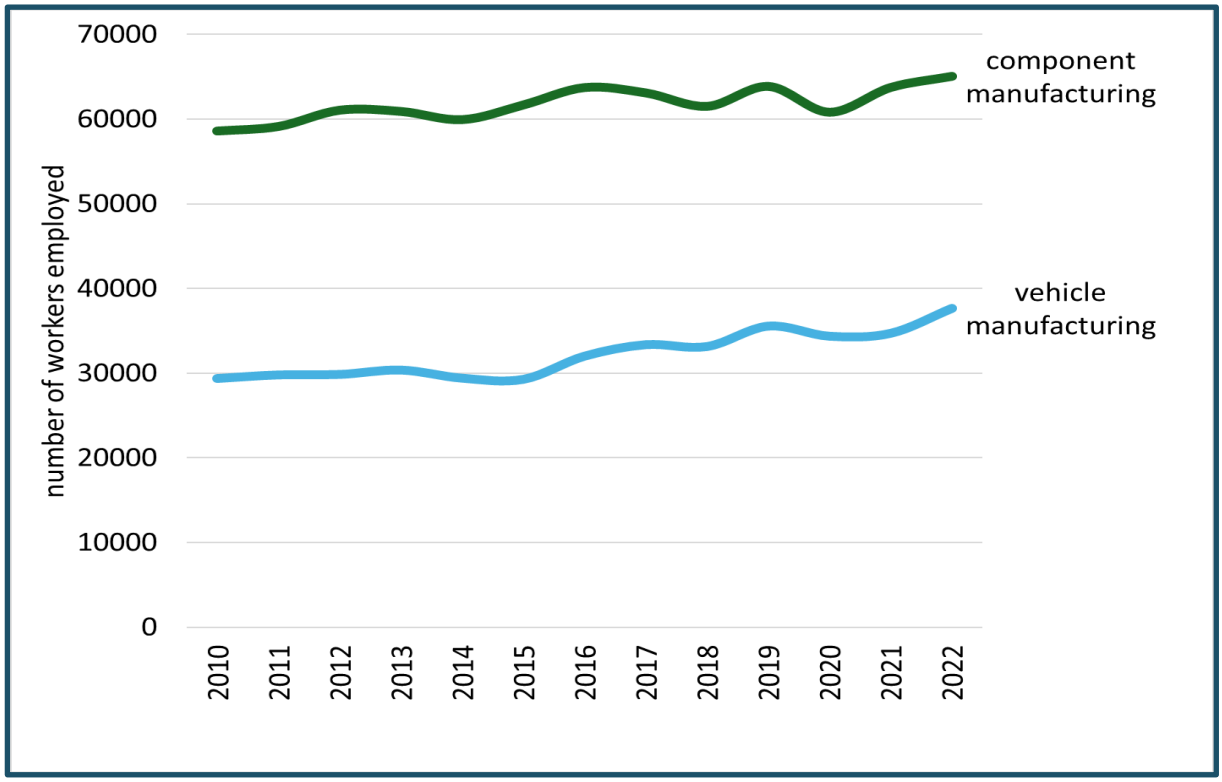
[3] Employment figures have been rounded to the nearest tenth.

[4] The Quarterly Labour Force Survey (QLFS) reports different statistics compared to the QES survey. For the third quarter of 2023, the QLFS indicated that the vehicle manufacturing industry employed 28030 workers, while the components sector employed 53500 workers. Unlike the QES, the QLFS has a large scope of coverage, and includes the informal sector. For this reason, the QLFS statistics data is employed to examine employment demographics.

of the work in vehicle manufacturing is automated, which makes vehicle manufacturing and assembly relatively more capital intensive in relation to component manufacturing.

Figure 11 illustrates an increasing growth trend in employment within the industry. The workforce in vehicle manufacturing showed little change up to 2016, at which point a marked increase was observed. Employment increased notably in 2019, with a growth of 7.3%, but this dipped in 2020. The sector made a modest recovery in 2021, growing by 1%, and saw a more significant rebound in 2022, with an 8.5% growth. Overall, component manufacturing displayed resilience with an upward growth trajectory despite periodic fluctuations. The industry recovered well in 2021 and continued to grow in 2022.

Figure 11: Employment in component and vehicle manufacturing



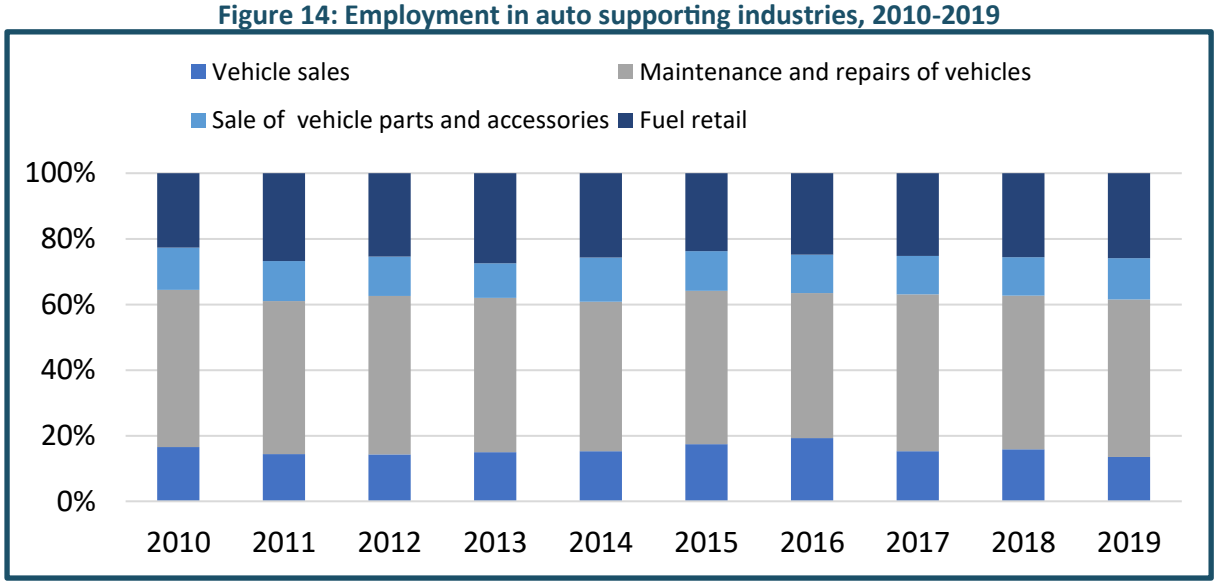
Source: Statistics South Africa. Quarterly Employment Statistics. Excel spreadsheet 2009-2023Q3. Available at: https://www.statssa.gov.za/publications/P0277/QES_Details_BreakDown_200909_202309.xlsx

The key concern regarding employment is the impact of backward linkages from the OEMs, along with the demand generated by their workforce within the communities. The downstream jobs generated to sell, service and finance vehicles are significant. Local manufacturing is not usually a crucial factor for these jobs, however, since they would likely remain in existence irrespective of local production. As shown in Figure 14., vehicle maintenance and repairs are the biggest employer in the value chain employing 267 000 workers, including mechanics, technicians and engineers. The automotive fuel retail market employed at least 144000 workers in 2019.[5] Vehicle sales employed 75000 workers, and a further 70 000 people were employed in the sale of vehicle parts and accessories. In auto supporting industries, the share of employment in small and medium-sized enterprises (SMEs) in the value chain is relatively high, mostly because of the relatively large informal sector in repairs, maintenance and transport services (Makgetla, 2019).

[5] StatsSA occupational data aggregates all workers in fuel retail, including petrol attendants, into a single category (Makgetla et al., 2019).

The general trend in indirect employment in the automotive industry does not quite follow the declining employment trends seen in assembly and component manufacturing. From Figure 14, for example, there is a growing employment trend in vehicle maintenance and fuel retail. The aftermarket industry has exhibited strong growth resulting from increased investment in these activities, as well as the increase in new entrants (Research and Markets, 2019).

Figure 14: Employment in auto supporting industries, 2010-2019



Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2010 to 2019. Series on automotive supporting industry employment in the automotive industry. Electronic databases. Downloaded from Nesstar: www.statssa.gov.za.

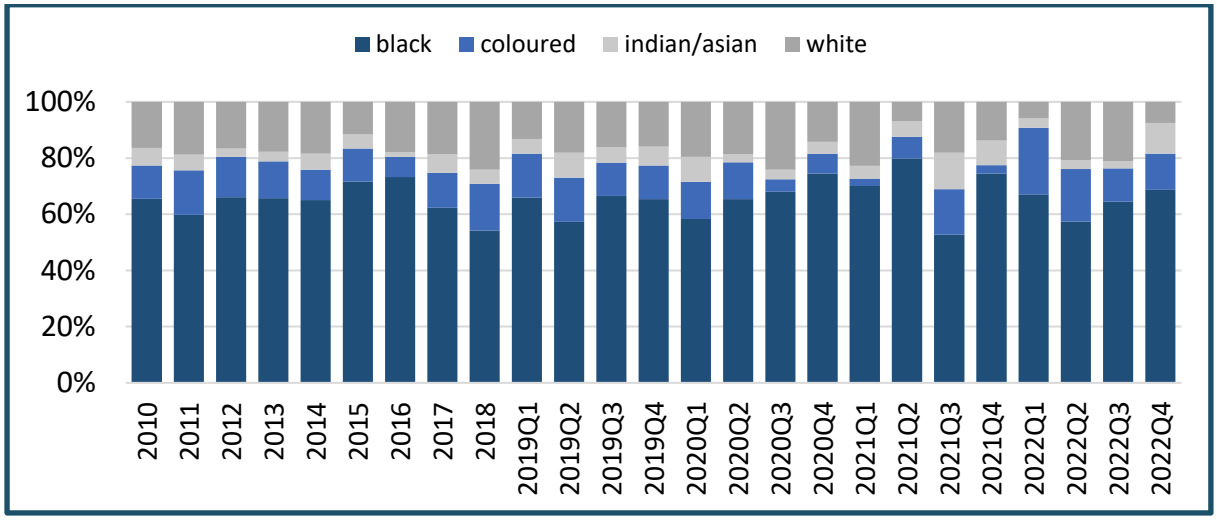
1.8 Employment by demographics

This analysis also seeks to explore demographic trends in the automotive industry, looking at race, the proportion of men and women in automotive manufacturing, age of the workforce, sex and the level of educational attainment.

