

Mendez Parra, Maximiliano et al.

Research Report

Impact of geopolitical dynamics on global trade: The case of the African automotives sector

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ODI Global



Firoz Lalji Institute
for Africa



Report

Impact of geopolitical dynamics on global trade

The case of the African automotives sector

Max Mendez-Parra, Prachi Agarwal, David Luke, Noncedo Vutula, Agisanang Magooa, Inas El-Aidi, Asmita Parshotam, Eleni Iacovou and Francesca Chapman

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Abbreviations and acronyms

AAAM	African Association of Automotive Manufacturers
AFIRM	AfCFTA Implementation Review Mechanism
AIDA	Accelerated Industrial Development for Africa
AIEC	Automotive Industry Export Council (South Africa)
APDP	Automotive Production and Development Programme (South Africa)
AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AFIRM	AfCFTA Implementation Review Mechanism
AGOA	African Growth and Opportunity Act
AI	artificial intelligence
AICO	ASEAN Industrial Cooperation
AMICA	Association marocaine pour l'industrie et la construction de l'automobile (Moroccan Association for the Automobile Industry and Trade)
ASEAN	Association of Southeast Asian Nations
ASML	Advanced Semiconductor Materials Lithography
AU	African Union
AUC	African Union Commission
BRICS	Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Indonesia, Iran and UAE
BYD	Build Your Dream
CBAM	Carbon Border Adjustment Mechanism
CEO	chief executive officer
CHIPS	Creating Helpful Incentives to Produce Semiconductors
CKD	completely knocked-down
DEPF	Direction des études et des prévisions financières (Department of Financial Research and Forecasts)
DRC	Democratic Republic of Congo
EU	European Union
EV	electric vehicle
FDI	foreign direct investment
FTA	free trade agreement
GADP	Ghana Automotive Development Policy
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GVC	global value chain
HUV	Hydrogen Utility Vehicle
ICE	internal combustion engine
IFMIA	institut de formation aux métiers de l'industrie automobile (training institute for automotives industry professions)
IMF	International Monetary Fund
ITA	US International Trade Administration

Mercosur	Common Market of the South
MICEPP	Moroccan Ministry of Investment, Convergence and Evaluation of Public Policies
MIDP	Motor Industry Development Programme (South Africa)
MITI	Malaysian Ministry of Investment, Trade and Industry
NAACAM	National Association of Automotive Component and Allied Manufacturers (South Africa)
naamsa	The Automotive Business Council (South Africa)
NEV	new energy vehicle
OECD	Organisation for Economic Co-operation and Development
OEM	original equipment manufacturer
OSAA	United Nations Office of the Special Adviser on Africa
PHEV	plug-in hybrid vehicle
PIDA	Programme for Infrastructure Development in Africa
R&D	research and development
REC	Regional Economic Community
RoO	rules of origin
RVC	regional value chain
SACU	Southern African Customs Union
SADC	Southern African Development Community
SAAM	South African Automotive Masterplan
SKD	semi-knocked-down
SOMACA	Société marocaine de la constructions automobiles (Moroccan Automobile Construction Company)
the dtic	South African Department of Trade, Industry and Competition
TRIM	Trade-Related Investment Measure
UAE	United Arab Emirates
UK	United Kingdom
UMSCA	US–Mexico–Canada Agreement
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
US	United States
USTR	United States Trade Representative
VAT	value-added tax
VNOM	value of non-originating material
WEF	World Economic Forum
WTO	World Trade Organization

Executive summary

This report examines the evolving geopolitical landscape, characterised as it is by rising economic nationalism, protectionist policies and intensifying economic and strategic competition between the West and China. It assesses the implications of these dynamics for African trade, investment flows and the continent's automobile sector, providing policy recommendations for mitigating risks and leveraging opportunities.

Geopolitical shifts and their implications

The global economic order is increasingly shaped by protectionist policies and economic nationalism. Trade disputes between the US, the EU and China have led to supply chain disruptions, shifts in foreign direct investment (FDI) patterns and heightened uncertainty in global markets. These developments have significant ramifications for African economies, which are deeply integrated into global value chains (GVCs) and rely on external investment and trade partnerships.

Impacts on African trade and investment

- **Trade diversification and market access:** The fragmentation of global trade networks presents both risks and opportunities for Africa. While supply chain realignments may create new trade corridors, African economies must navigate potential barriers such as tariffs and restrictive trade policies imposed by major economies.
- **FDI trends:** Shifts in FDI as a result of China–US tensions have implications for Africa's economic landscape. While China remains a key investor in African infrastructure and industrial projects, increasing scrutiny from Western nations may alter investment flows. African policy-makers must balance these interests to maintain economic growth and stability.
- **Regional trade agreements:** The African Continental Free Trade Area (AfCFTA) presents a strategic avenue for mitigating external shocks by fostering intra-African trade and investment and reducing reliance on external markets. Strengthening regional supply chains will be critical in enhancing economic resilience.

Effects on the African automobile sector

Africa's automotives industry is a growing yet underdeveloped sector, valued at \$30.44 billion in 2021, with projections of \$42.06 billion by 2027. However, the continent remains heavily reliant on imports,

particularly second-hand vehicles, because of the high costs and limited scale of local production. The sector's historical challenges stem from fragmented economies, weak industrial infrastructure and the influx of cheaper foreign imports, which have hindered the growth of domestic vehicle manufacturing.

- **Supply chain disruptions:** The automobile sector is heavily dependent on global supply chains, including components sourced from Asia and North America. Trade restrictions and economic nationalism could impact access to critical inputs in the short term, necessitating localised production and alternative sourcing strategies.
- **Investment in manufacturing:** Africa's automotives industry is poised for expansion, with investments from both China and Western automakers. However, geopolitical uncertainties may alter these investment flows, requiring strategic policy interventions to attract and sustain industrial development.
- **Technological and regulatory adaptations:** The transition to electric vehicles (EVs) and green technologies adds another layer of complexity. Africa must align regulatory frameworks to attract sustainable investments and ensure competitiveness in the evolving global automobile market.
- **Integration into automotive GVCs:** African nations are striving to integrate into global automotive value chains by leveraging regional trade agreements and FDI. Two key models of automotive production have emerged. South Africa serves as the continent's main automotive hub, sourcing components from Europe and China while exporting vehicles primarily to Europe and other African nations. Morocco operates within the European value chain, producing and exporting vehicles largely for European markets. However, both value chains exhibit weak backward linkages, meaning there is limited sourcing of components from within Africa.
- **The role of FDI:** FDI plays a crucial role in Africa's automotives sector, with multinational companies like Renault, Peugeot, Toyota and Volkswagen investing in production facilities. However, challenges such as limited local supplier capacity, inconsistent policies and competition from imported second-hand vehicles continue to hinder deeper integration into GVCs.
- **Challenges and opportunities:** While Africa's automotives sector faces numerous obstacles, including poor infrastructure, policy inconsistencies and a lack of skilled labour, new opportunities are emerging. The AfCFTA presents a significant chance to unify markets and create regional automotive value chains. Additionally, incentives for local production, growing consumer demand and rising middle-class populations provide momentum for sectoral growth.

- **The EV revolution and two-wheelers:** EVs are slowly gaining traction in Africa, though infrastructure difficulties and high costs remain barriers to widespread adoption. Two-wheelers, especially motorcycles, dominate transport in many African cities, with increasing interest in electric models to reduce carbon emissions and fuel dependency.
- **Lessons from the Association of Southeast Asian Nations (ASEAN):** Africa can learn from the success of ASEAN's automotives sector, which achieved significant growth through strategic trade policies, local supplier development and strong government support. Implementing similar frameworks could help Africa build a competitive automotives industry.

Overall, while Africa's automotives sector has notable potential, unlocking its growth will require sustained policy reforms, infrastructure development and strategic investments to enable it to reduce dependency on imports and integrate effectively into global markets.

The key takeaways from the South African case study are as follows:

- The growing need to build capabilities domestically, regionally and continentally is front and centre for the South African Government, which is keenly aware of the need for holistic development via regional value chains. Selling this message and building the political will to implement such efforts among African partners is where possible hurdles could arise.
- The short-term future in South Africa's automotives sector will largely set the tone for the sector's longer-term growth trajectory. New policy instruments, coupled with additional incentives, identification of what new energy vehicles (NEVs) to prioritise, etc., mean the policy space is very fluid at the moment. How investors respond to these new announcements, once made, and policy efforts, once fully implemented, will determine the growth or lack thereof for the sector.
- Investment opportunities from the EU can provide an outlet for diversification and development of NEV manufacturing and related components for South Africa. However, efforts will also have to respond to the Carbon Border Adjustment Mechanism and other related measures, increasing compliance requirements for the sector and its inputs at large.
- China is big and cannot be ignored, and building a partnership approach, where possible, should be the preferred outcome. However, the relationship needs managing, and African agency over its own resources, in engaging all of its trading partners, is critical. Industry-wide responses to China's growing presence in South Africa is still being developed. The next five years will be very telling in terms of how the relationship is managed and cultivated on both sides.

- For South Africa, managing a potential loss of access under the African Growth and Opportunity Act is critical. Diversification of markets in this respect will be essential. Through the AfCFTA, the rest of the continent could offer possible reprieve if the US market is lost. However, this will not be an easy loss to recover from, and mitigating against such a possible outcome is likely the number one priority for the industry and government alike.

