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CASE STUDY 2

Unpacking South Africa's position within the automotive Global Value Chain

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INSIDE

Introduction

The South African auto-motive industry faces a range of development challenges, particularly in relation to its participation within a producer-driven Global Value Chain (GVC). While there has been recent growth in the sector, driven by substantial incentives provided by the national government in the form of the Motor Industry Development Programme to the end of 2012 (and the new Automotive Production and Development Programme, which runs until 2020), the industry still faces significant challenges in the global context. The future of SA's auto industry therefore depends on answers to the following questions:

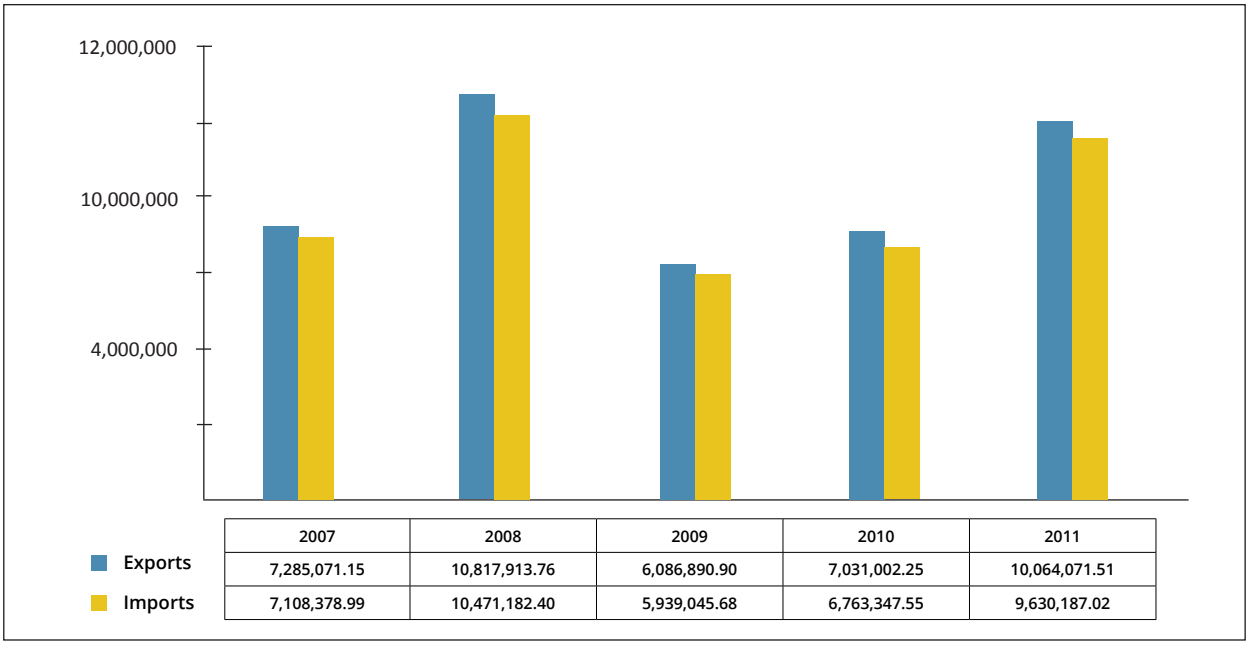
- Can SA become a major producer of vehicles and auto components, given its location at the southern tip of Africa, and the emergence of low cost competitors in the East?
- Will the evolving dynamics of global producer-driven GVCs support, or undermine the opportunities for the local industry?
- Can the domestic auto industry find a viable operating space within a GVC governed by multinational producers?

This concept note outlines the extent of global auto trade, and highlights import and export dynamics within the GVC. It explains some of the drivers of global trade through an analysis of GVC developments, locates South Africa's trade position in relation to the global picture and the GVC developments shaping
its structure and development trajectory, and explores South Africa's present industrial policy framework and its implications.

Global trade analysis

Global trade in vehicles and auto components is very substantial, at well over R9.5 trillion in 2011. As highlighted in Figure 1, trade has however suffered from the impact of the Global Credit Crisis, with 2011 exports and imports lower than 2008 levels.

Figure 1: Total Aggregate Global Exports & Imports: 2007 - 2011 (rm)



	2007	2008	2009	2010	2011
Exports	7,285,071.15	10,817,913.76	6,086,890.90	7,031,002.25	10,064,071.51
Imports	7,108,378.99	10,471,182.40	5,939,045.68	6,763,347.55	9,630,187.02

Table 1 provides a list of the top 10 ranked auto vehicle and component exports in 2011. The GVC's exporting powerhouses are Germany, Japan, and the USA. The balance of the top 10 countries represented less than 6% of total exports individually and included a mix of countries from Asia, North America and Europe. A notable inclusion in the top 10 is China, representing 3.9% of global exports. China is not a traditional leader in the global auto industry, and its ascendency has major implications for the GVC. SA is a small player globally, representing 0.7% of total global exports.