1.8.1 Employment by race

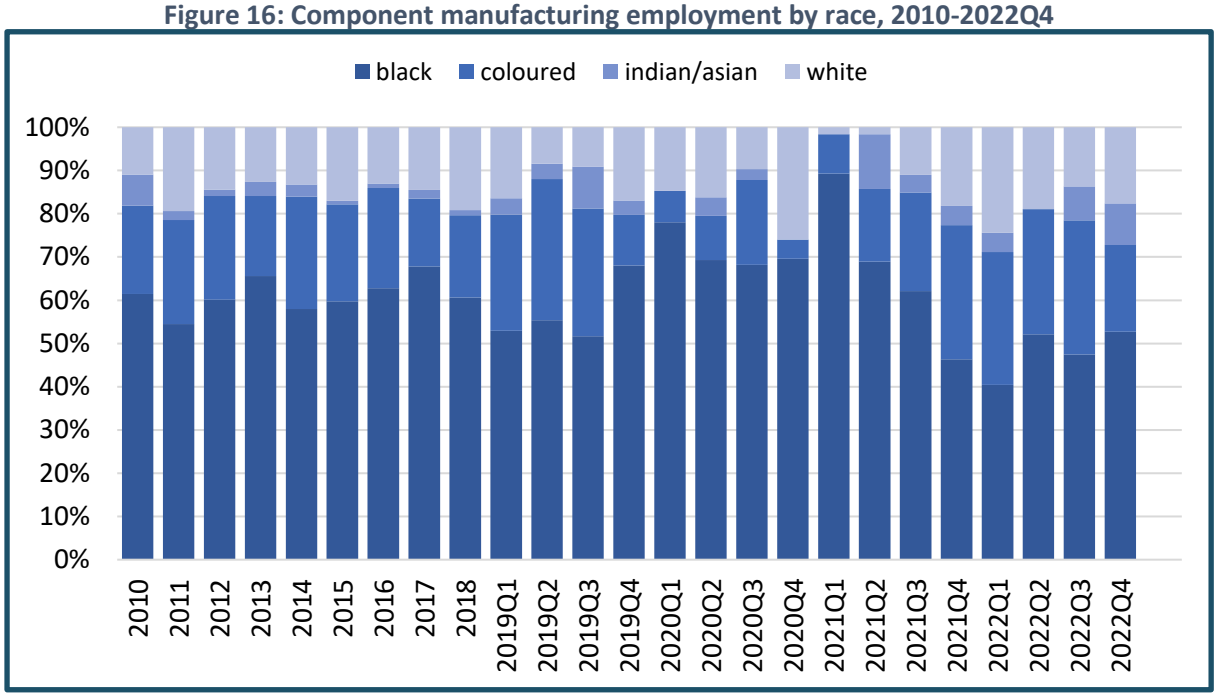
Black workers accounted for the majority of workers in automotive manufacturing (Figure 15 and Figure 16). The representation of Black workers in vehicle manufacturing has progressively increased, while the proportion of White workers appears to be declining. In the fourth quarter of 2022, vehicle manufacturing employed a significant majority of Black workers, with over two-thirds or 68.5% of the workforce being comprised of Black workers. White workers accounted for 17.6% of workers in the industry in the fourth quarter of 2022, while Indian/Asian made up 9.6% of the workforce in the same quarter. Employment in vehicle manufacturing declined due to the COVID-10 pandemic resulting in job losses, of which Black workers were disproportionately affected. Black workers made up almost over half of all workers in component manufacturing in 2022, however, since the first quarter of 2020, this percentage is gradually decreasing (Figure 16).

Figure 15: Automotive industry employment by race, 2010-2022Q4



Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2010 to 2019 and Quarterly Labour Force Survey. Q1 2019 to Q4 2022. Series on employment by race in vehicle manufacturing. Electronic databases. Downloaded from Nesstar: www.statssa.gov.za.

Figure 16: Component manufacturing employment by race, 2010-2022Q4

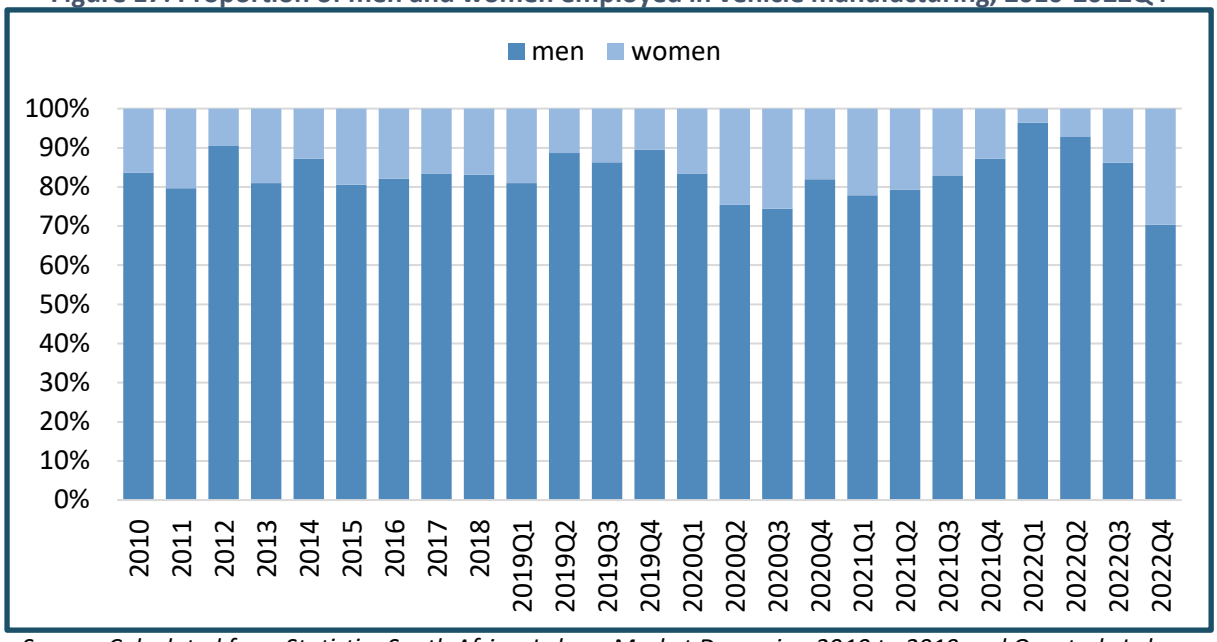


Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2010 to 2019 and Quarterly Labour Force Survey. Q1 2019 to Q4 2022. Series on employment by race in component manufacturing. Electronic databases. Downloaded from Nesstar: www.statssa.gov.za.

1.8.2 Employment by gender

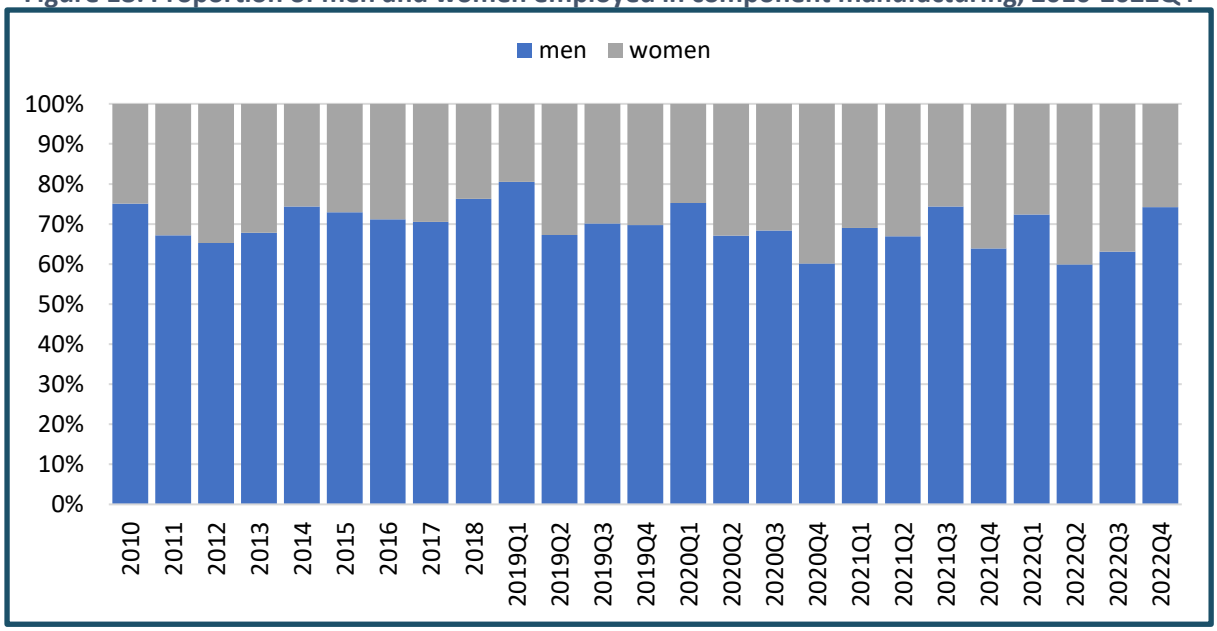
Women are generally underrepresented in the manufacturing sector. Similarly, the local automotive industry remains dominated by men. In 2022 Q4, 70.3% of vehicle manufacturing and assembly workers were men, while only 29.7% of workers were women. In component manufacturing, as illustrated by Figure 17, in 2022 Q4, women held a quarter (25.8%) of jobs with 11 400 women employed in the industry, while at least 32900 men (74.2%) accounted for the majority of employees in the industry. The sector, however, particularly in vehicle manufacturing, appears to be making some progress in increasing the proportion of women employed in the industry.

Figure 17: Proportion of men and women employed in vehicle manufacturing, 2010-2022Q4



Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2010 to 2019 and Quarterly Labour Force Survey. Q1 2019 to Q4 2022. Series on employment by gender in vehicle manufacturing. Electronic databases. Downloaded from Nesstar: www.statssa.gov.za.