In Morocco, the following can be highlighted:

- The success of the automotives industry is supported by significant state subsidies and grants, an attractive fiscal policy, as well as the Industrial Acceleration Plan 2014–2020, which prioritises the development of industrial ecosystems.
- Morocco's integration into the global economy began with free trade agreements starting in the 1980s. Key agreements include those with the EU, the US and Turkey, as well as membership in organisations like the World Trade Organization and the AfCFTA. African suppliers and the African market are expected to grow in importance both as part of the Moroccan industry's value chain and as an export destination.
- Recent trade developments and protectionist measures in Europe and the US mean Chinese EV manufacturers are considering Morocco as an attractive destination for operations, leveraging its strategic location and free trade agreements.
- Morocco controls 72% of global phosphate-rock reserves, essential for producing lithium iron phosphate batteries. In 2023, Morocco signed a \$6.4 billion agreement to build Africa's largest EV battery gigafactory.
- Engaging in agreements with China could raise concerns about Morocco being used as a conduit for the production of Chinese EVs and batteries for the US and EU markets. However, it also presents an opportunity for Morocco to become an industrial hub and global trade centre. This would require pursuing a more independent foreign policy.
- While Morocco is almost self-sufficient in critical minerals needed for battery production, the ambition to become a major lithium iron phosphate battery production centre is expected to rely on sourcing graphite, which is a key ingredient for cathodes, from countries like Madagascar and Tanzania.
- The global semiconductor shortage has highlighted the need for alternative sources. Morocco is well positioned to meet this challenge through its investment in EV chip production and its support to research and development, training and skills-building.
- Morocco is committed to developing fully decarbonised automotives supply chains and leading green practices, supported by key Moroccan institutions. This is exemplified by

NamX's Hydrogen Utility Vehicle, a pioneering Moroccan hydrogen-powered car with potential for scale and exports, allowing a pivot from 'made in Morocco' to 'made by Morocco'.

Policy recommendations

- **Enhancing regional trade integration:** African nations should expedite implementation of the AfCFTA to strengthen intra-continental trade, reduce external dependencies and improve market access.
- **Strategic investment diversification:** Policy-makers must adopt strategies to attract diversified investment sources, balancing partnerships with China, the US and emerging players to ensure sustainable economic development.
- **Strengthening local supply chains:** Promoting domestic manufacturing to reduce reliance on imported components will not only spread the gains from industrial development but also enhance resilience in the face of global trade disruptions.
- **Adapting regulatory frameworks:** Aligning policies with global trends in technology, environmental sustainability and industrial standards will ensure competitiveness in the automobile sector.
- **Leveraging multilateral partnerships:** Engaging with international financial institutions and trade organisations can help mitigate risks associated with geopolitical tensions and facilitate economic stability.

Rather than an increasing number of African countries each seeking to develop its own automotive sector, strategic coordination among African policy-makers is required to integrate into supply chains, support the major production hubs and speak with one voice to external partners. An African automotives industry pact may be required to ensure a coherent approach to the development of the sector. The evolving geopolitical environment presents both challenges and opportunities for Africa's trade and investment landscape in relation to the automobile sector. By adopting proactive policies, African economies can navigate uncertainties while positioning themselves as competitive players in this sector that is so critical to its industrialisation and economic transformation.

In conclusion, the evolving geopolitical environment presents both challenges and opportunities for Africa's trade, investment landscape and automobile sector. By adopting proactive policies, African economies can navigate uncertainties while positioning themselves as competitive players in the global economic order.

1 Introduction

The global economic landscape has undergone significant transformation, particularly in the realms of trade and investment, since the 2008 financial crisis. This period of approximately 15 years reveals critical shifts that have reshaped global economic dynamics. It is important to analyse these changes to fully understand the evolving nature of global trade and investment. This is critical for Africa for two reasons. First, the expansion of global value chains (GVCs) has supported African economic expansion, and the current geopolitical dynamics and economic nationalism are changing Africa's opportunities radically. Second, the formation of the African Continental Free Trade Area (AfCFTA) is based on the objective of increasing intra-African trade and investment to support continental economic transformation, assuming a context of global economic growth and open markets. These premises are being challenged by these trends.

The focus on the automobile value chains is valuable on two fronts. First, the value chain is one of the archetypes of the producer-led value chain expansion that occurred during the 1980s and 1990s, and the changes in the global economic landscape and technology are transforming the sector like never before. Second, the sector is at the core of the African economic development strategy, with many countries (e.g. Nigeria) putting the sector at the crux of their efforts to industrialise, and a prioritised value chain as part of the AfCFTA. In this sense, understanding current global dynamics and their effects on African economies and the automobile value chain will be invaluable to understand how the AfCFTA can be supplemented and eventually transformed to account for these changes and challenges.

Section 2, 'Geopolitical dynamics', forms the core of this report's analysis of the changing global landscape. It starts by detailing the changes in global trade and investment dynamics. This section examines the transformation of the product composition of global trade, highlighting the shift from traditional commodities like oil and gas to new drivers such as semiconductors and the increasing significance of trade in services. It then analyses the main exporters and importers, identifying the evolving roles of different regions and countries in global trade, noting the rise of East and Southeast Asia and the relative decline of Europe. The section further investigates changes in trade flows, emphasising the growing importance of intra-regional trade and the impact of nearshoring and friendshoring. This includes an analysis of investment flows, detailing the reorientation of

foreign direct investment (FDI), with a focus on shifts in investment origin and destination, and the changing roles of key players like China and the US. Following this overview of the changing trade and investment landscape, Section 2 delves into the factors affecting value chains. It explores the impact of the energy transition and the increasing importance of the digital economy, both of which are reshaping global production and trade.

The report then turns its attention to the specific context of Africa and the automobile industry. Section 3 analyses the current state of the African automobile industry and the opportunities and challenges it faces. It examines the geopolitical opportunities that could foster the development of regional value chains (RVCs) in Africa, as well as the geopolitical challenges that could hinder its progress. It also presents a comparison with the growth of the value chains in Association of Southeast Asian Nations (ASEAN) countries. Section 4 presents two case studies to illustrate the growth in the African automotives industry – of South Africa and Morocco. Each cases addresses a significantly different strategy, with South Africa focusing on becoming a continental hub of production and Morocco heavily integrated into European value chains.

Finally, the report concludes with Section 5, which provides a summary of the key findings and offers policy recommendations. This section outlines policy recommendations for developing RVCs in Africa, aimed at leveraging geopolitical opportunities and mitigating challenges to foster sustainable industrial development on the continent.

In summary, this report offers a structured exploration of the evolving geopolitical landscape and its impact on global trade and investment, culminating in specific policy recommendations for the development of the automobile industry in Africa. It provides a detailed analysis of the changing dynamics of global trade and investment, the technological transformations driving these changes and the specific opportunities and challenges facing Africa in this new geopolitical context.

2 Geopolitical dynamics

This section presents a series of facts that illustrate how the global economy, especially in relation to trade and investment, has changed since the financial crisis in 2008. This gives us a period of 15 years, enough to reveal some global dynamics in trade and investment. In this sense, this section just presents some facts without entering the drivers behind them, which we discuss later.

We can analyse the changes in global trade based on what has been traded, how the composition of exporters and importers have changed and, consequently, the changes in the trade and investment flows between the countries.

2.1 Changes in global trade and investment dynamics

2.1.1 Composition of global trade

In general, analysis on global trade tends to focus primarily on the countries trading, with little on what is being traded. While this appears essential in understanding trade structures and patterns at the country level, it receives less attention in relation to global trade. This is under the assumption that, in general terms, products traded have changed little over time. Oil and gas, for example, have dominated global trade in past decades.

However, energy transition and technological change are changing the composition of what is traded. Although still very volatile, oil is losing its share against semiconductors as the most important traded product. Semiconductors have been steadily growing as new technologies (e.g. artificial intelligence, AI) are being deployed, requiring an increasing number of ever more powerful chips and electronic components. Demand for these products is expected to continue increasing as new technologies requiring these products are being developed or even traditional products are requiring chips in their composition. In 2020, semiconductors overtook oil as the top traded product.

Additionally, trade in services has gone from 20% to 25% of total trade since the financial crisis of 2008. The difficulties involved in capturing and accounting precisely the value of trade in services are well known. An increasing number of transactions involving professional, business and personal services are failing to be captured by statistics and are likely to be underrepresented. In this sense, it is likely that the share of services in total trade has

increased further as technology is facilitating the provision of small-scale services.

2.1.2 Main exporters and importers

Simultaneously, and very well documented, there have been significant changes in the countries trading. Trade has been pivoted around three global economic centres or regional ‘factories’ (Baldwin and Lopez-Gonzalez, 2013): North America (US, Mexico and Canada), Europe (EU and UK) and East Asia and Southeast Asia (China, Japan, South Korea, Taiwan, Hong Kong and ASEAN) (**Error! Reference source not found.**). The three regions accounted for 75% of global trade of both goods and services in 2023.

Table 1 Share of regions in global exports

	Services		Goods		Goods and services	
	2009	2023	2009	2023	2009	2023
Africa	2.2	1.8	3.1	2.5	2.9	2.3
EU	38.4	38.2	33.9	30.4	34.9	32.3
UK	8.0	7.4	2.8	2.2	4.0	3.5
Total Europe	46.3	45.6	36.7	32.5	38.9	35.8
China	4.0	4.9	9.5	14.2	8.3	11.9
Hong Kong	1.8	1.2	2.6	2.4	2.4	2.1
South Korea	2.0	1.6	2.9	2.7	2.7	2.4
Taiwan	0.6	0.7	1.6	1.8	1.4	1.5
Japan	3.3	2.6	4.6	3.0	4.3	2.9
ASEAN	4.9	6.8	6.5	7.6	6.1	7.4
Total East and Southeast Asia	16.4	17.8	27.8	31.7	25.2	28.3
India	2.6	4.3	1.3	1.8	1.6	2.4
UAE	0.3	2.1	1.5	2.0	1.2	2.1
Qatar	0.1	0.4	0.4	0.4	0.3	0.4
Total Other Asia	2.9	6.8	3.2	4.3	3.1	4.9
US	13.9	12.7	8.4	8.5	9.6	9.5
Mexico	0.6	0.7	1.8	2.5	1.5	2.0
Canada	1.9	1.7	0.5	0.6	0.8	0.9
Total North America	16.4	15.1	10.8	11.5	12.0	12.4
Total (trillion \$)	3,603	7,822	12,585	23,813	16,188	31,635

Source: Own elaboration based on WTO

Note: EU includes intraregional trade.