Table 1: Ranking of Global Exporters - 2011 (rm)

Rank	Country	Export Value	Export%
1	Germany	R1,998,940	19.86%
2	Japan	R1,207,572	12.00%
3	USA	R869,337	8.64%
4	Rep. of Korea	R595,112	5.91%
5	Mexico	R475,923	4.73%
6	France	R449,145	4.46%
7	Canada	R440,587	4.38%
8	Spain	R391,125	3.89%
9	China	R389,169	3.87%
10	United Kingdom	R380,101	3.78%
-	South Africa	R70,063	0.70%
-	Other	R2,796,996	27.79%
Total		R10,064,072	100.00%

Breaking the auto GVC down into smaller units of analysis, it is evident that auto components made by suppliers and finished motor vehicles dominate GVC trade. Finished motor vehicle exports made up over half of the total in 2011, followed by auto components made by suppliers at 43.9%. The trend is similar on the import side, as engines, transmissions and body assemblies make up a very small portion of GVC trade. Trade in auto components has grown faster than other GVC nodes by a wide margin.

Table 2: Breakdown of Global automotive data by node (rm)

GVC Node and direction of trade		2007	2011	CAGR	2011 sector %
Exports	Auto Components (made by Suppliers)	R 2,818,059	R 4,416,367	14.18%	43.88%
	Engines, Transmissions, Body Assemblies (made by oEMs)	R 444,616	R 584,759	7.88%	5.81%
	Finished Motor Vehicles	R 4,022,397	R 5,062,946	6.47%	50.31%
	Total	R 7,285,071	R 10,064,07	9.54%	100.00%
Imports	Auto Components (made by Suppliers)	R 2,857,608	R 4,347,565	13.03%	45.15%
	Engines, Transmissions, Body Assemblies (made by oEMs)	R 400,830	R 566,338	10.32%	5.88%
	Finished Motor Vehicles	R 3,849,940	R 4,716,284	5.63%	48.97%
	Total	R 7,108,379	R 9,630,187	8.87%	100.00%

Global exports at the 6-digit HS-level shows that finished vehicles dominate global trade. medium sized light vehicles (engine capacity between 1,500cc and 3,000cc) are the most important export category with total exports of R1.9 trillion (19.1% of the total) in 2011, while the largest component category (other parts and accessories), generated R936 billion in exports. The highest value SA export category in 2011 was medium engine sized light vehicles, although it represented less than 1% of total global exports in this category. SA has its largest global export share in small sized engine light vehicles, with 1.7% of the global total.

Table 3: Breakdown of most important auto exports by product category - 2011 (rm)

Rank	HS Code	Product Category	Export Value	% Category Exports	SA Export Value	SA % Global Exports
1	870323	other Vehicles, Spark-ignition Engine, cylinder capacity above 1,500 cc but not 3,000 cc	R 1,923,993	19.12%	R 18,757	0.97%
2	870332	other Vehicles, Diesel Engine of cylinder capacity exceeding 1,500 cc but not 2,500 cc	R 1,097,733	10.91%	R 2,631	0.24%
3	870324	other Vehicles, Spark-ignition engine, cylinder capacity above 3,000cc	R 935,729	9.30%	R 2,549	0.27%
4	870899	other parts and accessories	R 780,833	7.76%	R 1,709	0.22%
5	870322	other Vehicles, Spark-ignition engine, cylinder capacity above 1,000cc but not 1,500cc	R 553,163	5.50%	R 9,248	1.67%
Total			R 10,064,072	100.00%	R 70,063	0.70%

*Note: HS Chapter 98, which is used to record special transactions like Ckd duties, is not collected at the global level. It is an important part of South Africa's auto GVC trade, and is included in the country-level analysis.

The profile of major auto importing countries is distinct from the global exporting profile. The USA (18.4% of the global total) is the world's largest importer, followed by Germany (9.6%) and China (6.4%). The top 10 importing economies accounted for 64.6% of total global imports in 2011. South Africa, at R92 billion, contributed just below 1% of all international vehicle and auto component imports. A breakdown of global imports by product category (Table 5) shows the ranked imports closely mirror global exports. South Africa's import contribution by product category is, however, distinct from its export profile. South Africa's largest contribution to any of the major product categories is 1.6%, for HS 870333 (other vehicles, diesel engine: cylinder capacity exceeding 2,500cc).