Figure 18: Proportion of men and women employed in component manufacturing, 2010-2022Q4

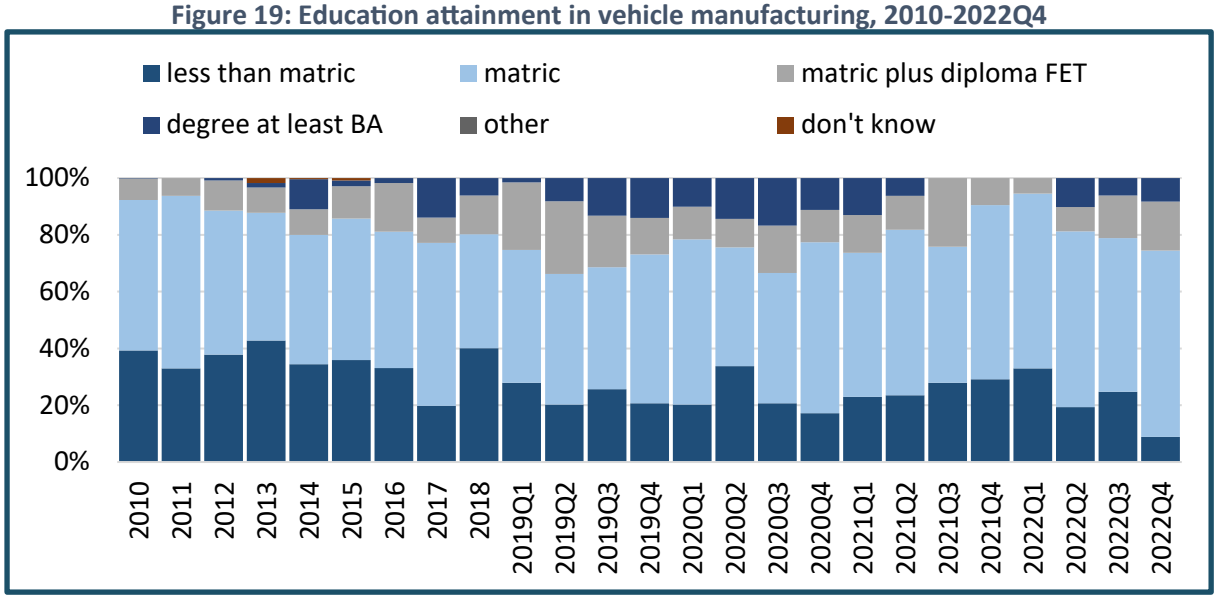


Source: Calculated from Statistics South Africa. Labour Market Dynamics. 2010 to 2019 and Quarterly Labour Force Survey. Q1 2019 to Q4 2022. Series on employment by gender in component manufacturing. Electronic databases. Downloaded from Nesstar: www.statssa.gov.za.

1.8.3 Employment by education

Figure 19 shows most of the automotive manufacturing workforce were only in possession of a matric certificate in 2022. At least 17.2% of workers in vehicle manufacturing had a matric plus diploma or certificate, and 8.2% had a university degree. This could be considered relatively high compared to other manufacturing sectors, for example plastics (6.6%), capital goods (general) (8.2%) and electrical equipment (2.5%).

Figure 19: Education attainment in vehicle manufacturing, 2010-2022Q4

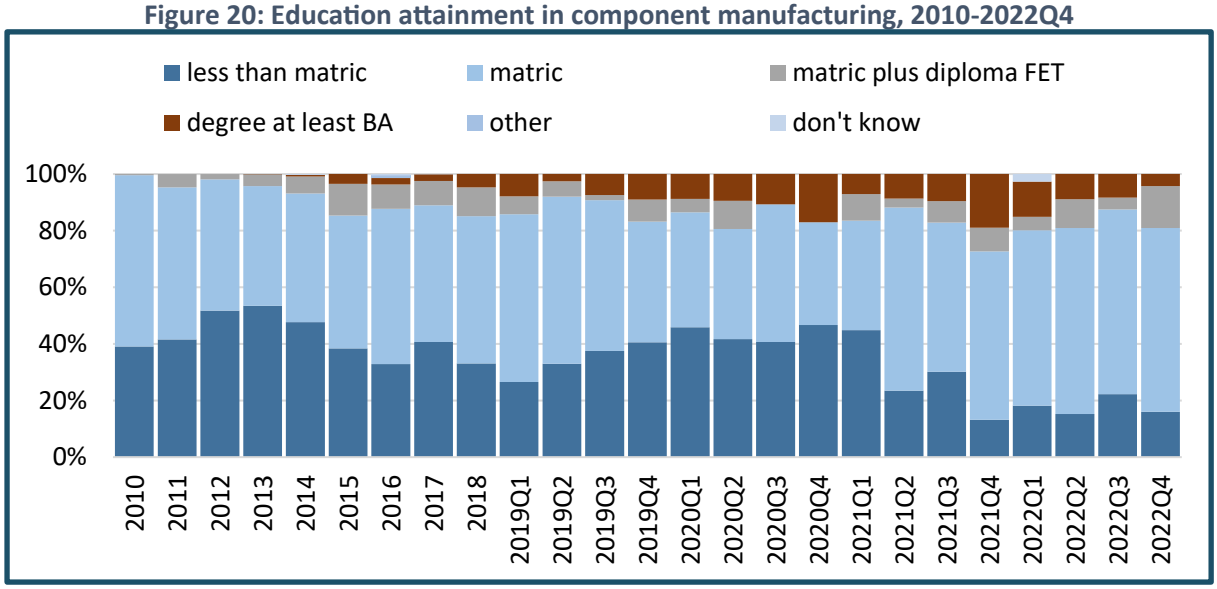


Source: Calculated from Statistics South Africa. Labour Market Dynamics. 22010-2020 and Quarterly Labour Force Survey 2019Q1 to 2022 Q4. Series on education attainment in the vehicle manufacturing industry. Electronic databases. Downloaded from Nesstar: www.statssa.gov.za.

In component manufacturing, almost two thirds of the workforce had a matric in the fourth quarter of 2022, and about 16% had less than a matric. This is a relatively high percentage compared to only 8.9% of workers in vehicle manufacturing without a matric, see Figure 20.

Over time, there is a noticeable change in the workforce composition of both vehicle and component manufacturing industries. The data suggest a declining trend in the number of workers without a matric qualification, accompanied by an increase in the number of workers with a matric qualification. This trend might be attributed to companies setting a minimum requirement of a matric certificate for employment. Furthermore, within the component manufacturing sector, the number of graduates holding degrees has risen since 2010, although this figure appears to fluctuate. On average, the data also show that workers employed in vehicle manufacturing are more likely to possess a higher level of education compared to those in component manufacturing.

Figure 20: Education attainment in component manufacturing, 2010-2022Q4

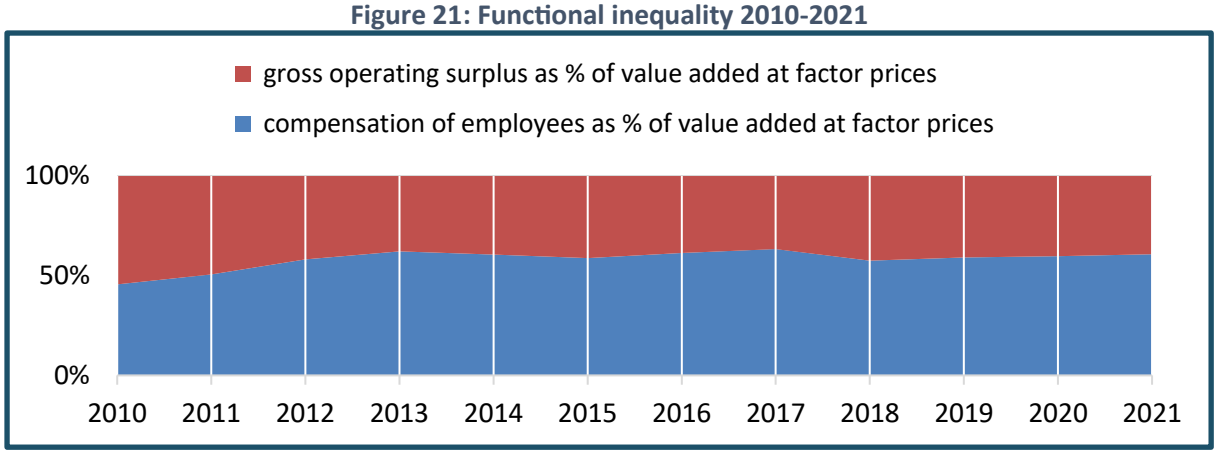


Source: Calculated from Statistics South Africa. Labour Market Dynamics. 22010-2020 and Quarterly Labour Force Survey 2019Q1 to 2022 Q4. Series on education attainment in the component manufacturing industry. Electronic databases. Downloaded from Nesstar: www.statssa.gov.za.

1.8.4 Functional inequality

Functional inequality focuses on the allocation of value generated between employees (remuneration) and businesses. In the automotive industry, there has been a general upward trend in functional inequality over the study period, characterised by a rise in employee compensation and a slight decline in the share of value going to business profits. From 2018 onwards, it is evident that employee compensation as a percentage of value add has been increasing, and this trend persisted even during the COVID-19 pandemic, resulting in a larger share of profits being directed towards workers, thus displaying a relatively lower level of functional inequality in Figure 21.

Figure 21: Functional inequality 2010-2021

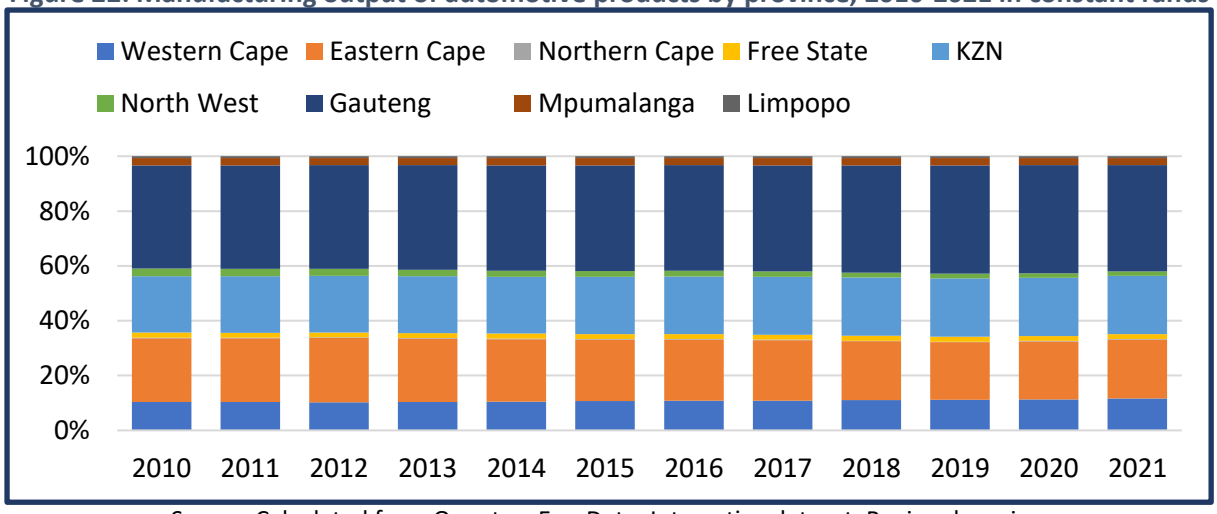


Source: Calculated from Quantec. EasyData. Interactive dataset. Industry service. Accessed at www.quantec.co.za in September 2023.