Since 2009, the participation of these two regions has barely changed, indicating a very stable structure determining trade across the world. However, there have been some changes that have affected the internal dynamics of each of them and their relationships. Five points are interesting to highlight in relation to the global distribution of trade.

First, Europe is shrinking relative to the other trade centres, particularly in goods trade. Even when the figures presented include intraregional trade, they suggest a slight reduction in the size of EU trade. Second, East and Southeast Asia’s share in both goods and services has increased. Third, the share of North America in combined goods and services trade remains unchanged, but because of an increase in the share of goods and a decrease in the corresponding to services. Fourth, Other Asia has increased its share notably, especially in services, but the increase in goods cannot be downplayed. Fifth, interesting to our analysis, the share of Africa in

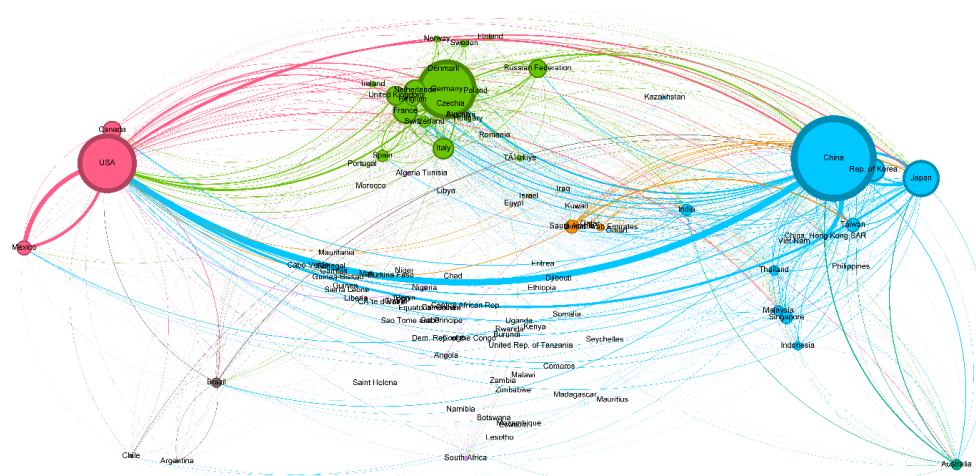
world trade exports remains low and shows a decrease in both services and, notably, goods.

In addition to these changes in each of the regions, there have been significant changes affecting their internal dynamics. In the case of East and Southeast Asia, China, the largest exporter in 2023, has gained share within Asia, while South Korea and Japan are shrinking (in relative terms). In the rest of Asia, the expansion appears driven by India and UAE. In the case of North America, Mexico has expanded its share in global trade notably.

2.1.3 Changes in trade flows

Figure 1 presents global trade flows using a geographic layout from network analysis. To simplify the analysis, we have presented the flows from the top 50 global exporters and those from African countries. For further readability, we have shown only the flows (i.e. 'edges' in network analysis terminology) that are above the average trade flow. The sizes of the exporters (i.e. 'nodes' in network analysis terminology) and the flows reflect the relative sizes in each year.

Figure 1 Main global trade flows in 2008–2010 (top panel) and 2022–2024 (bottom panel)



Source: Own elaboration based on CEPII BACI

Among other factors that we discuss later, the changes in the composition of goods traded and of exporters have generated some changes in global flows. In addition to increased trade of Russia with China and India, the most important aspect to identify is the continuous increase in intraregional trade. Flows within regions appear stronger relative to those between regions. This phenomenon – a consequence of the process of RVC formation and expansion since the 1990s (Baldwin and Lopez-Gonzalez, 2013), appears to have been reinforced by an intensive process of nearshoring and friendshoring (Gopinath et al., 2024; McKinsey, 2024).

2.1.4 Global value chains

GVCs are undergoing an unprecedented transformation, driven by a complex interplay of geopolitical tensions, domestic politics and broader economic transitions. GVCs are an integral part of international economic integration. Driven by favourable conditions, including technological advancements, trade liberalisation and China's integration into the global trade system, they deepened and complexified in the 1990s and early 2000s (Javorcik et al., 2022; Alfaro and Chor, 2023). However, GVCs are currently undergoing unprecedented transformations. In the past, disruptions such as the global financial crisis, automation and extreme weather events have prompted concerns about supply chain resilience (The Economist, 2022). Yet today, the resilience of supply chains is considered at least as important as their economic efficiency (The Economist, 2024). This growing attention to risk and resilience, coupled with other key drivers, has led to notable shifts in GVC configurations.

Geopolitics are clearly influencing how decision-makers perceive value chains and has made them more concerned about mitigating risks. The growing China–US rivalry, the war in Ukraine and the Gaza–Israel conflict have exposed dependencies and increased uncertainty. These challenges are exacerbated by tensions surrounding key chokepoints for global transport. The Covid-19 pandemic has also highlighted supply chain vulnerabilities (Barbieri et al, 2020; Broecke, 2024; Gopinath et al., 2024). As a result, decision-makers are increasingly concerned about risk mitigation and resilience, alongside traditional efficiency considerations (Aiyar et al., 2023; Alfaro and Chor, 2023; Broecke, 2024). This shift is captured in the concept of 'de-risking', which involves realigning trade relationships – either broadly or within specific sectors – to mitigate risk (Cerdeiro et al., 2024). This aligns with widespread references to corresponding strategies such as 'friendshoring', 'nearshoring' or 'onshoring'.

Geopolitical tensions interact with domestic politics and longer-term transformations, notably the green transition and the digital/AI revolution. Critical minerals, which are essential for green and digital technologies, as well as semiconductors and chips – whose supply chains are distributed across geopolitical rivals – are central to these dynamics. The two transitions are increasingly interconnected, in terms of both the products needed to sustain them and the way they are framed in domestic policies.

The interactions between these dynamics have triggered a range of policy responses. The US has been at the forefront. While the escalation of China–US tensions can be traced back to US tariffs imposed under the Trump administration in 2018, the rivalry has deeper roots, and has become increasingly centred on technology, evolving into what has been described as an 'American techno-nationalism focused principally on China' (Bateman, 2022; see also

Shivakumar et al., 2024). The US has imposed export restrictions on semiconductors to China to limit its access to critical technologies. It has also sought to promote domestic industries with policies such as the CHIPS (Creating Helpful Incentives to Produce Semiconductors) and Science Act (2022) and the Inflation Reduction Act (2022).

China has responded with a mix of targeted retaliatory measures and efforts to bolster its domestic technology sector (Arcesati et al., 2024). It has introduced export licensing requirements for rare earth metals such as gallium and germanium (2023) and launched investigations into US companies operating in China. Building its earlier Made in China 2025 (2015) and Dual Circulation (2020) strategies, it is intensifying efforts to catch up with the US on semiconductors (Arcesati et al., 2024; The Economist, 2024b).

The EU is pursuing 'strategic autonomy', which in recent years has extended to its foreign and trade policies, and is seeking to mitigate supply risks in an integrated way (Amighini et al., 2023). Its NextGenerationEU package, a plan for post-pandemic recovery, resilience and employment, targets both the green and the digital transitions and aims to reduce dependency (European Commission, n.d.). In April 2024, it launched the Minerals Security Partnership with the US and resource-rich partners (European Commission, 2024).

However, GVCs are also driven by corporate decision-making, which does not always align with government policies. Although geopolitics lead to uncertainty and policies create incentives for companies to adapt their sourcing strategies (Javorcik et al., 2022), companies are also driven by longstanding economic factors such as transport costs, automation and wage differentials. As a result, it can be difficult to distinguish the influence of policy-makers and companies in shaping GVCs (Broecke, 2024).

Companies are using different strategies to balance efficiency and resilience. Surveys show that firms adopt a variety of strategies and in some cases do not align with government rhetoric. This reflects the fact that moving to new markets may bring regulatory and cultural challenges (The Economist, 2024a), as well as issues related to quality and compliance (Amighini et al., 2023). The case of ASML (Advanced Semiconductor Materials Lithography), a Dutch company that is the world's leading supplier of lithography systems for producing semiconductors, illustrates these complexities. Amid US pressure to restrict exports to China, ASML's CEO has highlighted the costs of decoupling (Haeck, 2024). The company recently announced plans to 'upgrade' a 'reuse and repair' centre in Beijing this year (Feng, 2024).

These complex interactions are driving shifts in GVCs. Despite the prevalence of de-risking policies and the surge in protectionist rhetoric across many countries, evidence suggests trade realignment is occurring, rather than deglobalisation (as a reduction in global trade relative to gross domestic product, GDP) (Alfaro and Chor,

2023; Attinasi et al., 2024; Gopinath et al., 2024). Contrary to expectations of nearshoring or onshoring, the distance between trading partners has increased (Seong et al., 2025). These new realignments are context-specific, with sector-specific relationships emerging. While some of these align with geopolitics (Attinasi et al., 2024; Conteduca et al., 2024; Seong et al., 2025), this is not the case for all countries (Seong et al., 2025). While China, Germany and the US have diversified their imports, the import sources of other countries, such as ASEAN countries, Brazil and India, have become more concentrated (Seong et al., 2025).