Table 4: Ranking of Global Importers

Rank	Country	Import Value	Import %
1	USA	R 1,774,801	18.43%
2	Germany	R 928,462	9.64%
3	China	R 618,861	6.43%
4	United Kingdom	R 510,741	5.30%
5	France	R 506,709	5.26%
6	Canada	R 445,587	4.63%
7	Belgium	R 365,549	3.80%
8	Italy	R 357,745	3.71%
9	Spain	R 320,366	3.33%
10	Mexico	R 300,719	3.12%
-	South Africa	R 92,817	0.96%
-	Other	R 3,407,831	35.39%
Total		R 9,630,187	100.00%

Table 5: Breakdown of Imports by product category - 2011 (rm)

Rank	HS Code	Product Category	Import Value	% of Imports	SA Import Value	SA % Global Imports
1	870323	other Vehicles, Spark-ignition Engine, cylinder capacity above 1,500 cc but not 3,000 cc	R 1,729,624	17.96%	R 17,836	1.03%
2	870332	other Vehicles, Diesel Engine of cylinder capacity exceeding 1,500 cc but not 2,500 cc	R 1,056,697	10.97%	R 4,610	0.44%
3	870324	other Vehicles, Spark-ignition engine, cylinder capacity above 3,000cc	R 869,533	9.03%	R 5,062	0.58%
4	870899	other parts and accessories	R 641,426	6.66%	R 2,646	0.41%
5	870322	other Vehicles, Spark-ignition engine, cylinder capacity above 1,000cc but not 1,500cc	R 540,869	5.62%	R 4,610	0.85%
Total			R 9,630,187	100%	R 92,817	0.96%

Analysis of the Global Value Chain

The auto GVC has a tiered production structure, with lead firms (oEms such as Ford and Toyota) relying on several levels of suppliers to produce vehicles in regional production systems that are nested within a dense set of global business linkages (see Appendix 1). because Tier 1 suppliers now support oEms with global operations, small producing countries like South Africa manufacture vehicles for the domestic and regional markets, but also have to compete globally for parts production occurring in places like Asia and Eastern Europe.

The globalisation of the automobile industry is not a recent phenomenon. In the period after World War one, Ford and GM established 35 plants across Europe, Asia, latin America (and South Africa) to assemble completely knocked down (Ckd) “kits” of parts from vertically integrated factories in the USA, Canada and the Uk. The motivation, without exception, was to access new markets by jumping over tariff walls and to reduce transportation costs (Sturgeon and Florida 2000). Current globalisation patterns in the auto industry can be seen, in part, as extensions of these earlier trends. when annual sales volumes become significant enough, oEms typically set up assembly operations near consumers to satisfy local demand. At the same time, firms seek cost-cutting investments. However, because major parts tend to be heavy and bulky or require last minute customisation, there are limits to how separate parts production and final assembly can be. This had led to a regional production structure within the industry to support just-in-time (JIT) delivery of parts to final assembly plants.

The dominant production regions are North America (with increasing Mexico and Central America participation), Europe (with increasing Turkey and Eastern Europe participation), and Asia (Thailand and other South East Asian countries comprise a relatively coherent production region). domestic markets (in excess of 2 million units) are large enough — and costs are low enough — to support local production in brazil, China, and India. because a great deal of export production in Japan has shifted to end markets in the Americas, Europe, and Asia, the Japanese production mainly satisfies local demand (vehicle imports to Japan are very low). production of labour- intensive parts continues to migrate to low cost countries within regional production networks (e.g. Nicaragua, serving North America, and Macedonia,

serving Europe) (Sturgeon and Zylberberg, 2012). The economic geography of the auto GVC will continue to shift as developing economies continue to command the attention of oEms and global suppliers, forcing them to meet local content requirements through sector-specific industrial policies. Finally, production still occurs for domestic consumption and regional exports in medium-sized market countries such as South Africa, where investment was established some time ago to overcome tariff barriers. With globalisation, the hold these countries have on their domestic industries has become tenuous.

Changes to the GVC structure

The auto industry's structure has been undergoing significant changes since the mid-1980s, when lead firms began to outsource the manufacture of components, modules and sub-systems to their tier 1 suppliers. In turn, these suppliers managed their own upstream supply bases made up of tier 2 and 3 suppliers (see Appendix 1). more recently, the supply base has consolidated significantly, with more work going to fewer, larger, more diversified and globalised suppliers. Tier 1 suppliers support multiple oEms globally and now make the bulk of the industry's overseas investments. The list of top suppliers is shown in Table 6. As suppliers have taken over the production of larger and more complex modules and sub-systems, they have also taken on more responsibility for design and development, which requires co-location for iterative, collaborative work during platform and vehicle design and development (Sturgeon, et al. 2007). Today it is the suppliers, not the oEMs that make the bulk of new investments in both production and engineering.

Table 6: Top Global Automotive aupliers by worldwide oEM part sales, 2010 (r millions)

Rank	Company	Ownership	Worldwide Sales to oEMS
1	Robert Bosch	Germany	R 227,783
2	Denso International	Japan	R 216,481
3	Continental AG	Germany	R 163,557
4	Aisin World Corp.	Japan	R 162,199
5	Magna International	Canada	R 155,524
6	Faurecia	France	R 120,069
7	Johnson Controls	U.S.	R 109,394
8	mobis North America	South korea	R 95,179
9	TRW Automotive	U.S.	R 94,896
10	Delphi Automotive	U.S.	R 91,054

Source: Automotive News Top 100 Suppliers, 2011; Corporate websites

Market Developments

The opening of the largest developing markets, such as China, India, and Brazil, to foreign investment after 1989 signalled a new chapter in the industry's globalisation. Because these countries satisfy the market-seeking and cost-cutting motivations of global automakers, they have received the lion's share of new investment, not least because their markets are large enough to allow their governments to institute local content rules and tax laws that favour locally produced parts and components. Saturation in traditional markets in the USA and

Europe has prompted automakers to look elsewhere to design, assemble and sell their cars. While developing economies will play an important role in the future of the automotive GVC, trade statistics reveal that the largest importers of automobiles and components continue to be industrialised countries.