1.9 Main location

As highlighted, automotive manufacturing is concentrated in three provinces (Figure 22). Gauteng remains the leading contributor to automotive manufacturing output. Figure 22 clearly indicates that Gauteng, KZN and Eastern Cape contribute significantly to the overall manufacturing output in the automotive industry. All three provinces have increased manufacturing output since 2010. In 2019, each province achieved its peak level of output compared to previous years. For example, in Gauteng province, manufacturing output reached 39.5%, an increase from 39.1% in the previous year. The share of output has seen an upward trend since 2020. In addition, Figure 22 shows that the Western Cape also contributes to the manufacturing output, likely including the production of buses.

Figure 22: Manufacturing output of automotive products by province, 2010-2021 in constant rands



Source: Calculated from Quantec. EasyData. Interactive dataset. Regional service. Accessed at www.quantec.co.za in August 2023.

SECTION 2: GOVERNANCE STRUCTURES AND STAKEHOLDERS

2.1. Governance structures and stakeholders

The Department of Trade, Industry and Competition (the dtic) considers the automotive industry a vital pillar in the country's industrial landscape and, as a result, has implemented various industrial policies over the years to provide support to this industry. For example, the importance of the automotive industry for the South African economy is illustrated in the national government's Industrial Policy Action Plan (IPAP) 2018/19-2020/21. Within the plan, the industry is recognised as an important sector with interconnected relationships across multiple industries and services, making a substantial contribution to the overall economy. As a result, national departments along with key agencies, numerous research and academic institutes, and other stakeholders actively support the industry. Provincial government also plays a key role in supporting the industry. Furthermore, there are established formal structures in place to assist in the growth and development of the local automotive industry.

The dtic is entrusted with the task of governing the automotive industry through to 2035 under the SAAM 2035 policy framework. Within its mandate, the dtic assumes responsibility for formulating, implementing and monitoring automotive policies, including the SAAM 2035, which aim to foster the growth and advancement of the automotive industry. The MIDP, APDP and SAAM are all automotive policies administered by the dtic. Moreover, the dtic also plays a pivotal role in overseeing initiatives like local content programmes, Automotive Investment Scheme (AIS), Broad-Based Black Economic Empowerment (B-BBEE) policies and the Export Marketing and Investment Assistance Scheme, ensuring their effective implementation in the automotive industry.

Table 2 is a list of key stakeholders responsible for supporting the development of the local auto industry.

Table 2: Departments and agencies supporting the auto industry

MANDATE	DEPARTMENT/ SUPPORTING AGENCY
Local market optimisation, or increasing local production	the dtic, Treasury
Regional market development and regional integration	the dtic, Southern African Customs Union (SACU), Southern African Development Community (SADC), Automotive Supply Chain Competitiveness Initiative (ASCCI), Trade and Industry departments of neighbouring countries
Localisation	the dtic, Industrial Development Corporation (IDC), ASSCI
Infrastructure development in the industry and establishing the automotive infrastructure roadmap to 2035	the dtic, Transnet, SANRAL and local municipalities
Transformation	the dtic, ASCCI, IDC
Skills and technology development roadmap to 2035	the dtic, Department of Science and Technology, Department of Labour, Department of Education, ASSCI
Development and publication of standards, certification and testing of standards for automotive products, especially in terms of ensuring standards for the international market and enhancing quality.	the dtic, South African Bureau of Standards

MANDATE	DEPARTMENT/ SUPPORTING AGENCY
The EuroType Test Centre (Pty) Ltd is a 30-million-rand investment in the Eastern Cape, equipped for vehicle emissions testing meeting European, American, and Japanese environmental standards.	
Trade promotion	the dtic
The **National Regulator for Compulsory Specifications (**NRCS) is the inspectorate responsible for administering and enforcing compliance with Automotive Compulsory Specifications. New vehicle models, built-up vehicles, and modifications of vehicles, whether locally manufactured or imported, must conform to the compulsory specifications for vehicles of the relevant class, and in particular, the standards affecting safety of the vehicle and its components. Compulsory Vehicle Specifications require compliance to South African National Standards (SANS), which are based on UN ECE Regulations. Compliance to ECE, EEC and others where stated, are considered equivalent standards to SANS. Manufacturers and Importers of motor vehicles must be registered as a Manufacturer, Importer or Builder. There are eight Compulsory Specifications (Technical regulations), promulgated under the National Regulator for Compulsory Specifications Act No. 5of 2008 that relate to whole vehicle approval.	NRCS (an entity of the dtic), the dtic

Source: Various sources. Accessed at relevant organisational websites.

Tabel 3 presents the key government programmes and reports, and their KPIs for the automotive industry.

Table 3: Programmes and reports supporting the autos industry

PROGRAMME AND REPORT	OUTPUT/KPI
Annual Performance Plan (APP) 2023/24	The strategic focus of the APP 2023-2024 is one that will continue to focus on the implementation of Masterplans, notably the Automotive, Poultry, Sugar, Steel and Metal Fabrication, Clothing and Textiles and Furniture Masterplans. *OUTPUT 3: R700 billion in manufacturing exports* Contributions to this output include dtic's efforts for stable production and trade, financial support for companies entering export markets, duty rebates to promote value-added goods exports, and sector policies like APDP. *OUTPUT 27: Implementation of the African Continental Free Trade Area (AfCFTA)* This output aims to finalise protocols and trade offers for South Africa to trade at preferential rates under AfCFTA. The target will be measured by the acceptance of SAC''s offer by the AfCFTA Council and the finalisation of clothing and autos rules of origin by October 2023. *OUTPUT 30: Electric vehicle (EV) strategy finalised*

PROGRAMME AND REPORT	OUTPUT/KPI
	This output refers to the finalisation of a strategy and roadmap for NEVs. The output is aligned to achievement of Priority 2 and 7 commitments of the Medium Term Strategic Framework.* *Industrial competitiveness sub-programmes* R2.5 billion will be transferred to technical institutions for masterplans, industrialisation, and competitiveness projects. An extra R402 million will promote localisation and support skill improvement through NGOs. The ASCCI was allocated R10 942 000. Under the APP, ASCCI is included as one of the Customised Sector Programme(CSP).**
Estimates of National Expenditure (ENE) 2023	Industrial financing Over the next three years, the dtic will continue to provide financial support to the AIS, the black industrialist programme and other support schemes. The Manufacturing Incentives sub-programme constitutes around 51% (R8.8 billion) of the total Incentives programme budget over the medium term. The auto industry benefits from these sub-programmes, including various manufacturing incentives like the AIS, Infrastructure Investment Support, and the Broadening Participation and Industrial Innovation Incentives. An additional R728.8 million will be reprioritised over the medium term, mainly from the department's operational budget, to support the implementation of the NEV roadmap. Infrastructure subsidies in special economic zones and industrial parks are mainly provided through the Infrastructure Investment Support sub-programme in the Incentives programme, with R4.5 billion allocated for special economic zones, R443.4 million for industrial parks, and R372.7 million for critical bulk infrastructure. Vote transfers and subsidies trends and estimates for: ASCCI: R5 110 000 The National Treasury administers the tax subsidy for the automotive industry, estimated to be approximately R34 billion in the 2022 fiscal year.
Annual Incentive Report (AIR) 2020/21	In the automotive sector, the Tshwane Automotive Special Economic Zone was approved in 2020/21 for R2.4 billion. Projected local procurement from supported projects in the automotive sector R45 177 858 430. The AIS is one of the manufacturing incentives identified in the AIR as an investment catalyst in the manufacturing sector and for support of broader participation in the mainstream economy.
IPAP 2018/19-2020/21	The automotive industry is identified as a key sector in the IPAP. The National Industrial Participation Programme secretariat manages R28 billion in obligations to be fulfilled. Sectors covered included Defence, Oil and Gas, Automotive, Aerospace, Rail, Energy, and ICT. Between 2011/12 and January 2018, the department supported 14 226 enterprises with R61 billion in incentives, including the Manufacturing Competitiveness Enhancement Programme, Aquaculture Development Enhancement Programme, and Business Process Services Incentive, which led to over R45 billion in investment commitment in the auto industry. Value of funding approved to IPAP Priority Industries 2008 to 2017: Automotive R6.3 million; clothing, textiles, leather and footwear (CTLF) R4.3 million; and plastics, chemicals and pharma R12.5 million The automotive masterplan is listed as a key programme in the IPAP.

PROGRAMME AND REPORT	OUTPUT/KPI
	"The Automotive Master Plan, in development since 2016/7, represents the national strategy to further develop the automotive industry in South Africa through to 2035, in a manner consistent with the Presidential 9-Point Plan and the National Development Plan (NDP)."
South Africa Revenue Services (SARS)	The APDP is legislated in Rebate item 317.03 of Schedule No. 3 to the Customs and Excise Act, No. 91 of 1964. Any Motor Vehicle Manufacturer and/or OEM importing original equipment components for use in the manufacture of Specified Motor Vehicles must license their Special Manufacturing Warehouse and register for Home Use Processing under Rebate Item 317.03 (SARS, 2023a). According to SARS (2023b), for the 2021/22 fiscal year: Import VAT was collected mostly from the importation of machinery and electronics (25.6%); chemical products (14.2%); vehicles, aircraft and vessels (9.7%); special provisions (8.9%); base metals (7.5%); plastics and rubber (5.5%); textiles and clothing (5%) as well as mineral products (4%). The largest contributors to customs duties in 2021/22, were vehicles, aircraft and vessels (22.7%); textiles and clothing (17.3%); food, beverages and tobacco (14.8%) as well as machinery and electronics (13.3%).

Source: Various sources. Accessed at relevant organisational websites.
Notes: *Priority 2: Economic Transformation and Job Creation and Priority 7: A better Africa and World.
**The main objective of the CSP is to formulate and design policies and strategies that aim to strengthen the manufacturing sector through creating meaningful job opportunities, promoting inclusivity, increasing value addition, and enhancing competitiveness.