US decoupling from China is advanced but remains complex. Since 2017, US imports from China have declined across nearly all sectors (Alfaro and Chor, 2023; Seong et al., 2025). In 2023, Mexico overtook China as the US' main supplier of goods and is a key supplier of automobile parts (ibid.), though Trump's recent tariff increases may introduce new uncertainties. The US has also expanded trade with ASEAN, particularly Vietnam, in sectors such as electronics and apparel and textiles (ibid.). US companies have also shifted production to India and Thailand (Haley, 2024). China has increased trade with ASEAN, as well as Brazil, Russia and developing economies (Seong et al., 2025). Studies suggest that ASEAN, and Vietnam in particular, has become an intermediary between China and US trade (Conteduca et al., 2024; Seong et al., 2025). As a result, direct trade between the two sides has declined, but their supply chains have become longer and remain intertwined.

The EU has focused on decoupling from Russia but remains dependent on China. The war in Ukraine has triggered EU decoupling from Russia, particularly in the energy sector (Attinasi et al., 2024; Mancini et al., 2024; Seong et al., 2025). Although the U.S. has become Germany's largest trading partner in goods (The Economist, 2024b), the EU remains dependent on China for key products needed for the green transition, such as lithium batteries, electric vehicles (EVs) and photovoltaic cells (Attinasi et al., 2024).

Studies consistently argue that fragmentation leads to efficiency and welfare losses (Javorcik et al., 2022; Gopinath et al., 2024). Analysts warn that countries may be insufficiently prepared for industrialisation, consumers are likely to bear the costs of greater economic inefficiency and shifts are creating longer and more fragile, rather than more resilient, supply chains (Alfaro and Chor, 2023; Gopinath et al., 2024).

2.1.5 Investment flows

As in the case of trade, there has been important reorientation of the global flows of FDI. Although capturing total FDI only partially, analysis of greenfield investment flows suggests important changes in relation to which countries are receiving or generating such investment.

It is important to highlight the nature of the data under analysis. Not only does the analysis focus on greenfield investment and not consider other important types of investment flows, such as mergers and acquisitions and loans between subsidiaries and headquarters, but also it is based on announced investments. This is likely to bias data against those countries whose companies have no tradition of announcing investments or those with less transparent media or informational practices. Also, announced investments may fail to materialise, or they may end up being smaller than was originally announced.

On the origin of investment, two features are of note. First, Europe, particularly the EU, is reducing its share as an investor. Second, Asia as a whole is now the origin of one-third of global greenfield investment flows. The main investing countries are China, South Korea, Japan and UAE. Flows originating from China appear to be underestimated, based on other sources collecting data on total FDI.

As the information that has China as a destination of investment is likely to have originated in other countries, there is a higher degree of confidence with respect to it. It is notable to highlight the dramatic fall of China as a destination for greenfield investment, driving the fall of East and South Asia. In fact, for the first time, in 2022 net FDI in China was positive. The other dramatic change is the significant increase of North America, especially the US, as a destination for greenfield investment for the whole world.

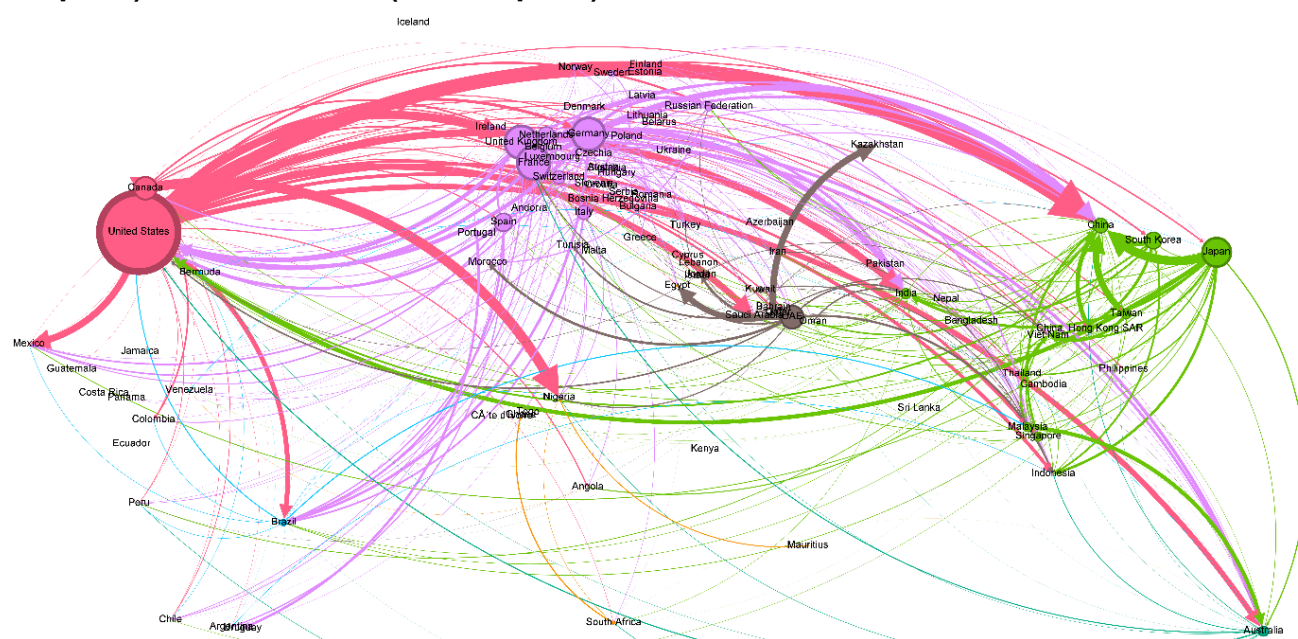
Table 2 Origin and destination of announced greenfield investment flows (share in %)

	Origin		Destination	
	2008–2010	2022–2024	2008–2010	2022–2024
Africa	1.2	0.5	9.5	12.3
EU	32.1	27.6	13.9	17.5
UK	7.3	6.5	6.4	6.3
Other Europe	5.0	4.3	6.9	3.0
Total Europe	44.3	38.4	27.2	26.9
China	2.8	7.6	10.4	2.5
Hong Kong	1.3	1.8	0.6	0.3
South Korea	3.1	4.9	0.6	0.9
Taiwan	2.0	3.8	0.4	0.3
Japan	6.0	4.4	0.7	1.7
ASEAN	4.2	3.5	11.7	10.1
Total East and Southeast Asia	19.4	26.1	24.4	15.7
India	2.0	2.0	5.1	6.5
UAE	3.9	5.9	1.4	1.3
Qatar	0.8	0.7	0.9	0.8
Total Other Asia	6.7	8.6	7.4	8.6
US	17.5	16.5	6.2	13.7
Canada	3.3	3.1	1.6	2.3
Mexico	0.1	0.2	2.5	3.1
Total North America	20.9	19.8	10.4	19.1
Total Rest of the World	7.4	6.6	21.1	17.5

Source: Own elaboration based on fDi markets

As a result of this, there have been significant changes in the direction of investment flows (Figure 2). First, the US has reduced notably its investments into China and increased those going to India. Second, greenfield investment from Asia in the US has increased dramatically, particularly from South Korea, Japan and Taiwan (where investments in the production of semiconductors have played a key role). Third, China, which used to be an important destination for South Korea and Japan, is now an important investor in the rest of Asia and Middle East. Fourth, Europe has reduced its investments in China and is increasing its flows into India and North and South America.¹ Finally, UAE has become an important investor in Africa.

Figure 2 Greenfield investment flows in 2008–2010 (top pane) and 2022–2024 (bottom pane)



Source: Own elaboration based on fDi Markets

2.1.6 Technological changes and the digital economy

Finally, in the past 15 years, there have been radical technological changes that have affected products and production processes and, consequently, what and how trade is conducted. First, the energy transition has led to significant technological changes in goods traded, especially automobiles. The emergence of hybrid and electric vehicles has, and is, reconfiguring these value chains in technological and business terms. Energy transition is also affecting other products and value chains, but the impact has magnified in the automobile sector by virtue of its importance in GVCs.

Second is the increased importance of electronics as inputs of value chains and as components of products. Although electronic products have existed for almost more than 80 years, in recent decades a

¹ Europe investment in South America appears to be explained primarily by a single project between the Netherlands and Argentina for \$30 billion in 2024, which was the largest announced project for that year in the database.

massive expansion in the utilisation of electronics components and chips in a wider range of products beyond electronic goods is visible (Miller, 2022), for example in automobiles. On top of this, the rise and massification in the use of AI has created further demand for the development of more powerful and faster chips and components, exploiting global demand for semiconductors. The global disruptions generated by different issues affecting the availability of these products during the Covid-19 pandemic illustrate their reach and their impact in multiple value chains (Goodman, 2024). As we will see, they are at the centre of the conflict between China and the US.

Third, the expansion of the digital economy has allowed the notable expansion of trade in goods via e-commerce through global (Amazon, E-Bay, AliExpress) and regional (Mercado Libre, Jumia) platforms as well as other dedicated or niche spaces to trade in goods. The global lockdowns during Covid-19 generated an acceleration in the adoption of this trade modality across the world and in Africa (Lemma et al., 2022).

At the same time, the digital economy has boosted, in addition to the provision of personal services such as education and in contrast with the goods trade, the provision of a wide range of business and professional services to firms. Individual providers in accounting, engineering, computing, etc., facilitated by digital communications and digital working and sharing tools, are increasingly providing services to firms located across the world. Although data are scant, this is producing a further expansion of value chains, or a 'third unbundling' (Baldwin, 2016) in relation to the provision of services.

2.2 What is behind these trends?

As usual, there are a series of factors affecting economic structures and trends. Some of them are sequential (i.e. one generating or leading the other); others, although independent, have compounding effects that are mutually reinforcing. In this section, we focus on just a few of the most relevant issues affecting the global economy, trade and, more specifically, value chain formation.