Production Developments

The changing nature of the automotive GVC is best captured by production statistics, which demonstrate that production volumes continue to decline in saturated markets like the USA, Japan and France. Countries like Turkey, Mexico and South Korea produce primarily for export. Led by China's spectacular growth in the last ten years, the BRICs have shown an upward trend in production, most of which is geared towards the internal market. Table 7 depicts the nature of these trends in countries producing more than one million motor vehicles a year. It is interesting to note that although China has grown to become the largest producer of motor vehicles in the world, it has not yet become globally competitive. China ranks only 9th in the world in respect of automotive exports, a ranking that is incongruous with its disproportionately large production volumes.

The global automotive industry is also undergoing important changes in regard to product design, as automakers seek to cut development costs in the face of market segmentation and increasing global competition. Because the cost associated with vehicle design and development has become so high (motor vehicles now contain diverse technologies and meet extremely high quality standards), most automakers are shifting towards fewer platforms, more centralised design, and perform only derivative engineering for regional markets. For example, GM currently utilises roughly 30 platforms on its products around the world, and aims to run 90% of its vehicles on just 14 platforms by 2018 (Seabaugh 2011). By 2017 Volkswagen plans to produce 4 million cars – half of its current global output – on its new MQB platform. The platform will underpin over 40 Audi, VW, Skoda and Seat models by 2017 (Rogers 2012). Platform sharing will drive the consolidation of the industry in terms of design locations and the composition of the supply base.

Table 7: Vehicles produced 2002, 2007, 2011, in countries producing 1M+ units in 2007, plus SA (in 000s)

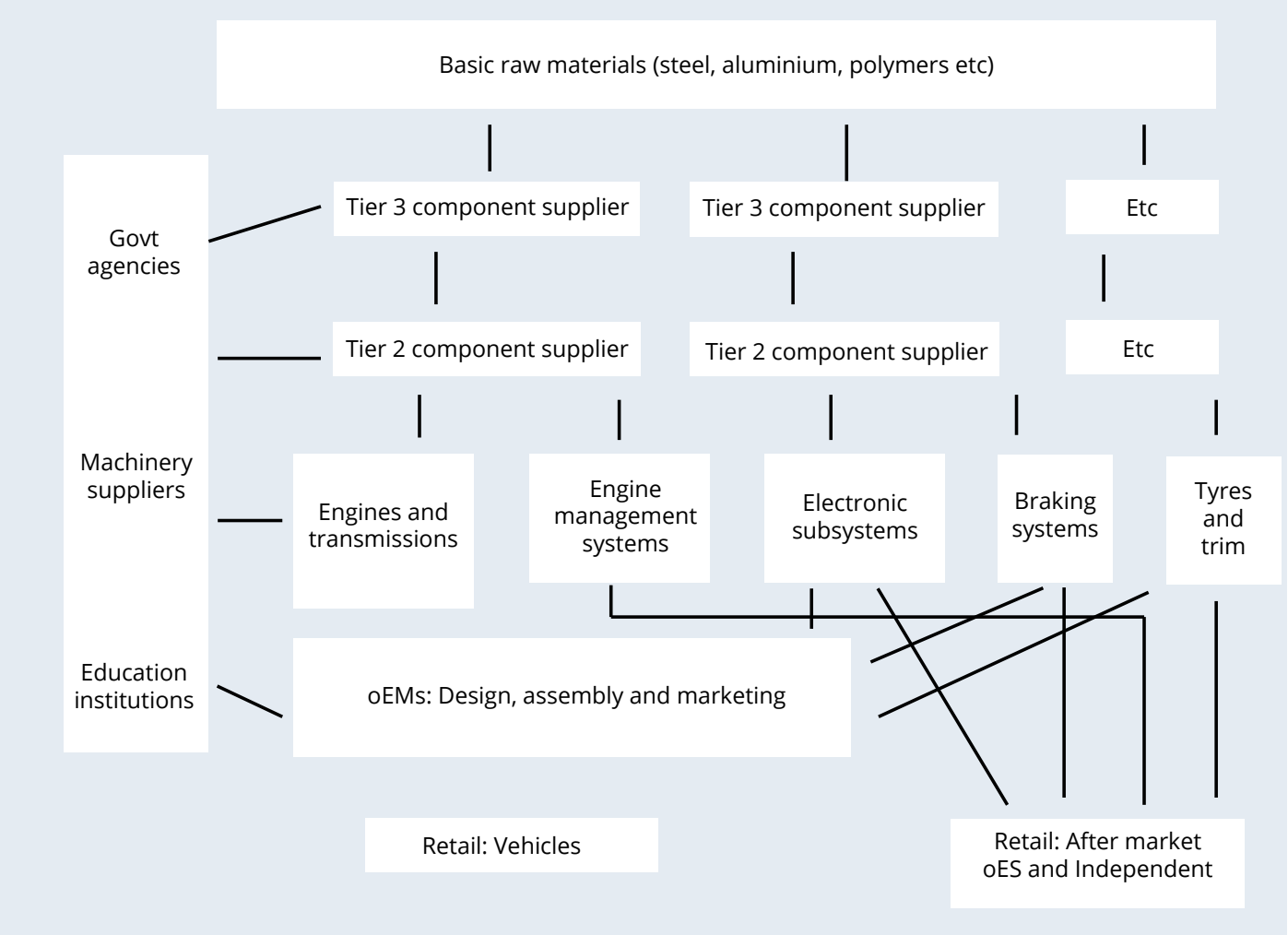
Country	2002	2007	CAGR 2002-07	2011	CAGR 2007-11
China	3,287	8,882	22.0%	18,419	20.0%
India	895	2,254	20.3%	3,927	14.9%
Mexico	1,805	2,095	3.0%	2,680	6.4%
Russia	1,220	1,660	6.4%	1,988	4.6%
Brazil	1,792	2,977	10.7%	3,406	3.4%
South korea	3,148	4,086	5.4%	4,657	3.3%
Thailand	585	1,287	17.1%	1,458	3.2%
Turkey	347	1,099	26.0%	1,189	2.0%
Germany	5,469	6,213	2.6%	6,311	0.4%
South Africa	404	534	5.7%	533	-0.1%
UK	1,823	1,750	-0.8%	1,464	-4.4%
Canada	2,629	2,579	-0.4%	2,135	-4.6%
Spain	2,855	2,890	0.2%	2,354	-5.0%
USA	12,280	10,781	-2.6%	8,654	-5.3%
France	3,602	3,016	-3.5%	2,295	-6.6%
Japan	10,257	11,596	2.5%	8,399	-7.7%
Italy	1,427	1,284	-2.1%	790	-11.4%