2.2. Main business associations and councils in the industry

Industry bodies in auto manufacturing play an important role in providing a collective voice for individual businesses within the industry. The organisational structure in vehicle and component manufacturing and automotive industry retail sectors include naamsa I The Automotive Business Council, the National Association of Automotive Component and Allied Manufacturers (NAACAM), and the Retail Motor Industry Organisation (RMI).

naamsa I The Automotive Business Council

naamsa| The Automotive Business Council is the representative body for the vehicle industry in South Africa, advocating for the collective interests of major automotive OEMs operating in the country. As an industry body, naamsa was established and registered to consolidate the organisation's activities, assets and reserves, ensuring effective representation of all its members.

naamsa's vision includes the following objectives (naamsa| The Automotive Business Council, 2023):

- Promote, advance, protect and represent the interests of all its members;
- Promote trade, foster and stimulate the promotion and growth of the automotive industry;
- Actively participate in conversations and activities that advance the automotive industry's competitiveness domestically and globally;
- Act as a portal for expert knowledge on automotive industry regulations;
- Collect, process, and circulate statistical information and other key automotive industry data in compliance with the requirements of the South African law and in accordance with the automotive industry's reporting guidelines; and
- Proactively communicate the role and the importance of the automotive industry, using reliable data and information.

National Association of Automotive Component and Allied Manufacturers

NAACAM acts as a representative body for South African component manufacturers, safeguarding their interests. Furthermore, the association provides administrative oversight to the South African Tyre Manufacturers Conference. NAACAM also plays a pivotal role in facilitating the localisation programmes by the Automotive Supply Chain Competitiveness Initiative.

Retail Motor Industry Organisation

According to naamsa (2023), the RMI represents the retail motor trade sector within the automotive industry, with a membership of 8 378 establishments across all sectors of the retail and wholesale motor industry, including vehicle dealers, motorcycle dealers, motor vehicle parts dealers, motor body repairers, motor vehicle component re-manufacturers, tyre dealers, independent workshops, and fuel retailers, among others. Within the RMI brand, the National Automobile Dealers' Association (NADA), operates as one of organisation's constituent associations, focusing specifically on new vehicle franchise dealerships and qualifying used vehicle outlets. As a professional body, NADA represents the interests of 1391 members, comprising about 85% of franchised dealer networks in South Africa.

African Automotive Manufacturers Association (AAAM)

NAACAM and all the major OEMs in South Africa are also affiliated with the independent AAAM.

The AAAM was established with the primary objective of promoting the growth and advancement of the automotive industry throughout Africa. The association achieves this by collaborating with governments to shape policies and offering support to attract investments, unlock the economic potential of the continent, and foster a global network of stakeholders dedicated to the development of the automotive sector in Africa.

Export promotion council

The Automotive Industry Export Council (AIEC), founded in 1999, serves as the authorised private sector export promotion entity for South Africa's automotive industry. The AIEC Board of Directors, which consists of representatives from NAACAM, naamsa, and two ex-officio members from the dtic, oversees the activities and management of the council.

Trade union representing workers in autos

National Union of Metalworkers of South Africa (NUMSA): Motor Industry Combined Workers Union (MICWU) is one of the four unions affiliated with NUMSA. MICWU focuses on organising and advocating for workers in various segments of the automotive industry, including vehicle and component manufacturing, vehicle body building, car dealerships and petrol attendants (NUMSA, n.d.).

According to the Labour Market Dynamics (LMD) 2020 data by StatsSA, all workers in auto assembly have formal employment, with around 57% being members of a trade union. In the components industry, which includes the manufacturing of vehicle bodies and components, more than half, or 56% of workers, reported trade union membership.

Consumer protection agency – Motor Industry Ombudsman of South Africa (MIOSA)

The automotive industry in South Africa stands out as the sole manufacturing subsector that has an Ombudsman. MIOSA serves as the industry's official and accredited forum for resolving disputes. MIOSA takes on the responsibility of investigating complaints between consumers and various entities

within the automotive sector, including car dealerships, repair shops and related industries.[6] [7] According to the agency (MIOSA, n.d.), the automotive industry (manufacturers, dealers and service providers) funds the agency but has no control over its operations or the recommendations it makes. MIOSA retains full jurisdiction over the automotive industry and operates independently without any interference from industry stakeholders.

2.3. Main platforms for stakeholder engagement

Automotive Supply Chain Competitiveness Initiative (ASCCI)

ASCCI is mandated to co-ordinate supply chain development efforts within the South African automotive industry. ASCCI operates as a collaborative initiative, jointly funded by suppliers (represented by NAACAM), OEMs (represented by naamsa), government (represented by the dtic), and labour (represented by NUMSA). The primary goal of ASCCI is to enhance domestic manufacturing value-add through localisation by creating opportunities for sourcing components locally at Tier 1 and Tier 2 levels (naamsa, 2023; ASCCI, n.d.). The programme is jointly funded by ASCCI (50%) and the participating private sector sponsors (50%).[8]

Bargaining structure in autos industry

Collective bargaining holds significant importance as a platform through which workers pursue their rights and social upgrading, either at firm, industry or national level. Mashilo and Webster (2021) note that in the context of the automotive industry in South Africa, collective bargaining is organised into three distinct institutions. These institutions provide a structured framework for sector-wide negotiations and collaboration.

1. In the vehicle assembly, collective bargaining is conducted centrally through the National Bargaining Forum.
2. Collective bargaining within the components' manufacturing sector is facilitated by the Motor Industry Bargaining Council.
3. The New Tyre Manufacturing Industry Bargaining Council oversees collective bargaining processes within the New Tyre Manufacturing Industry.

Wage negotiations

Formal wage negotiations in the auto industry are preceded by consultative industry meetings involving naamsa, NUMSA, the dtic, the Department of Labour, and other relevant stakeholders. These negotiations primarily involve the Automotive Manufacturers Employers' Organisation, representing OEMs, and NUMSA.

NUMSA assumes a crucial role in driving social upgrading[9] within the automotive components manufacturing sector. Mashilo and Webster (2021) highlight that labour's influence in achieving social upgrading improvements within the South African automotive industry primarily stems from the effective use of structural power – the establishment of associational power through NUMSA, and the strategic deployment of institutional and societal power.

[6] See Ombuds – Why and How to use them (PGPS attorneys, 2023).
[7] MIOSA, established in 2000, gained accreditation through the South African Automotive Industry Code of Conduct in October 2014, making it a recognised entity under the Consumer Protection Act No. 68 of 2008.
[8] IPAP: https://www.gov.za/sites/default/files/gcis_document/201805/industrial-policy-action-plan.pdf
[9] Social upgrading refers to the process of improving working conditions, wages, benefits, and overall well-being of workers within a particular industry or value chain.

Manufacturing, Engineering and Related Services Sector Education and Training Authority

The Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA) is responsible for facilitating skills development in the local automotive industry, according to the SETA SIC Codes (PJF Marine, 2010). A key objective of the SAAM 2035 is to emphasise the importance of skills development, and to establish merSETA as a key implementation entity of skills development in the sector.

The automotive value chain in merSETA includes the auto chamber, new tyre chamber and the motor chamber, comprising of automotive components and vehicle body manufacturers; engineering and re-conditioning repairs and maintenance; and a smaller embedded and integrated sales and retail part.

2.4. Clusters and geographic locations of automotive manufacturers

Clusters are geographic concentrations of related companies that collaborate and compete within the same industry. They bring together specialised suppliers, services and infrastructure, leading to enhanced performance and competitive advantage. South Africa's automotive industry features clusters, supplier parks and SEZs/IDZs strategically located in the country's automotive manufacturing provinces.

Durban Automotive Cluster (DAC) (KZN)

As the automotive industry in KZN aims for market expansion, clustering becomes crucial for companies to collaborate and address common challenges more effectively. The DAC, a well-established public-private partnership, serves as a platform to enhance growth and competitiveness within the local automotive industry. With 45 represented companies and approximately 17 000 employees, the cluster draws on the expertise of individuals across various automotive member firms to tackle industry-wide challenges (DAC, 2023). The DAC's funding is overseen by the Economic Development and Investment Promotion Unit of the eThekwini Municipality, which is responsible for promoting economic development, job creation and economic growth. The DAC aligns with the ASCCI foster value addition and localisation within the local supply chain (DAC, 2023).

Eastern Cape Automotive Industry Cluster (ECAIC)

The Eastern Cape Province has a strong concentration of automotive suppliers and related industries, leading to the establishment of the ECAIC. The cluster serves as a collaborative platform for automotive manufacturers and allied sectors to leverage existing strengths and contribute to economic development within the province.

Automotive Supplier Park (ASP) (Gauteng)

The ASP, located in Rosslyn, Pretoria, is an industrial park that serves as a home to a diverse range of component manufacturers and suppliers to OEMs. The group of businesses located within the park consists primarily of automotive industry stakeholders which can take advantage of the park's strategic location. By being in close proximity to major OEM plants, including BMW, Nissan/Renault, Tata, and Ford/Mazda, businesses operating within the ASP can benefit from enhanced collaboration opportunities, cost efficiencies, and streamlined logistics within the automotive supply chain.

The ASP is managed by the Automotive Industry Development Centre (AIDC). The AIDC operates as a subsidiary of the Gauteng Growth and Development Agency, with its primary objective being to enhance global competitiveness within the local automotive industry and establish Gauteng as a preferred destination for automotive investment.

Table 4: Automotive SEZ/IDZs

NAME	LOCATION	DESCRIPTION
Coega Special Economic Zone	Nelson Mandela Bay, Eastern Cape	The Coega Automotive Zone aims to spearhead transformation and establish a favourable business environment for automotive industry investors. Since its inception in 1999, Coega has attracted 14 auto-companies consisting of OEMs and auto-component suppliers, including FAW, BAIC, ISUZU Parts Distribution Centre, Faurecia, Rehau, Groupo Antolin, Benteler, Hella and Q-Plas (Coega, 2021).
Nelson Mandela Bay Logistics Park (NMBLP)	Nelson Mandela Bay, Eastern Cape	The NMBLP offers infrastructure and services primarily to the automotive manufacturing industry, aiding manufacturers in cost reduction and enhancing supplier competitiveness through integrated logistics support. The first phase of the park currently houses ten auto-component suppliers, and the second phase will be developed gradually to meet the expansion requirements of existing tenants and accommodate new ones (Coega, 2021).
East London Industrial Development Zone (ELIDZ)	East London, Eastern Cape	The East London IDZ is one of the key locations for automotive manufacturing investment in South Africa. The Zone has attracted over R1-billion worth of investment in this sector. Renowned automotive suppliers and OEMs including Mercedes Benz South Africa, Nissan South Africa, Volkswagen South Africa, Ford South Africa, and Isuzu Motors South Africa are located within the ELIDZ.
Dube TradePort SEZ	Durban, KZN	Dube TradePort Special Economic Zone houses various businesses, including the Dube Cargo Terminal, Dube City, Dube AgriZone and the Dube TradeZone. The Dube TradeZone is a light industrial area that supports aerospace and aviation-related manufacturing, clothing and textiles, automotive component production, and other related light manufacturing industries.
Tshwane Automotive Special Economic Zone (TASEZ)	Pretoria, Gauteng	In May 2020, TASEZ was formed through an inter-governmental agreement involving the dtic, Gauteng Department of Economic Development and the City of Tshwane Metropolitan Municipality. The mandate of TASEZ is to transform the autos sector by being a driving force behind job creation, economic growth, and facilitating socio-economic progress in the automotive manufacturing industry.