There is, however, a general thread that summarises the effects on global trade and value chain formation. Some of the critical underlying principles and forces behind the expansion of GVCs in the late 1980s and 1990s are weaker, or they are directly not operating. While communications and technology have continued to push for further value chain integration and expansion, the process of elimination and reduction of trade barriers has halted and, in many cases, has moved in the reverse direction. Moreover, the spirit of global cooperation that accompanied GVC expansion has given space to a much more confrontational and suspicious attitude among countries. This is reflected not necessarily in the prioritisation of national interests, which is always a principle underlying policy-making, but in achieving these objectives regardless of the interests

and costs imposed on other countries and the international community.

Value chain formation, consequently, has become notoriously affected by this change in policy framework. Therefore, the expansion, formation or transformation of value chains is no longer driven by efficiency-seeking motives. In the past 10 years, there has been a different logic behind value chain formation. Although the just-in-time principles of productive organisation and reduced communication and transportation costs continue to be powerful factors behind the outsourcing of tasks along the value chain, political and geopolitical drivers are critical to determining the location of these tasks. In some cases, these tasks are increasingly being located in politically closer countries (i.e. friendshoring). In other cases, whenever it is possible, these tasks are locating at home (i.e. onshoring). The disruptions generated by the lockdowns during the Covid-19 pandemic highlighted the convenience of locating production stages geographically closer (i.e. nearshoring).

In this section, we propose two main drivers of this process. First is a more confrontational and complex geopolitical space. Second is a generalised rise of economic nationalism and, consequently, of protectionism across the world.

2.2.1 Increasing economic and geopolitical frictions

Beyond the instability generated by conflicts such as the Russian invasion of Ukraine, the spirit of cooperation and openness that has been prevailing since the end of the Cold War is no longer the norm. Growing rivalry between the West, particularly the US, and China has led to disengaging or decoupling from rivals.

The geopolitical tensions between countries are framed within two global races: (i) a competition between countries for access to and control and use of critical technologies and inputs; and (ii) a growing tension associated with control of global transport chokepoints.

Control of technologies and inputs

Not only is there a lack of cooperation between countries but also, in many cases, there are deliberate efforts to undermine the abilities of countries to access certain technologies and economic development.² This is evident in the case of electronics and semiconductors. Given the dual use of these products in civil and military applications, there is increasing control over their exports to rival economies. Semiconductors are also critical for the ongoing AI revolution, and the West and China are aiming to dominate this technology. The US, for example, has restricted or directly banned exports of semiconductors or investment in their production in certain countries, notably China. Moreover, given the widespread use of US

² These policies have their genesis in the so-called 'third offset' strategy, outlined by the US Department of Defense in 2014 (Miller, 2022).

technology, the control applies also to exports of third countries to China. The US is also removing passports or green cards of people working for Chinese manufacturers of semiconductors (Bluhm, 2022). Moreover, in anticipation of a potential conflict in the East and South China Seas, the 2022 CHIPS and Science Act aims to relocate a significant part of this industry from countries such as Taiwan and South Korea to the US, driving the rise in FDI from these countries in the US, seen earlier. Although the new Trump administration has denounced the CHIPS and Science Act, the threat of imposing tariffs is pursuing a similar objective (Tedford, 2025).

In addition, countries are increasingly concerned about their access to critical minerals and, at the same time, blocking or restricting their rivals' access (Mendez-Parra, 2024a). Minerals critical for the energy transition (such as those used in the production of batteries for EVs), or rare earth minerals (used in multiple military applications) are in the spotlight. In this case, it is China, with its vast deposits of lithium and rare earths, that seems to be in control (it has introduced several export bans on many of these minerals; Reuters, 2023) and making the US react (Todd-Lopez, 2024).

The US reaction appears to be articulated on two fronts. First, although with unclear prospects, given the reduction in US development assistance, the US has aimed at securing access to copper, cobalt and other minerals and reducing China's influence in Africa through the funding of infrastructure for the Lobito Corridor in Angola but also reaching Zambia and DRC. Second, more recently, is through a very aggressive and expansionist attitude, reflected in the potential annexation of Greenland by the US and the still under negotiation, and conflictive, agreement with Ukraine to support a ceasefire in the conflict with Russia in exchange for access to its rare earth minerals.

Control over global transport bottlenecks

Geography and geopolitics have created a series of global bottlenecks, or chokepoints, of significant relevance for transport and, consequently, global trade. These include a relatively limited list of shipping channels and straits that see significant volumes of shipping. For example, 30% of global container traffic traverses the Suez Canal. The critical chokepoints are the Suez and Panama Canals and the Malacca Strait, which are narrow and have very high vessel traffic. To this list, we need to add the Bering Strait and, for military reasons, the Denmark Strait between Greenland and Iceland.

In addition, and existentially critical for China, is its encirclement in the East and South China Seas. China may easily be blocked in its access to the Pacific and the Indian Ocean by a combination of a very narrow and heavily congested Malacca Strait (with the Sunda Strait not being a reliable option, given its shallow waters) and the string of US allies (some of them with US military presence) that can make such access impossible. These allies include South Korea,

Japan, Taiwan and the Philippines. Although the effective control of Taiwan by China is an objective embedded in a nationalistic rhetoric (Jin, 2023), it is also functional, together with the establishment of artificial islands and the sovereign claim over the Spratly Islands, to break the encirclement of China.

Similarly, the US focus on Chinese ownership of the ports in the Pacific Ocean and the Caribbean Sea mothers of the Panama Canal illustrates further the point about the control of these chokepoints. For the US, security and control of the Panama Canal are critical not only as a significant share of US domestic traffic goes through the canal but also because many of its navy assets make use of it. Chinese control of these ports may challenge the transit of these US vessels as well as providing China with very valuable intelligence.

While securing Greenland would give the US access to its critical minerals, it would also provide control over the Denmark Strait, seen frequently by military experts as an easy route for Russian navy vessels into the Atlantic Ocean and to the US East Coast. Moreover, the future (by virtue of climate change) opening of a permanent, non-reliant on icebreakers, shipping route through the Arctic will increase traffic from East China to the US East Coast and Europe, seeking to avoid the congested Suez Canal and also the longer route via the Cape of Good Hope. Interestingly, the opening of this shipping route would create another chokepoint and potential source of conflict, this time in the Bering Strait and the Aleutian Islands. This potential conflict, likely to involve Russia and the US, will have China as a primary interested party in its outcome.

Conflicts in any of these points will bring significant disruptions to the global economy and value chains. Indeed, the global economy has experienced their effects recently. First, the blockage generated by the Ever Given carrier in 2021 in the Suez Canal led to significant delays and higher costs for firms and consumers generated by the need to bypass the canal through use of the Cape of Good Hope. Also, regional tensions around the Suez Canal have increased the risk of transit. This also has led to an increase in the transit of vessels via the Cape of Good Hope, with figures increasing sharply since October 2023 as a result of attacks by the Houthi militia in the canal.³

Second, the strict lockdowns during the Covid-19 pandemic in China affecting the operations of factories and ports provided a simulation of the impact in the global economy of a conflict in this region that blocks goods and inputs from this region (Goodman, 2024). These events reinforced policy-makers and officials' perceptions about risks associated with the operation of GVCs.

³ In fact, early in 2024, there were more daily transits through the Cape of Good Hope than through the Suez Canal (OECD, 2024).

2.2.2 Protectionism and economic nationalism

Expansion of GVCs and trade growth during the 1990s and in the first decade of the 2000s occurred in parallel to, as well as benefiting from, a decrease in tariff and non-tariff barriers motivated by policy reform (e.g. the Washington Consensus), implementation of the Uruguay Round and formation of the World Trade Organization (WTO), the proliferation of free trade agreements (FTAs) and technological developments such as the internet and the improvement of communications that notoriously reduced the transactional and monitoring costs of value chains. This combination of factors was behind the expansion of GVCs and, in more general terms, globalisation (Baldwin, 2016).

However, most of these liberalisation forces have declined in strength, stopped operating or, in some cases, been directly reversed. Particularly since the financial crisis of 2008, there has been a gradual but steady increase in measures aimed at directly restricting trade and measures that either prevent competition or provide an unfair competitive edge to domestic producers and exporters. Beyond import measures, countries are increasing the use of subsidies and other stimulus measures to sustain dying and inefficient domestic industries at the expense of the competitiveness of other countries. Figure 3 shows the number of different types of measures, both discriminatory and liberalising, adopted by countries across the world since 2010.

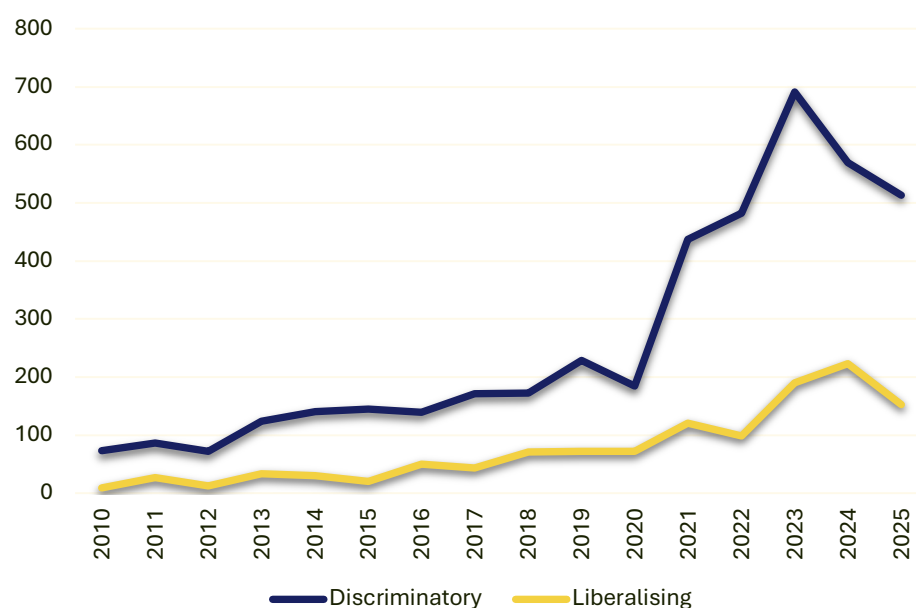
The US Inflation Reduction Act is an example within an increasing number of measures aimed at strengthening domestic production and developing or sustaining industries. Moreover, to address the consequences in markets of different events such as the Covid-19 pandemic and the Russian invasion of Ukraine, countries are increasingly introducing export restrictions or bans to secure domestic supply.