Source: International organisation of Motor Vehicle Manufacturers (oICA)

Policy Developments

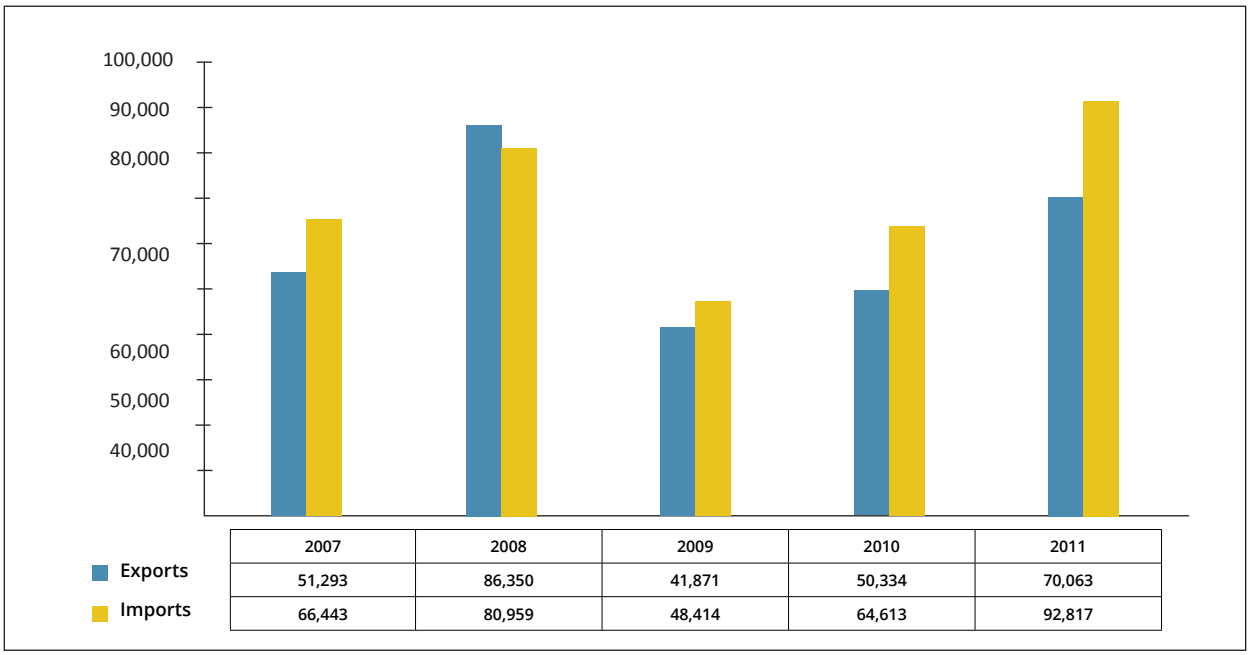
The auto industry has been targeted in numerous countries as a sector of strategic importance. Countries including brazil, China, Turkey and Russia have attracted large scale FdI as a means to create employment and increase domestic capabilities. large developing economies can bend the automotive GVC to suit their needs, while smaller countries have fewer options. The increasingly global nature of the auto industry has also necessitated the development of international quality standards to ensure that components produced in different sites around the world are compatible with final vehicles. The International Standards organisation's (ISo) ISo/TS 16949 was first applied to autos in 2002 and specifies the quality system requirements for the design/development, production, installation and servicing of auto-related products. Country safety boards also set standards. The result is a very complex set of requirements for oEms seeking to sell vehicles (or vehicle platforms) in multiple countries.