2.5. Major policy developments and infrastructure initiatives since 2020

South Africa has implemented various policy frameworks in the past to facilitate the growth and development of a globally competitive local automotive industry. The automotive industry has been identified in the IPAP as one of the key manufacturing sectors. South Africa's automotive industry is governed by policies designed specifically for the sector. The post-apartheid government inherited a highly protected, inefficient and inward-looking autos industry (Monaco and Wuttke, 2023). Since then, various iterations of automotive policies by the dtic have led to growth in investment, output, production efficiency and exports. Notwithstanding these improvements stemming from targeted automotive policies, the industry's production, investment and export growth have remained stagnant over the last decade. The MIDP in 1995 and the subsequent APDP, in 2013 (with minor changes implemented in 2016), were designed and implemented to promote modernisation, rationalisation and structural transformation within the sector.

Currently, the South African automotive industry is governed under the SAAM 2035[10], a strategic framework with the aim of developing a globally competitive and transformed industry that

[10] The SAAM presents a vision for the automotive industry, outlining guidelines and objectives for its improvement. The governance of master plans, including the SAAM, is structured to operate through a social compact that encompasses each sector of society, including business, government, and organised labour.

contributes to the sustainable development of the country's economy. Table 5 illustrates the progression of policy development within South Africa's automobile industry.

Table 5: South Africa's automotive policy landscape

PERIOD	AUTOMOTIVE POLICY	KEY POLICY INSTRUMENTS
1961-1989	Phase I-V: Local content programme	• Local content scheme introduced with different content levels implemented by weight • Excise duty rebate
1989-1995	Phase VI: Structural adjustment programme	• Domestic content scheme adjustment for value targets • Introduction of the import-export complementation scheme
1995-2000	MIDP: First phase	The four pillars of the MIDP were: 1. Lower tariffs on light vehicles and components 2. The abolition of local content requirements 3. Duty-free import of components up to 27% of the total value 4. Duty rebate mechanism, allowing for duty-free import of vehicles and components in exchange for increased exports. For many years after 1995, OEMs and large Tier 1 suppliers did not experience extreme pressure to localise and continued relying on foreign suppliers for both components and raw materials
2000-2007	MIDP: second phase (Damoense and Simon, 2004)	• Tariff phase down till 2007 • Import-Export Complementation (IEC) phase down from 2003-2007 • Introduction of production-based Duty-Free Allowance in 2000, discontinued in 2007 • Small vehicle incentive phased down and eventually discontinued by 2003 • Introduction of a productive assets allowance
2013-June 2020	APDP: first phase	The APDP also incorporates four policy instruments. 1. Tariffs remained stable under the APDP, at 25% on CBU (completely built up) light motor vehicles and 20% on components 2. The APDP replaced the IEC with a production incentive (PI) , an import duty rebate credit based on the amount of local value added. 3. Introduction of a vehicle assembly allowance (VAA), assemblers producing over 50 000 vehicles per year to import a portion of their

PERIOD	AUTOMOTIVE POLICY	KEY POLICY INSTRUMENTS
		components duty-free for vehicle production 4. A new investment scheme: Automotive Investment Scheme, a taxable cash grant of up to 30% of capital investment in productive assets that is awarded to eligible applicants for qualifying projects
July 2021	APDP2: second phase	Phase 2 of the APDP aimed to enhance local content and promote economic empowerment and transformation. The APDP2 aims to align with the South African Masterplan's objective of creating a globally competitive and transformed automotive industry Phase 2 introduced several changes and enhancements compared to the APDP phase one. APDP2 increased local content requirements and introduced B-BBEE targets for the industry
2021-2035	SAAM 2035	The SAAM encompasses a forward-looking vision and a comprehensive set of objectives, aimed at guiding the growth and development of the automotive sector in South Africa. SAAM 2035 focuses on six key areas: 1. Local market optimisation: Two fundamental changes are needed to support this key area: First, to increase production to 1.4 million units, the domestic market needs a compound annual growth rate (CAGR) of at least 4.5% for passenger vehicles, 3.5% for light commercial vehicles, and 3% for medium and heavy commercial vehicles from 2017 to 2035. Second, increase domestic sales by local manufacturers, i.e. for local producers to capture a large share of domestic sales. 2. Regional Market Development 3. Localisation: Increase local content for locally assembled vehicles to 60% (from the current 39%) 4. Infrastructure development (to leading international competitor standards) 5. Industry transformation: (i) double total employment in the automotive value chain (from 112 000 to 224 000), and (ii) achieve industry transformation across the value chain (at least Level 4 BEE status from 2021)

PERIOD	AUTOMOTIVE POLICY	KEY POLICY INSTRUMENTS
		6. Technology and associated skills development *APDP amendments* • Replacement of the VAA with a Volume Assembly Localisation Allowance, implemented on a phased basis over the period 2021 to 2026 • Remedying the differential earning of the PI • No more vulnerable industry status • Remedying the differential spending value of the PRCC – Customs Value PRCC to a Duty Credit Certificate • Increase PI benefit level to 12.5% of value addition within component manufacturing (from 10% for not-vulnerable industries)

Source : Damoense and Simon, 2004; Bronkhorst et al., 2013; SAAM 2035.

Infrastructure initiatives in the automotive industry

Infrastructure development forms a key pillar part of the SAAM 2025. The South African automotive industry requires access to domestic infrastructure and services that are on par with leading international competitors. Automotive infrastructure encompasses productive assets and also includes market-related and emerging technologies.

Critical infrastructure, in the context of the local automotive industry, includes Transnet's ro-ro (roll-on/roll-off) facilities. These facilities are essential for the automotive industry as they facilitate the efficient movement of vehicles and automotive components through ports, enabling smooth import and export operations for the sector. The ro-ro facilities play a crucial role in supporting the automotive industry's competitiveness and growth. The recent inefficiencies at Transnet have a negative effect on the automotive industry value chain.

As outlined in the SAAM 2035, the South African automotive industry requires a conducive environment that includes advanced logistical connections and transportation infrastructure (land, air, and sea). It also necessitates efficient industrial parks with appropriate factory infrastructure, along with readily available energy, water and other essential amenities. In addition, there is a need for convenient access to semi-skilled and skilled workforce (the dtic, 2018).

SEZs and automotive industrial parks play a vital role in promoting improving overall efficiency in the movement of goods and services, thereby contributing to overall infrastructure improvement. By establishing SEZs, governments aim to create designated areas where businesses can operate with enhanced efficiency, benefiting from streamlined logistics and transportation networks. For example, the Nelson Mandela Logistics Park, specifically, is designed to facilitate the movement of goods and optimise supply chain operations. This park includes the development of modern logistics infrastructure to support the smooth flow of goods. The infrastructure within these SEZs helps enhance connectivity, reduce transportation costs, and improve overall efficiency in the movement of goods and services.

It remains vital for South Africa to invest in alternative technology infrastructure to facilitate the adoption of NEVs. Additionally, in terms of market-related infrastructure, it is important for the South

African market to ensure the availability of advanced fuel qualities (petrol and diesel) to align domestic product demand with international market requirements.

The prevailing challenges in South Africa's electricity supply have a significant impact on infrastructure. Electricity is crucial for the smooth operations, efficiency, and movement of goods, including automotive products. South Africa plans to invest in modern infrastructure technologies, where reliance on electricity is often substantial. Many of these technologies are contingent on a reliable electricity supply to function optimally.

2.6. Main policy debates in the industry

There are several debates and discussions surrounding various aspects of the local automotive industry:

Cost of subsidies vs benefits from the automotive industry

A central and ongoing debate within the industry revolves around whether the benefits derived from subsidies justify their costs. The automotive sector in South Africa is heavily dependent on government support and foreign investment. This is in line with international trends. To boost economic development, job creation, and value addition, governments typically extend financial backing to the auto industry, with increased subsidies with the rise of EVs. According to National Treasury estimates, the South African government allocated R34 billion to its automotive sector in the 2022 fiscal year, excluding possible future EV-specific incentives. The subsidy per vehicle would be approximately R61 219 in this scenario. Meanwhile, German's government committed approximately US$5.9 billion or R98 billion to support vehicle manufacturing and sales (Deutsche Welle, 2020), and the Biden-Harris administration in the US announced a US$15.5 billion (R290 billion) package composed of grants and loans to advance EVs (US Department of Energy 2023; Innovation News Network, 2023). The government will provide US$12 billion to aid automakers in shifting to EV production (with US$2 billion in grants, US$10 billion in loans), and US$3.5 billion for new and upgraded facilities for battery materials and component manufacturing. Similarly, India's government injected U$$630 million or R11.8 billion into its FAME-II policy to encourage the adoption of 1153079 eco-friendly vehicles, including 14818 four-wheelers.[11]

Despite substantial subsidies, South Africa's automotive industry supports a relatively small workforce and maintains competitive export markets by lowering import tariffs. However, this strategy has not resulted in a favourable automotive industry trade balance. The country also continues to grapple with expanding its automotive sector to take advantage of greater economies of scale. This then raises an important issue: given the local industry's modest direct contribution to employment and the lack of transformation and development in black-owned enterprises, is it sustainable to keep providing such significant subsidies, and what changes are required in the local automotive industry to foster a setting conducive to meeting national objectives? The answer depends mainly on the extent of technological spillovers and indirect effects on production and employment.

Government subsidies play a vital role in the sustainability and success of the automotive industry, particularly now, and as the shift towards EVs gains momentum, it can be observing that government subsidies are being allocated to the development of EV production. The risk of losing a domestic automotive manufacturing base is evident in the Australian example and is detrimental to any economy. In South Africa's case, the core argument for the subsidy is around spillovers and indirect impacts. In 2019, Treasury allocated R31.3 billion to support the automotive industry through the APDP. However, according to Barnes (2022), the APDP imposes an annual expense of R4.1 billion on

[11] EV incentives in India also include two and three wheelers, as well as four wheelers. See FAME scheme in India (IEA, 2021; Ministry of Heavy Industries, 2023). The exchange rate of US$ = R18.97 is used.

the fiscus. This is offset by the contribution of about R86 billion in local value addition each year from the seven South African-based OEMs. The value addition is important and brings significant benefits to the economy, despite the considerable size of the government's tax incentive. There are inherent risks, and opportunity costs if the local industry was to lose government support, including forgoing potential investments intended for the automotive sector. It is essential to acknowledge the significance of spillover effects from the South African industry to the broader region and local economy, encompassing local advancements in technology, skills and upstream industries. Specifically, the automotive sector plays a vital strategic role in the Eastern Cape economy.