Geopolitical tensions are also partially behind the rise in protectionism. This includes the US and allies excluding Chinese technology companies (e.g. Huawei) from communications networks; safeguards applied to imports from China of EVs in the US and the EU; and the race for critical minerals by establishing partnerships with source countries. But beyond these geopolitical tensions, protectionism and economic nationalism appear also to respond to internal political demands or challenges to the status quo.

Moreover, facing apparent unfair competition or support practices, countries are more willing to make use of retaliatory trade measures than before. Of course, the inoperative WTO dispute settlement mechanism has not contributed. But this readiness and willingness to block imports and subsidise industries goes hand in hand with the current geopolitical tensions.

In addition, under the argument of addressing climate change or other environmental issues, countries such as those of the EU are introducing a series of trade-restricting measures. These include the Carbon Border Adjustment Mechanism (CBAM) and restrictions on the importation of agricultural products produced on deforested land.⁴ Although these measures may affect only a limited number of firms and sectors,⁵ or affect production from a certain point of time,⁶ they open the policy opportunity for countries to design and dress protectionist measures using the language of different palatable social and global outcomes.

Figure 3 Global discriminatory and liberalising measures



Source: Own elaboration based on Global Trade Alert

These industrial and trade measures restricting trade and foreign competition have affected the performance of value chains. Firms, rather than sourcing inputs and, in many cases, services from the most cost-effective countries, are forced by these measures to seek domestic and less cost-effective providers. Moreover, these restrictions have also affected FDI flows, particularly when they are imposed by the country of origin, seeking to prevent resources being allocated away from the domestic economy or in rival economies.

2.2.3 The new US trade policy

Most of the protectionist measures adopted across the world rely primarily on a combination of arbitrary non-tariff barriers, measures restricting foreign competition and subsidies. In general, tariffs,

⁴ The UK is considering introducing its own CBAM (HM Revenue & Customs and HM Treasury, 2024).

⁵ The CBAM covers only aluminium, steel, cement and fertilisers. The impact on trade depends on the carbon content in their exports, which depends, eventually, on how electricity used in their production is generated. The sectors tend to be dominated by large corporations, many of them global.

⁶ The EU Deforestation Directive restricts the imports of a wide range of agricultural and forestry products produced on plots of land deforested after December 2020.

although not being reduced, have remained relatively unchanged. The arrival of Donald Trump in the US Government in January 2025 has accelerated the ongoing protectionist trend by adding tariff increases to the mix. The new US trade policy is deeply rooted in boosting manufacturing production, on the one hand, and fixing some perceived issues in the multilateral trade system, on the other (Office of the USTR, 2025). The policy appears for the moment to be instrumented primarily through increases in tariffs targeting some specific countries (Canada, China and Mexico) and some specific products (steel and aluminium).

The US Government is analysing the case for extending tariffs to all partners based on principles of reciprocity. This would imply that the US will not rely on the globally accepted non-discrimination behind the most-favoured nation principle. Instead, the US will apply duties based on the height of the tariffs that US exports have faced in each partner. It is unclear how the US is going to handle the technical and operational implications of dealing with the high number of country-product combinations. Nor is clear how it will deal with the differences in tariff nomenclatures between countries.

Additionally, the US is considering applying additional duties to those countries (almost all countries) that rely on a value-added tax (VAT) and offer rebates for VAT paid on inputs by exporters. Even when the rebate offered puts exporters in VAT countries in the same situation as US exporters, who do not pay sales taxes on inputs, the new US Government considers this rebate an export subsidy and an unfair practice.

Of course, as the US advances on these lines, other countries are forced in many cases to retaliate. This is unfortunate, as retaliating with tariffs is, in general, not the best policy response to tariffs imposed on exports. This is because, in addition to exporters being affected by the tariffs imposed by the US, the retaliation damages consumers as well as other industries. However, countries often have to adopt these measures in the absence of other alternative retaliatory measures, or under internal domestic political pressure. Unfortunately, the US is also likely to retaliate further, leading to the feared trade war between partners.

No matter the outcome of all these policy announcements, the constant changes in policy and uncertainty not only create instability in financial markets but also lead to the postponement and re-evaluation of investment decisions and trade operations. This instability affects the US economy but also, more fundamentally, investment and trade from the rest of the countries of the world.

2.2.4 The crisis of multilateralism

Since 1947, the multilateral trade system has been structured around the spirit of international cooperation. The goal of establishing a system of principles and rules was set up to avoid trade wars like

those of the 1930s. Although originally incomplete, and unsatisfactory for many developing countries and recently independent countries because of the lack of disciplines applied to trade in agricultural products, the General Agreement on Tariffs and Trade (GATT) constituted a significant milestone. It aimed at establishing an environment of cooperation and promoting dialogue and resolving disputes through correction rather than punishment.

Over the decades, the GATT, through a succession of negotiation rounds, was able to gradually address some of its original omissions or mistakes and some of the new challenges. The Tokyo Round of 1979 managed to address the concerns of the newly independent countries and the continuation of the preferential access into their original colonial powers. In 1994, after eight years of negotiation, the Agreement on Agriculture was included in the GATT.

The cooperation spirit was reinforced in 1995 with the creation of the WTO, built on three key pillars: (i) a rule-based system, continuing the GATT, that all members adhere to, aimed at achieving trade fair practices; (ii) a mechanism to resolve disputes arising from interpretation of the rules, based on correcting and not punishing countries; and (iii) a shared goal to advance trade liberalisation, reducing further existing barriers. The launch of the Doha Round in 2001 brought renewed hopes of addressing further inequalities and reducing trade barriers. These hopes did not materialise.

Currently, all the critical foundations of the WTO either are inoperative or exhibit significant issues in their operation. As noted, countries are increasingly making use of trade-restricting measures that, if not directly incompatible with the WTO agreements, violate their spirit. The dispute settlement mechanism has been unable to operate fully in the past seven years as the US has refused, under both the Trump and the Biden administrations, to designate a member for its Appellate Body. Except for some successes through partial scope agreements (e.g. the Trade Facilitation Agreement in 2015), the WTO has continued with the same provisions and levels of protection from 30 years ago. In fact, members have failed since 1998 to agree on a definite framework for digital trade, relying instead on the recurrent renewal of the e-commerce moratorium.

With an increasingly diverse agenda, and frequently focused on discussing some current hot crisis, international political fora such as the G20 are also struggling to agree in addressing the problem. This in part because the underlying principles of free trade and fair practices are also being reevaluated as countries are reconsidering their industrial or general national policy (e.g. CBAM) and the WTO appears, in their view, to be constraining their action (Office of the USTR, 2025). Moreover, disputes can be resolved more quickly and effectively by appealing to bilateral mechanisms, including persuasion and, sometimes, coercion.

Moreover, the BRICS group is increasingly veering towards establishing a wide range of alternative institutions aimed at giving more decision-making power to emerging economies and less to Western countries.⁷ This includes institutions such as the New Development Bank and the Contingent Reserve Arrangements, which provide similar instruments to those of the International Monetary Fund (IMF). Although replacement of the WTO is not on the cards for the BRICS, some of their members have expressed significant dissatisfaction with many of the WTO practices and, in some cases, have challenged the operation of the system.

It is unclear what the plans of the US Government with respect to the WTO and the world trade system are. The new US Trade Policy makes significant criticisms of the WTO, pointing to issues such as imbalances in the commitments of partners and the perceived unfairness of the dispute settlement mechanism with respect to the US and of the special and differential treatment provisions. Many of these objections have been raised by the US on multiple occasions, especially during the first Trump administration, and documented by its trade representative (Lightzinger, 2023).

This is not the first time these issues, on this occasion raised by the US, have been discussed. The use of special and differential treatment provisions by China and some upper-middle-income countries has been criticised (Lopez-Gonzalez et al., 2011a) and solutions have been proposed (Lopez-Gonzalez et al., 2011b). However, it is the first time that a large country and an architect of the current system has presented such a significant challenge.

Finally, not only the multilateral trade system is in crisis. Bilateral trade relationships and their underlying legal architecture have also been challenged – or directly ignored. The tariffs the US is applying on imports from Canada and Mexico⁸, partners in the US–Mexico–Canada Agreement (USMCA), constitute the clearest example.

2.3 The impact on Africa

This section focuses on assessing how these dynamics are affecting trade, investment and value chain formation in Africa. This will help provide a general overview of value chain formation in the continent, aiming at providing some context to the discussion on how specifically the automobile value chain in Africa will be affected.

By 2050, the African population will reach nearly 2.5 billion, accounting for 25% of the global population (Stanley, 2023). Each year, nearly 46 million children are born in Africa, or the equivalent of 120,000 per day. In 20 years, close to that number will enter the

⁷ Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Indonesia, Iran and UAE.

⁸ At the time of writing, the US has announced, although not yet implemented, a tariff of 25% on imports from Canada and Mexico from 2 April 2025. Despite the existence of the USMCA, the US has extended tariffs applied to all countries on steel and aluminium to these countries since early March.

African labour force each day. Creating that number of jobs will be a daunting challenge for leaders and politicians.

Considering the evolution of the global population, and with global regions maintaining current productivity per worker, Africa will represent no more than 6% of the global economy (up from the current 3%). This is very short of their share in the global population and much shorter if the share of the working population is considered. This is likely to constitute a catastrophe for the continent and for the global economy.