Schematic of the Automotive GVC



SA Trade Analysis

Figure 2 provides an indication of the trends in South African exports and imports from 2007 to 2011. South Africa is a net importer of auto vehicles, with an average trade deficit of R10.7 billion over the period 2007-2011. This is moreover an under-representation of the deficit due to the exclusion of Chapter 98 imports.



	2007	2008	2009	2010	2011
Exports	51,293	86,350	41,871	50,334	70,063
Imports	66,443	80,959	48,414	64,613	92,817

Figure 2: Total aggregate SA Exports & Imports: 2007 - 2011 (rm)

The USA (30.0%) and Germany (28.3%) were the two most significant export destinations for the industry in 2011, collectively representing a total export value of R40.9 billion. Japan (5.7%), the Uk (4.0%) and poland (2.7%) made up the remainder of the top five export destinations. There were no African economies among the top 10 destinations in 2011.

Table 8: Ranking of South African Exports - 2011 (rm)

Rank	Country	Export Value	Export %
1	USA	R 21,019	30.00%
2	Germany	R 19,851	28.33%
3	Japan	R 3,987	5.69%
4	United Kingdom	R 2,828	4.04%
5	Poland	R 1,898	2.71%
6	Spain	R 1,784	2.55%
7	Belgium	R 1,753	2.50%
8	Australia	R 1,726	2.46%
9	France	R 1,267	1.81%
10	Netherlands	R 1,203	1.72%
-	Other	R 12,748	18.19%
Total		R 70,063	100.00%

At the GVC node level, SA's export breakdown resembles that of global trade; finished vehicles make up 49.3% of GVC exports followed by components made by suppliers (48.3%) and engines transmissions and body assemblies (2.4%). Unlike global patterns, SA's finished

vehicle exports grew by 23.1% compared to 2.6% export growth in the auto components node. Imports look entirely different, as engines, transmissions and body assemblies make up a sizeable portion of SA's imports (35.6%). The trade deficit in this GVC node has also increased significantly as exports declined 9.8% from 2007-2011 while imports grew 9.4%.

Table 9: Breakdown of Global automotive data by node

GVC Node and direction of trade		2007	2011	CAGR	2011 sector %
Exports	Auto Components (made by Suppliers)	R 30,606	R 33,841	2.64%	48.30%
	Engines, Transmissions, Body Assemblies (made by oEMs)	R 2,741	R 1,668	-9.79%	2.38%
	Finished Motor Vehicles	R 17,945	R 34,554	23.14%	23.14%
	Total	R 51,293	R 70,063	9.15%	100.00%
Imports	Auto Components (made by Suppliers)	R 12,443	R 19,036	13.25%	20.51%
	Engines, Transmissions, Body Assemblies (made by oEMs)	R 23,853	R 23,853	9.40%	35.36%
	Finished Motor Vehicles	R 30,147	R 30,147	8.97%	44.13%
	Total	R 66,443	R 66,443	9.92%	100.00%

A breakdown of SA exports in 2011 by product category is presented in Table 10. It shows that filtering or purifying machinery for gas was the most significant export by value at R30.0 billion (31.4% of total exports), followed by light vehicles with spark-ignition engines with a cylinder capacity between 1,500 cc and 3,000 cc (26.8% of the export total).

Table 10: Breakdown of Exports by product category - 2011 (rm)

Rank	HS Code	Product Category	Import Value	% of Imports
1	842139	Filtering or purifying machinery for gases nes (i.e. catalytic converters)	R 21,979	31.37%
2	870323	other Vehicles, Spark-ignition Engine, cylinder capacity above 1,500cc but not 3,000cc	R 18,757	26.77%
3	870322	other Vehicles, Spark-ignition Engine, cylinder capacity above 1,000cc but not 1,500cc	R 9,248	13.20%
4	870332	other Vehicles, Diesel of cylinder capacity above 1,500cc but not 2,500cc	R 2,631	3.76%
5	870324	other Vehicles, Spark-ignition Engine, cylinder capacity above 3,000cc	R 2,549	3.64%
Total			R 70,063	100%

The highest value import source in 2011 was Germany (R16.7 billion) followed by korea (R7.4 billion) and Japan (R6.5 billion). The other top 10 import sources individually represented less than 7% of total imports.