Another discussion point is the diversification of markets for domestically produced vehicles. This is mainly due to the need for a significant rise in domestic consumption of vehicles produced in South Africa to ensure the industry's viability. In numerous manufacturing sectors, the crucial factor for success and sustainability of locally based industries lies in the strength of domestically anchored demand. Both the SAAM 2035 and the AfCFTA highlight the significance of regional integration, particularly for the automotive industry. South Africa, with its relatively small industry size and limited economies of scale, remains at a competitive disadvantage. Although the regional African market is seen as a potential outlet for South African produced vehicles, this is challenged by the influx of cheap, imported second-hand vehicles from Asia. The fact that only a handful of African countries ban used car imports further intensifies this competition, undermining South Africa's reliance on the African market. Despite it being a prospective opportunity, it therefore remains conditional on African governments' readiness to limit such imports.

Localisation – import vs local manufacturing of high-value add components

Localisation remains a crucial priority in the local automotive industry, however, OEMs often face challenges in sourcing components locally. These obstacles arise from limitations in local capabilities and sourcing policies. One ongoing topic of discussion revolves around the 60% local content requirement outlined in the SAAM 2035. Section 1 of this report reveals that components show a negative trade balance, mainly because many high value-add components are imported into the country. South African-based OEMs currently have local content levels below 25%, which is significantly low. While higher local content levels can result in substantial incentives for OEMs, it is unlikely that they will achieve the 60% local content target due to the absence of local production of high-end, technologically advanced and sophisticated components such as lithium-ion batteries (LIBs), diagnostic and telematics, driver monitoring systems, Advanced Driver Assistance Systems and electronics, such as infotainment systems, for example. Moreover, South Africa will face difficulties in achieving local content targets unless there is an increase in both sales and production scale.

Future mobility and NEVs

As the world shifts toward sustainable transportation, the debate around EVs and infrastructure has gained momentum in South Africa. Discussions revolve around the need for government incentives and support to promote NEV market adoption and local manufacturing, the development of charging infrastructure, and the impact on the local automotive industry's value chain, including on aspects such as jobs and skills development.

Several emerging debates regarding NEV adoption in South Africa are as follows:

Market share: South Africa's biggest markets for automotive products are moving to NEVs: As highlighted in Section 1, South Africa's major vehicle importers are shifting towards NEVs and banning the sale of ICE vehicles. Europe and the US continue to be crucial export markets for South African automotive products, in both volume and value. Consequently, South Africa faces the risk of losing market share in these key markets if it fails to transition to NEV production. While there are potential markets in Africa, the Middle East, and BRICS countries for ICE exports, competition from other auto-

producing nations exists, and South Africa would also need to compete with the large market for second-hand vehicles in Africa.

Connected to this, South Africa is considering a phased strategy for NEV adoption. The initial phase is focused on incentivising production to retain the country's share in key export markets that are shifting towards NEVs. The subsequent phase involves the government exploring incentives for market demand. However, there are concerns about stimulating local demand for NEVs, mainly because the country's budget is constrained and such incentives might benefit middle-income individuals who are already able to purchase NEVs, unless incentives could be directed towards locally manufactured vehicles. There is an argument that incentives aimed at boosting market demand play a crucial role and have, in the experience of many countries, spurred the EV market and anchored demand for EVs and batteries as well. Nevertheless, such incentives should be temporary and not exclusively advantage a small segment of the country's population.

Market development: The discussions revolve around strategies for developing the NEV market. Specifically, there is deliberation regarding the high import duties imposed on battery electric vehicles (BEVs) which is 25%, compared to 18% on plug-in hybrid electric vehicles (PHEVs) and hybrid electric vehicles (HEVs). In addition, the high upfront costs associated with purchasing NEVs hinder widespread adoption in the domestic market, despite the long-term benefits of lower maintenance and running costs.

Infrastructural shortcomings: A key concern relates to the shortcomings of charging infrastructure and energy generation in the country. The limited number of publicly available charging units and the capacity of the energy grid pose challenges to NEV adoption. South Africa is currently experiencing loadshedding and there is a risk that increased adoption of NEVs could strain the existing energy infrastructure. Moreover, South Africa's reliance on coal-powered stations and fossil fuels like diesel undermines the effectiveness of NEVs in reducing carbon emissions in the transport sector.

Local manufacturing: South Africa, as a manufacturer of vehicles and components, faces the challenge of adapting to the growing demand for NEVs in major automotive markets. Countries like the United Kingdom and the European Union (EU) have announced bans on the sale of ICE vehicles and hybrids, incentivising the shift towards NEVs and low-carbon emitting vehicles. The introduction of carbon taxes on imports by these regions further impacts ICE vehicle imports. The dtic, in November 2023, published the automotive White Paper aimed at outlining policy direction for supporting the transition to NEVs, which includes incentivising local manufacturing and purchase of NEVs. To foster the manufacturing of NEVs in South Africa, the government will implement an investment incentive starting from 1 March 2026. This will enable manufacturers to "deduct 150 percent of qualifying investment spending on electric and hydrogen-powered vehicles in the initial year".[12]

Lack of transformation and empowerment

Transformation and empowerment within the automotive industry is another topic of debate. The industry has historically been dominated by a few large players, and there are ongoing discussions about promoting greater participation of black-owned businesses and SMEs across the value chain, particularly in component manufacturing, dealerships and the aftermarket sector.

These debates reflect the ongoing discussions shaping South Africa's automotive industry as it navigates the evolving global landscape.

[12] Minister of Finance Enoch Godongwana announced this during the 2024 budget speech.

SECTION 3: MAIN CONSTRAINTS ON LOCAL AUTOMOTIVE INDUSTRY

3.1. Constraints and challenges

3.1.1. Growth challenges

The automotive industry in South Africa is confronted with both micro and macro limitations that hinder its growth. Over the past few years, the industry has consistently faced challenges such as limited domestic market, power outages, high interest rates, currency depreciation, and disruptions in global supply chains, which have impeded local manufacturing and the growth of the local market.

Limited vehicle production

The automotive industry in South Africa faces growth hurdles due to a stagnant domestic market that is dominated by imports, and limited production volumes by OEMs. Local vehicle manufacturers rely on exports to earn rebates, which enable them to import components and fully assembled vehicles. However, if the domestic market underperforms, the incentive to export diminishes, affecting the industry's export potential and growth negatively. This significantly impacts the scale and nature of backward linkages in South Africa. As indicated, the rebate scheme creates a barrier for local producers, making it more challenging for them to compete against imported vehicles.

Loadshedding

The local industry continues to face a significant hurdle in the form of loadshedding, which hampers its growth. Loadshedding severely affects the automotive value chain, impacting manufacturers, vehicle sales and maintenance, and the sustainability of dealerships. The ongoing electricity shortage continues to increase production costs, impeding exports and resulting in job and revenue losses. Consequently, manufacturing companies are witnessing a decline in monthly production, ultimately affecting the competitiveness of the sector. According to Furlonger (2023), a considerable number of component manufacturers are not hiring and are increasingly laying off employees. Moreover, around 15% of component manufacturers have withdrawn from export orders due to uncertainty in timely delivery. Any delays from components suppliers can have a ripple effect on the entire vehicle manufacturing chain, impacting OEMs and suppliers, potentially resulting in production suspensions or the need to make production adjustments. To achieve the goals set in SAAM 2035, such as increased production, the implementation of new production technologies, and infrastructure development, it is crucial to stabilise electricity supply.

Transnet

Transnet plays a crucial role in supporting automotive infrastructure, and the industry's efficiency is significantly dependent on investment in infrastructure, particularly in revitalising South Africa's ports, rail, and roads. Unfortunately, persistent inefficiencies and congestion at Transnet, combined with ongoing high costs, have adversely affected the automotive industry. This has resulted in delays, disruptions in the supply chain, and additional costs for companies. These challenges with Transnet led to a consecutive three-month decline in new vehicle sales, as reported by naamsa (Malesele, 2023).

In addition, the negative effects of cable theft on the South African rail system further exacerbate the challenges faced by the automotive industry. Electrified rail locomotives are unable to operate if the supply of electricity to the line is disrupted due to such theft. The impact on the automotive sector extends to increased costs, with the industry reported to be spending millions on armed escorts for road transportation, as highlighted by Mthembu and Petersen (2023).

Navigating global shocks: Impact on global value chains

Closely connected to global markets and trends, the local automotive industry faces susceptibility to external factors due to supply chain disruptions caused by the COVID-19 pandemic and geopolitical

risks. The immediate challenges arising from the pandemic have had a detrimental impact on the local automotive industry, particularly considering South Africa's heavy reliance on imported components and parts for vehicle assembly. The impact of the COVID-19 pandemic extends beyond reduced automotive production and sales, as it also posed a significant threat to the attainment of the SAAM 2035 manufacturing target of producing 1.4 million vehicles by 2035. Additionally, the ongoing Russia-Ukraine conflict has further contributed to disruptions in the supply of raw materials for vehicle parts, as well as increased costs, logistics challenges, and higher energy expenses. These factors collectively weaken global supply chains for automotive products.

3.2. Job creation by the auto industry

Compared to supporting industries within the automotive value chain, vehicle manufacturing remains capital intensive with limited potential for significant job creation. However, the automotive industry plays a vital role in employment generation, especially when factoring in its multiplier effect on total employment and generally, in the entire economy. This multiplier effect is particularly evident in the influence of the automotive industry on upstream industries in component assembly like PGMs (used in catalytic converters) services to the auto industry. As per research conducted by the Institute for Economic Justice, the closed employment multiplier for motor vehicles (SIC 381-382), which considers induced consumption and investment effects, was determined to be 5.04. This implies that the initial job creation in the industry is expected to lead to the generation of an additional 4.04 jobs in related industries and sectors (Schröder and Storm, 2020). In most cases, the automotive industry, particularly in assembly manufacturing, offers well-paid, secure and unionised employment, while also establishing advanced production capabilities.

Although OEMs may not directly contribute substantially to employment numbers within the value chain, their presence remains important for skills development in manufacturing, technological transfers, attracting foreign direct investment and promoting industrialisation. However, as outlined in section one of the report, the contribution of the automotive industry to the overall GFCF is relatively minor when compared to other manufacturing subsectors, and this contribution has been on the decline in recent years. In addition, a considerable portion of the investment reported is allocated for asset depreciation rather than increasing production capacity, which is unlikely to lead to an increase in employment.