Consequently, Africa will be able to generate jobs for everyone and to increase incomes only if it manages to transform its economy. Not only this is critical for Africa's future, but also, in a context of declining populations, the global economy will depend on Africa becoming an economic engine that can support the rest of the world, in the same way that other regions have played the role in the past.

Increasing the participation of African firms in GVCs and expanding and developing African-led value chains is at the centre of economic transformation and development in Africa. This should involve upgrading participation in current value chains (e.g. agro products) but also expanding and intensifying African involvement in critical GVCs such as electronics and automobiles.

2.3.1 Low impact

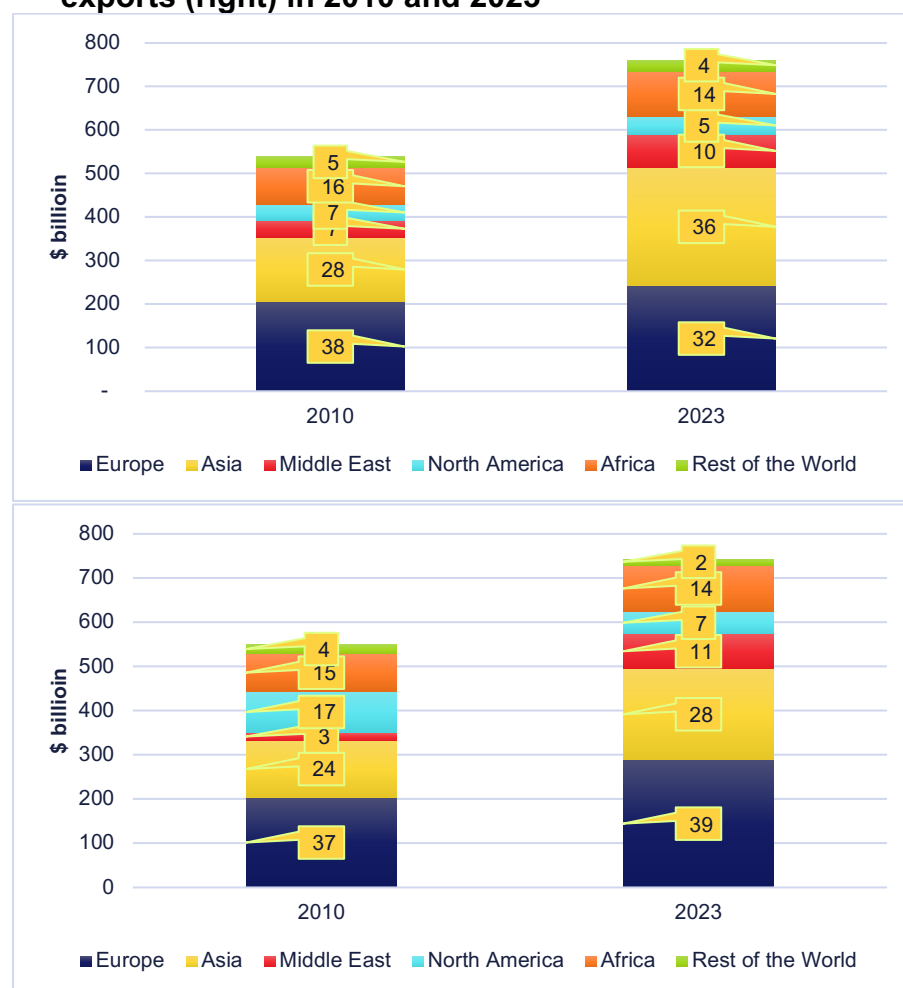
Not all the dynamics described above affect Africa in the same way; nor, of course, do they affect each individual African country in the same way. It is possible to classify the different issues that are affecting the global economy depending on their perceived impact in Africa. Whether an issue affects African trade and investment strongly or not will depend on, among other things, how African trade is exposed to the origin of the problem. This origin depends on the structure of trade in terms of partners and products being traded.

Since the financial crisis in 2008, Africa has increased its trade in terms of exports and imports with both Asia and the Middle East (Figure 4), particularly trade with China and India, and decreased it with South Korea and Japan (see tables in Appendix 1 for country disaggregation). Africa has reduced its dependence on imports from Europe it remains increasingly reliant on its export demand. Europe is accounting for 23% of total African exports.

But it is notable how Africa is particularly decreasing its reliance on trade with North America, whose share in Africa's exports has dropped from 17% in 2010 to 7%. This enables a first approximation of the effect of current US policy in Africa. Except for particular cases of slightly high trade exposure (e.g. West Africa) or political conflict with the US Government (e.g. South Africa), it is not expected that the higher tariffs announced by the US Government will impact

African exports to the US. In general terms, the low share of exports to the US suggests a relatively low impact.

Figure 4 African origin of imports (left) and destination of exports (right) in 2010 and 2023



Source: Own elaboration based on BACI

Note: Callouts indicate percentages with respect to totals.

Of course, and as mentioned, the situation could be different for some countries. In particular, uncertainty around the renewal of the African Growth and Opportunity Act (AGOA) by the US Congress, to expire at the end of 2025, is of concern for certain African countries and for some sectors (notably agriculture and textiles and garments). It is likely that the end of preferential access to the US will prove fatal for the textiles and garments sector in these countries.

Intra-African trade remains low. Although Africa countries could represent up to 25% of the exports of East Africa, on average, for Africa as a whole, exports or imports to the rest of the continent of the average African country remain locked at 14%. Of course, these shares are likely to increase thanks to the AfCFTA, which is expected to bring down trade barriers and increase cooperation within the continent. However, the impact of the AfCFTA will depend on the

successful implementation of its commitments and provisions. This process is ongoing and not captured by the available data.

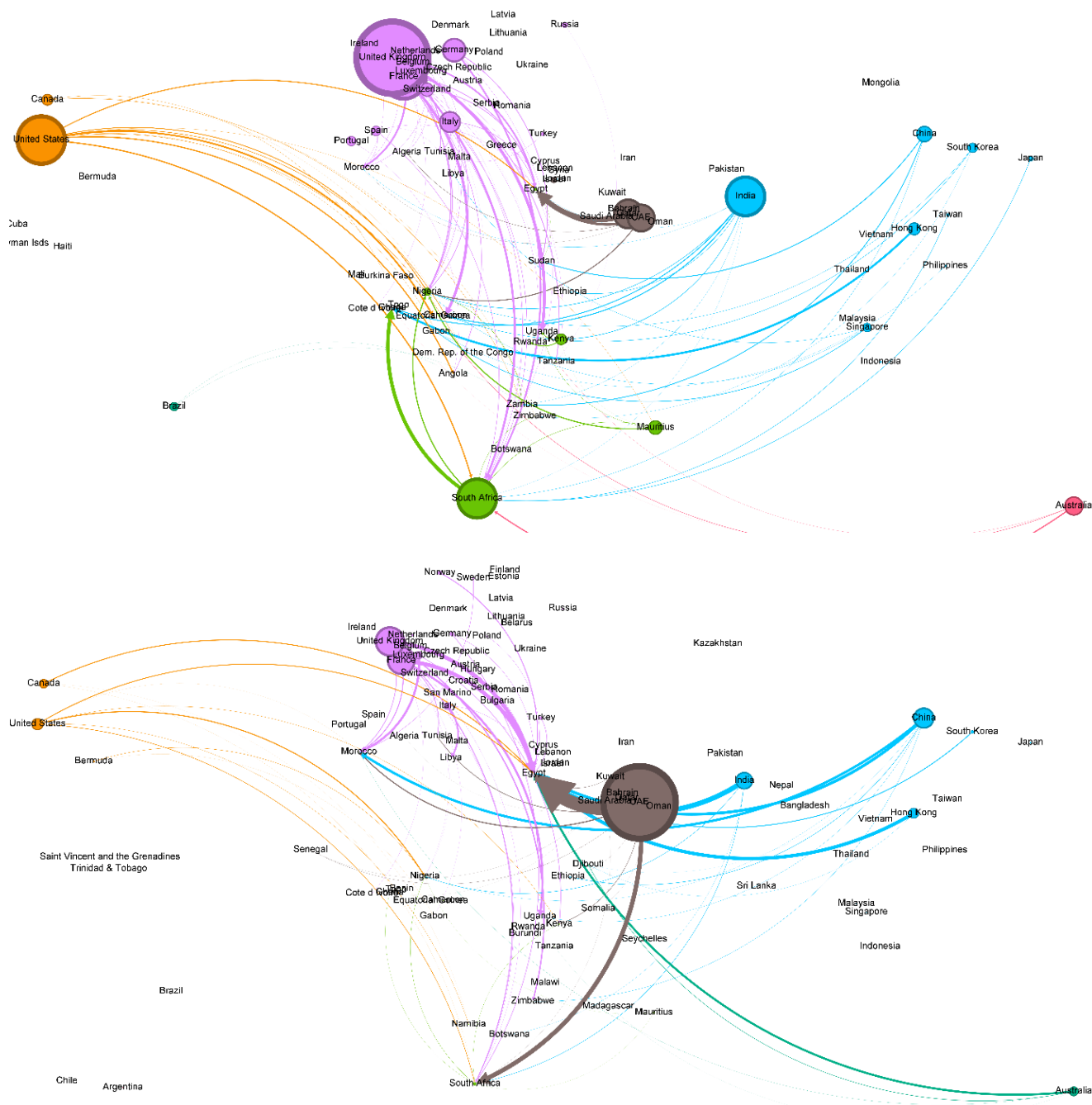
Global geopolitics have had a deeper impact on investment flows into and within the continent (Figure 5). There has been a marked change in the origin and destination of the flows. In terms of origins, there is a marked reduction of investment by the US, Europe and India and a significant relative increase of UAE, especially in Egypt. In terms of destination, Morocco and Egypt have increased their weight as destinations of FDI for Asian and European investors. There seems to have been a significant reduction, in relative terms, of intra-African investment, particularly investment originating in South Africa. It is important to note that the database we use may underrepresent and fail to capture the real dynamics of flows originating in China and, to some extent, Africa. However, some of the critical aspects of our analysis, such as the reduced importance of the US and Europe as investors, would not change – and would be actually reinforced.