Table 11: Top 10 South African Import sources - 2011 (rm)

Rank	Country	Import Value	Import %
1	Germany	R 16,664	17.95%
2	Rep. of Korea	R 7,424	8.00%
3	Japan	R 6,514	7.02%
4	USA	R 5,701	6.14%
5	United Kingdom	R 4,413	4.75%
6	India	R 4,329	4.66%
7	China	R 2,979	3.21%
8	Thailand	R 1,757	1.89%
9	France	R 1,497	1.61 %
10	Spain	R 1,198	1.29%
-	Other	R 40,342	43.46%
Total		R 92,817	100.00%

A breakdown of 2011 imports by product category indicates that vehicles with engines of various sizes (spark-ignition: HS 87032, HS 870322, HS 870324 and compression-ignition: HS 870332 and HS 870333) dominate the top five SA imports with a combined total value of R40 billion, representing over 43.1% of the country's total auto imports.

Table 12: Breakdown of Imports by product category - 2011 (rm)

Rank	HS Code	Product Category	Import Value	% of Imports
1	980100	oE components for motor vehicles for the transport of 10 or more persons, of heading 87.02 of vehicle mass above 2000 kg (excl. vehicles in 8702.10.10)	R 31,579	34.02%
2	870323	other Vehicles, Spark-ignition Engine, cylinder capacity above 1,500 cc but not 3,000cc	R 17,836	19.22%
3	870322	other Vehicles, Spark-ignition Engine, cylinder capacity above 1,000 cc but not 1,500cc	R 8,177	8.81%
4	870324	other Vehicles, Spark-ignition Engine of cylinder capacity exceeding 3,000cc	R 5,062	5.45%
5	870332	other Vehicles, diesel, cylinder capacity exceeding 1,500 cc but not 2,500cc	R 4,610	4.97%
Total			R 92,817	100.00%

South African GVC context

The SA auto industry dates back to the first vehicle assembly plants established in in the country during the 1920s (Ford 1924, GM 1926) (Barnes 2000). In the ensuing decades direct government intervention led to a series (six in total) of local content programmes, (beginning in 1961 and ending in 1995) that involved a combination of tariffs and import permits designed to increase the degree of local content and further encourage oEM-component linkages in South Africa (Barnes 2000, 2013). Until the mid-1990s the SA auto

industry was dominated by mainly domestically owned oEMs (operating under license to multinational oEMs) that were encouraged into 'partnership' with domestic auto component firms through local content programmes.

From its inception, the SA auto industry developed out of high levels of government protection. In its initial years, the industry was inwardly oriented and only began to liberalise in the late 1980s, with this this process accelerating in the mid-1990s. It was during this period, whilst the industry was increasingly exposed to international competition that the new post-Apartheid government attempted to make the industry more competitive and improve exports (black 2001). A phased reduction of tariffs on both final vehicles and components was introduced in 1995 amidst generalised tariff reductions prompted in part by pressure from the world Trade organisation (black 2001). The industry has since experienced massive structural change, including a transfer to foreign ownership, and significant levels of exporting and importing growth. Foreign ownership has also increased in the auto components industry where locally owned firms producing under licence agreements have been bought out by foreign multinationals or have entered into joint ventures (Barnes 2013).

The auto industry has significant concentrations in three provinces: Gauteng, the Eastern Cape and kwaZulu- Natal. The Gauteng area (including parts of the North west) represents the largest market and has the largest concentration of oEms (bmw, Ford, Nissan) and component firms. The Eastern Cape is home to three major oEms (mercedes benz in East london; Vw and General motors in port Elizabeth). kwaZulu-Natal only has Toyota SA, although it is the largest oEm in the country. SA also has an established medium, heavy and extra heavy commercial vehicle sub-sector comprising truck, bus and off-highway oEmS, and component firms. Component manufacturer capabilities are broad, including the manufacture of exhaust systems and catalytic converters, trim, harnesses, electronics, metal pressings, metal fabrications, drive train components, machined components, plastic mouldings, tyres and other rubber products, paint and glass. Table 13 below provides a brief summary of auto activity by province.

Table 13: Automotive Industry in major automotive producing provinces, 2013

Province	*oEm Assembly plants*	*medium, heavy, extra heavy commercial vehicles and bus companies*	*Suppliers (2013)*
Gauteng (incl. North West)	bmw, Nissan (incl. Renault), Ford	Freightliner, Fuso, Iveco, Isuzu, mAN, marcopolo, Navistar, peugot- Citroen, Powerstar, Renault Trucks, Scania, Tata Trucks, UD Trucks, VDl, Volvo Trucks	150
Eastern Cape	Vw, Gm, mercedes-benz	General motors, mercedes-benz, and Volkswagen	100
kwaZulu-Natal	Toyota	bell Equipment, Hino, mAN, Toyota	80

Source: AIEC 2012

Changes to SA position within the GVC structure

The SA auto industry has experienced a period of substantial liberalisation, and is now globally integrated. This is evident in relation to the domestic market, where in excess of 60% of all vehicles sold are fully imported; as well as in relation to production, where over 50% of vehicles produced in SA are exported. The industry's global integration is clearly captured in Table 14 below, which outlines sales, production and trade data for 2006 and 2011.