3.3. Climate change and reducing carbon emissions

Globally, there is a growing trend to ban sales of ICE vehicles as a climate change mitigation policy, particularly in Europe, North America and Asia. Major automotive manufacturers worldwide are shifting towards fuel-efficient NEVs to reduce carbon emissions in the transportation sector. Countries like Germany, France, India and Hungary have implemented national policies and targets to promote NEV development, including subsidies, fiscal incentives for charger installation, and free public charging in urban areas. South Africa has the potential to reduce emissions from the transport sector through the use of NEVs. Following the publication of the EV White Paper in December 2023 and the announcement by the National Treasury in February 2024 to back EV manufacturing, South Africa is taking steps towards fostering the production of EVs. However, as outlined in the EV White Paper, there are presently no initiatives to encourage consumer demand through incentives, despite its commitment to achieving net-zero emission. The absence of favourable policies for NEVs, along with local manufacturing obstacles and high costs, has the potential to hinder the industry's competitiveness and restrict its entry into key markets for automotive products. This could impede the progress of the automotive sector in achieving a sustainable future.

Currently, only two OEMs produce NEVs for the export market, relying on imported batteries and advanced technology components. This heavy dependence on imported NEVs to meet local demand

exacerbates the trade deficit in components. Moreover, the elevated cost of NEVs creates a barrier for accessibility among customers with lower incomes, impeding the sector's advancement in decarbonisation efforts. Globally, the high purchase price of NEVs and the availability of charging infrastructure[13] remain major barriers to NEV adoption. However, South Africa currently does not view the availability of charging stations as a significant barrier. By the end of 2020, the country had 305 public NEV charging stations, which surpasses the global standard, with five plug-in NEVs per charging point compared to the global average of eight vehicles per station (naamsa | The Automotive Business Council, 2023; TIPS and B&M Analysts (2023). Nonetheless, there are challenges in coverage and visibility of charging stations, hindering market development (naamsa | The Automotive Business Council, 2023; TIPS and B&M Analysts (2023).

3.4. Assessing the progress of SAAM 2035: A review of goals and future possibilities

By 2035, the South African automotive industry aims for global competitiveness by boosting local demand, improving supply capabilities, and driving South Africa's transformation efforts. This includes promoting employment equity and involving Black-owned businesses in the value chain, particularly for lower-tier suppliers. The auto masterplan has established specific targets for the industry, outlined in Section 2 of this report. Considerable resources from both the government and the private sector have been directed towards growing the local industry. However, to date the available evidence suggests that the industry might not grow as initially envisioned. Given the significant support involved, it is important to look not only at the strengths of the industry but also the potential areas where the industry might be facing shortcomings. An integral aspect of institutionalising industrial policy involves facilitating the process of maintaining regular monitoring and evaluation of industry objectives to ensure their alignment with dynamic shifts in the industry and to address ongoing challenges. These challenges have the potential to disrupt certain assumptions made within SAAM 2035, prompting a need to re-evaluate the feasibility of these initial objectives. Two fundamental assumptions were embedded in the masterplan: a growing domestic market and expansion into the regional market. These assumptions formed the basis for the masterplan's goals.

Achieving production of 1.4 million units of vehicle centres on two pivotal shifts in the domestic market. The first relates to the country's future growth trajectory of the industry. SAAM 2035 suggests that South Africa could achieve competitive vehicle production levels of 1.4 million units by boosting domestic and regional sales to a point when it could replace all imports. However, the SAAM falls short of detailing the specific steps needed to attain this goal realistically. The continued extension of the APDP fails to introduce strong measures for this target, leading to a stagnation in rapid growth. It is important to note that SAAM's growth projections were predicated on the substitution of local products for imports rather than higher sales in South Africa and the region, hence the focus on "optimisation" rather than mere expansion. The goal of manufacturing 1.4 million vehicles, which would represent 1% of global production, is likely unattainable due to numerous reasons including a weak macroeconomic environment and additional challenges faced by the industry in both the local and global context. Consequently, the production target has been adjusted to 620 000 units.

Despite half of the country's domestic demand being met by imported vehicles, the role of domestic demand in the industry's longevity should not be underestimated. The expansion of the local market is closely linked to the condition of the South African economy, showing a clear and direct correlation between economic growth and vehicle consumption. The anticipated growth rate of South Africa's economy remains low. Projections suggest a decrease to 0.1% in 2023 from 2% in 2022, averaging

[13] To achieve decarbonisation, it is crucial to ensure that the charging infrastructure relies on renewable energy sources. By powering NEV charging stations with renewable energy, we can alleviate the burden on the grid and contribute to a cleaner environment simultaneously.

around 1.4% from 2010 to 2022. The volume of vehicle sales in South Africa has been consistently decreasing over the past few years, and this trend is unlikely to shift in the short run. In 2022, new vehicle sales reached a total of 528 963 units, 1.4% below the pre-pandemic sales of 536 612 units in 2019. New and used vehicle financing agreements have also declined, partially attributed to escalating vehicle costs that have outpaced wage growth, consequently reducing disposable incomes. (BusinessTech, 2023).

Considering these factors, the challenge is to leverage the local small assembly industry to support the economy. This could be through technology transfers and spillovers, possibly more focus on upstream product specialisation for export growth, adapting to EV transitions, and enhancing support for small-scale and affordable EVs. An opportunity for the industry thus remains in broadening its range of vehicles to include smaller and affordable passenger vehicle options, while also looking to develop alternative mobility services in alignment with the global trend, including ride sharing, leasing and e-hailing (Reddy, 2023). Support for public transport is also important, serving low-income households to foster an inclusive shift to EVs.

The domestic market is small, as mentioned above, and so expanding into the regional market remains a pivotal strategy for fostering local industry growth. However, venturing into these regional markets comes with numerous challenges, one of which is the prevalence of second-hand vehicles across the African continent. It is notable that only Egypt, South Africa, Algeria, Morocco and Sudan have regulations against importing second-hand vehicles. This has resulted in an increased demand for vehicles not produced within South Africa or on the continent, but instead on imports of second-hand vehicles, mostly from Japan. If African countries do not cease importing used cars (which seems unlikely), it raises concerns about the regarding the attainability of the SAAM targets.

Another prominent objective of the auto masterplan is to increase employment throughout the automotive value chain, aspiring to double the workforce from 112 000 to 224 000 jobs (during the fourth quarter of 2022, the industry had a workforce of 94 000 employees). But the industry's struggle to meet production goals, coupled with a stagnant economy, presents a challenge to meet these employment targets. Recognising the industry's role as an employment multiplier is important, and efforts are still needed to create jobs in the components industry and within upstream industries. Moreover, it is imperative to ensure that the downstream industries, including sales, repairs, fuel and charging stations, all strive to increase employment and foster SME growth.

South Africa's automotive sector replaced the IEC with a PI, which is an import duty credit linked to local value added. This mechanism enables OEMs to offset vehicle and component duties, playing a key role in industry growth and competitiveness. OEMs earn export credits by manufacturing vehicles locally, which are then used to import vehicles for local sales. A challenge arises when the domestic market is not performing well, affecting the incentive to export. This incentive is driven by the need to earn these credits and if the market does not grow, the incentive to export diminishes. Consequently, exports relying on rebates to balance the local market decrease. Without this model, the rationale for OEMs to operate becomes a challenge, especially considering South Africa's distance from key markets, low levels of local content, and high logistics costs. To maintain the effectiveness and benefits of the rebate system, addressing growth challenges in assembly volumes is imperative.

While the local industry continues to receive government support, there is still potential for improvement, especially in aligning with national goals. Ensuring accountability among stakeholders is also important, while also considering innovative approaches to address industry challenges and stimulate growth. The current market presents the automotive industry with a multitude of internal and external factors, encompassing Strengths, Weaknesses, Opportunities, and Threats (SWOT).

Table 6: Swot Analysis

STRENGTHS	WEAKNESSES
• Supportive sector-based government policies for the automotive industry. • A developed supply network that encompasses worldwide sourcing connections, specifically with OEMs and Tier 1 suppliers. • South Africa holds a dominant position within the African continent in automotive manufacturing. • Strong capability to export vehicles and components, with a specific emphasis on catalytic converters. • Preferential international market access (via AGOA and the EU-SADC-European Partnership Agreement) • Transnet's Ro-Ro automotive terminals located in the three main automotive hubs of South Africa (Durban, East London and Gqeberha). • Well-established industry structures and support to include the different associations, councils and labour. • The automotive aftermarket industry has demonstrated substantial expansion since the early 2000s and is projected to continue growing at an annual rate of 5.5% until 2023. • While direct employment is low, the jobs are well paid and often a key support for the urban economies where they are located.	• Industry is heavily supported by tax subsidies, and does not generate substantial direct jobs in manufacturing. • Weak macro-economic environment, pressure on consumer'' disposable income, and fragile business and consumer confidence have contributed to a decline in vehicle sales. • South Africa's geographic location poses challenges in terms of disconnection from major export markets and increased logistics costs (especially rail and port costs). • The local industry operates on a relatively small scale, which limits the potential for cost reduction and efficiency gains. It also means that components producers cannot get up to scale. • Rising sectoral trade deficit, primarily influenced by the components industry. • The industry's reliance on ICE production and consumption patterns exposes it to fuel price volatility and environmental regulations. • Low levels of localisation • Highly polluting industry, including air, water and noise pollution. • Lack of specific NEV policy towards incentivising manufacturing and market development remains one of the key barriers to local adoption
OPPORTUNITIES	**THREATS**
• Increase local content in South African assembled vehicles. • Build on existing capacity and work to maximise spillovers and multipliers. • The shift towards NEVs, new technologies and ownership model presents an opportunity for the industry to capitalise on the growing markets and reduce their carbon footprint. • Use APDP and existing policies to support local NEV manufacturing prospects. • The African Continental Free Trade Area (AfCFTA) presents a significant opportunity for exporting vehicles and components to the region.	• Loadshedding and poor service delivery (water cuts, electricity disruptions, poor enabling infrastructure example road, rail, charging for NEVs). • Poor logistics infrastructure (rail and freight) • Climate-related disasters may cause production and shipping delays. • The rising adoption of imported NEVs into South Africa, combined with the absence of a domestic manufacturing base for NEVs and parts. • South Africa's automotive exports are at risk in key markets due to the ban on ICE vehicles. • Low levels of labour productivity compared to peer economies (India, Thailand). • Weakening currency contributes to high capital expenditure and carries the risk of pushing up inflation. • Consumer inflationary pressures • Fiscal squeeze reduces incentives

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