Table 14: SA auto industry vehicle sales, production and trade 2006-2011

Indicator	2006	2011
South African market sales	681,235	545,593
local manufacturers	374,780	233,449
Imports	306,455	312,153
SA vehicle exports	179,587	271,654
Total vehicle production	554,100	505,094
Imports as % SA market	44.99%	57.21%
Exports as % SA production	32.41%	53.78%

Source: NAAmSA (2013)

All strategic decisions within the domestic auto industry are driven and governed by multinational-owned oEMs operating in the country. The oEMs in SA have rapidly fallen into line with their developed country parent company operations, manufacturing and selling products on global, as opposed to national, imperatives. This has had enormous implications for the domestic auto component manufacturing industry, which has had to enhance its international competitiveness to sustain its output levels (Barnes and Morris 2008). The global re-alignment of the SA auto industry is exemplified in the export profile of its major vehicle production platforms, as summarised in Table 15 below.

Table 15: Major South African vehicle export platforms

oEM	SA production platform	Units Exported	Major Markets
BMW	3-Series sedan	41,866	Japan, Australia, USA
Mercedes Benz	C-Class sedan	36,413	USA
Toyota	Hilux/Fortuner	67,195	Europe, Africa
	Corolla	19,746	Europe, Africa
Volkswagen	Polo	81,155	Europe

Source: NAACAm (2012)

Domestic and Regional Developments

A strategic focus for many SA-based oEMs is the potential growth of the African market. SA has clearly been identified as the primary access point for supply into Africa. In addition, the country is increasingly being used as a shared services hub for African operations, especially for Sub-Saharan African countries. It is likely that SA will increasingly re-orient its output to African economies, as these grow in future. SA remains the only significant auto industry in Sub-Saharan Africa; although vehicles assembled in SA are effectively 'priced-out' of many

regional markets as governments in these economies permit the importation of cheap second-hand vehicles.

Production Developments

domestic oEm assembly operations have an export focus: production statistics indicate that of the 312,265 passenger vehicles produced in SA in 2011, 187,529 (60.1%) were exported and the remaining 124,736 (39.9%) supplied into the domestic market (oICA 2013). The production of light commercial vehicles on the other hand has a much stronger SA market orientation: of the 192,829 lCVs produced, 43.6% (84,125) were exported. The m&HCV producers are even more domestic market oriented. of the 27,451 medium and heavy vehicles produced in 2011, only 2.9% (803) were exported.

South African automotive policy, and potential development trajectories

The SA auto industry has been governed by the Motor Industry Development Programme (MIDP) since 1995. Tasked with supporting the domestic auto industry's integration into the global environment through a set of export and investment incentives, the mIdp has been the cornerstone of the SA auto industry's recent growth and development. The Automotive Production and Development Programme (APDP) replaced the MIDP in 2013. It runs until the end of 2020 and seeks to shift the industry's emphasis away from an export focus, to one that addresses issues of scale in vehicle production (AIEC 2012, 11). The APDP has four components:

- **Tariffs**: Vehicles imported into SA incur a 25% tariff, while auto components incur a 20% tariff
- **Volume Assembly Allowance**: SA vehicle assemblers that manufacture more than 50,000 vehicles annually received a duty credit certificate equivalent to 4% of their sales in 2013, with this reducing to 3.6% from 2015 to 2020
- **Production Incentive**: Vehicle assemblers and component manufacturers receive a duty credit certificate equal to 3-7% of their sales value depending on their levels of production activity and the extent to which they source certain local materials for production.
- **Investment Assistance**: Auto investments qualify for grant funding of 20-35% of the value of investments, depending on the depth of technology and the employment multipliers associated with the investment being made.

In addition to the positive impact of the mIdp and Apdp, a further set of policy benefits for the South African auto industry are duty free access to the United States market (via African Growth and opportunity Act (AGoA)) and the European Union market (via the EU-SA Free Trade Agreement). on a more negative note, the major challenges facing the local vehicle assembly industry relate to the small domestic (and regional) market, an under-developed auto components industry (local content in South African vehicles is around only 40%), labour market instability as evidenced through extensive wildcat and protected strikes in 2013, diminishing technical skills at the artisanal and engineering levels, rapidly increasing prices of government administered services, and municipal infrastructure and associated service deficiencies. These challenges undermine the competitiveness and standing of the SA auto industry in respect of its GVC positioning, limiting export opportunities and further eroding the position of local manufacturers in the domestic market. The growth in imports to well over 60% of the SA light vehicle market in 2012, and SA's widening trade deficit on automotive products (especially when including Chapter 98 imports) is indicative of the pressures the industry is under. Whether the industry is able to grow and contribute to the development of the SA economy therefore remains an open question.

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