Another aspect that will have limited direct impact in Africa is the race between China and the US for control and dominance in the production of semiconductors and chips. Currently, 95% of the global production of these products is located in East Asia, with significant efforts to relocate this by the US. Even within the remaining share that is not located in East Asia, the share of African production is insignificant. Therefore, the immediate and direct impact of this competition for Africa is small.

However, there is a potentially much larger impact in relation to Africa associated with use of these technologies in production. Sensors, computers and other electronics components are increasingly included in many common products, from bicycles and clothing to vehicles and even food. Electronics are also part of the machinery and the production processes of many agricultural products made in Africa (Krishnan et al., 2020).

Consequently, the conflict between China and the US in relation to semiconductors and chips could affect Africa as a producer and as an exporter of many other products using these inputs. This could be reflected, for example, in the restrictions that any of the technology producers could place on their users in exports of final products to their rivals. In this sense, the use of technologies originating in certain countries could limit the markets where those products can be exported. Moreover, access to these technologies may become increasingly sensitive to the country's geopolitical alignment with one or the other global power.

Figure 5 Main announced greenfield investment in and by Africa in 2008–2010 (top panel) and 2022–2024 (bottom panel)



Source: Own elaboration based on fDi Markets

High impact

Four trends may have significant impacts on the African economy and its participation in value chains. These do not necessarily need to be seen as operating negatively for Africa. In some cases, there are opportunities emanating from them.

The Suez Canal and the Cape of Good Hope

The Suez Canal accounts for 30% of global container traffic. It is extensively used by all the vessels taking cargo from China, Southeast Asia, South Asia, the Middle East and the East African coast to Europe. Countries such as Djibouti and Somalia attract investment and economic development in relation to the provision of logistics services and special economic zones in the Horn of Africa.

The area around the Suez Canal is also subject to a series of regional conflicts, such as those in Sudan and Yemen. For example, attacks to vessels by the Houthi militia have led to a redirection of vessels through the Cape of Good Hope since October 2023.

More structurally, the route through the Suez Canal is being challenged by two factors that are expected to reconfigure global transport significantly. First, container vessels are becoming larger, aimed at gaining efficiency as well as reducing their carbon footprint per container transported. Vessels transiting through Suez are not limited by length but are limited by draft, with many vessels being required to go the Cape route. The Ever Given, which ran aground in the Suez Canal in 2021 and blocked transit for weeks, illustrates the challenge. The second challenge is associated with the permanent opening of the Arctic route, which it could take up a significant share of the transit from East Asia to Northern Europe.

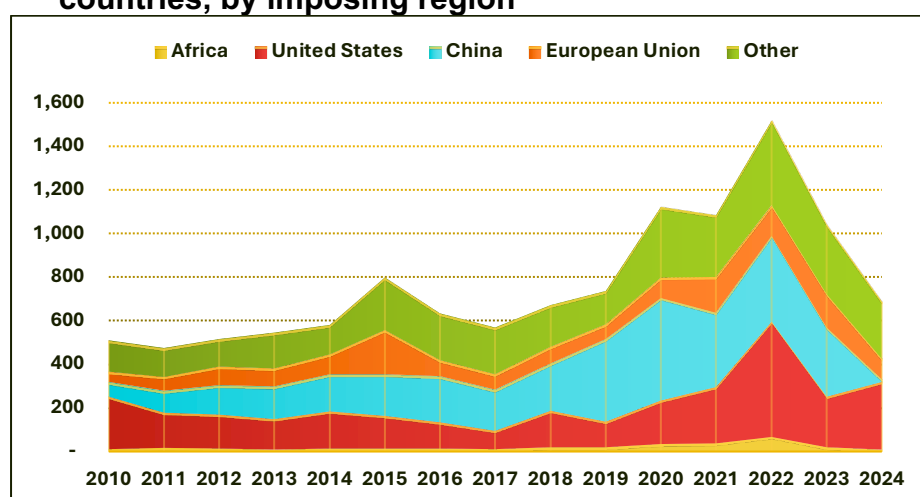
These challenges are expected to have two significant impacts for Africa. First, they could reduce the development opportunities in the Horn of Africa. Second, they could provide a significant opportunity for South Africa, a particular the area around Durban, to become a global transport and logistical hub. It will also increase the number of transport links, benefiting industries located in the region such as the automobile industry.

Global nationalism and protectionism

Although the impact of the announced tariffs on Africa's exports is expected to be contained by virtue of its general limited trade with the US, the continent has been subject to many different measures that have either restricted market access to key partners or introduced unfair discrimination or competition in other markets. Figure 6 shows the wide range of discriminatory measures affecting Africa, by imposing regions and countries. Most of these measures have been applied to a wide range of countries and regions, but some have targeted African countries directly.

As we have seen, like the whole world, Africa has been a victim of a rise in measures that, with multiple arguments, aim at limiting imports, introducing restrictions on foreign competitors or subsidising domestic producers in both domestic and export markets. The measures presented in Figure 6 only partially capture the impact they are having on the economies of Africa.

Figure 6 Discriminatory measures affecting African countries, by imposing region



Source: Own elaboration based on Global Trade Alert

The EU, for example, is introducing a series of measures that are expected to restrict trade and possibly investment in Africa. The CBAM and the EU Deforestation Regulation will restrict EU imports of a wide range of products that fail to comply with EU-determined standards in terms of carbon content or use of deforested lands. Technically implemented to address non-trade issues, these measures may have significant impacts on African exports to the EU.

Moreover, Africa is being affected indirectly by measures being adopted by other countries to restrict trade from third countries. For example, the EU's safeguard applied on the imports of Chinese EVs could lead to an increase of imports into Africa (Mendez-Parra, 2024b). China, not able to export these vehicles to Europe, may redirect them to Africa. This constitutes another instance of geopolitics affecting African value chains.

The bottom-line message is that there is an increase in global economic nationalism, conflated with geopolitical considerations, manifested through traditional (e.g. tariffs) and non-traditional protectionism that is disrupting investment and trade flows into and out of Africa. Moreover, this is strong enough to also affect Africa indirectly, reducing African value chain insertion and development.

Race for access to critical minerals

As discussed, the energy transition and geopolitics are drawing the attention of many global actors in key critical minerals. These include those used in the production of batteries, such as lithium and nickel mineral used to produce weapons (e.g. rare earth minerals) and minerals needed in nuclear applications, such as cobalt. Africa possesses potential and deposits of most of these minerals and has consequently caught the attention of many of these global actors.

In recent decades, China has been particularly active in relation to partnering with Africa countries to build infrastructure to facilitate the

transport and export of minerals. The railway built in the 1970s between Zambia and Tanzania is an example. More recently, China has continued but also expanded this type of approach in relation to the extraction of minerals in Africa. This has received significant academic and policy attention.

Very recently, there has been increased attention from other global players in relation to playing a similar role. For example, the US has partnered with Angola in support of the development of the Lobito Corridor, particularly in relation to investment in the relevant infrastructure (e.g. railways). Not only central Angola will benefit from the corridor, but also southern DRC and western Zambia, both with important deposits of cobalt and copper.

It is unclear whether this initiative will be sustained by the new US Administration. Should it decide not to continue with this partnership, though, it will not be because of lack of interest or a change in objectives – but rather a change in instrument. Rather than partnering, the US Government appears to be looking at annexation of areas (Greenland) or negotiating access (Ukraine) to facilitate exploitation and extraction. Given the availability of these resources across the African continent, it is a possibility that similar approaches may be adopted to obtain access to the minerals.

This implies an opportunity for Africa, particularly as oil is gradually phased out globally, but also a potential risk. This is associated with the replication of previous exploitation and engagement models that have not contributed to Africa's economic development. Unfortunately, even the Lobito Corridor and those initiatives supported by China appear to be following the previous models. For example, the fact that the railway supporting the Lobito Corridor goes straight to the sea rather than through Luanda reduces the potential manufacturing opportunities associated with the population already located in the capital.

2.4 Geopolitics and the automobile sector

The automobile value chain, together with electronics and aircrafts, is the archetype of producer-driven value chain development. It is one of the sectors that took the most advantage of trade liberalisation in the 1990s–2000s and that made the most extensive and intensive application of the just-in-time practices of production organisation.

The automobile value chain is also one of the sectors and value chains most affected by current geopolitical dynamics and the rise in economic nationalism. In addition to this, the sector is experiencing a radical transformation, associated with product technological changes. This involves significant corporate restructuring. Compounded by geopolitics and protectionism, this is shaking the foundations of the industry.

2.4.1 Changing investment trends

Some of these transformations are seen in the changes in the direction and origin of FDI (greenfield) in the sector (Figure 7). Immediately after the 2008 financial crisis, there were three large origins of FDI, of roughly equal size: North America (dominated by the US), Europe (dominated by Germany) and Asia (dominated by Japan). In 2022–2024, this changed radically. First, the US has reduced its outward investment flows significantly. More significantly, China has outpaced Japan and Korea as the largest investor in Asia.

Figure 7 Greenfield investment flows in the automobile sector in 2008–2010 (top) and 2022–2024 (bottom)



Source: Own elaboration based on fDi Markets

Note: Includes automotive components and original equipment manufacturing.

There have been significant changes in relation to the destination of investment flows. The US and Mexico have recently become the largest destination for investment in the sector, accounting for nearly two-thirds of all flows. And China has notably reduced its share in relation to the reception of FDI in the sector. Table 3 presents these changes.

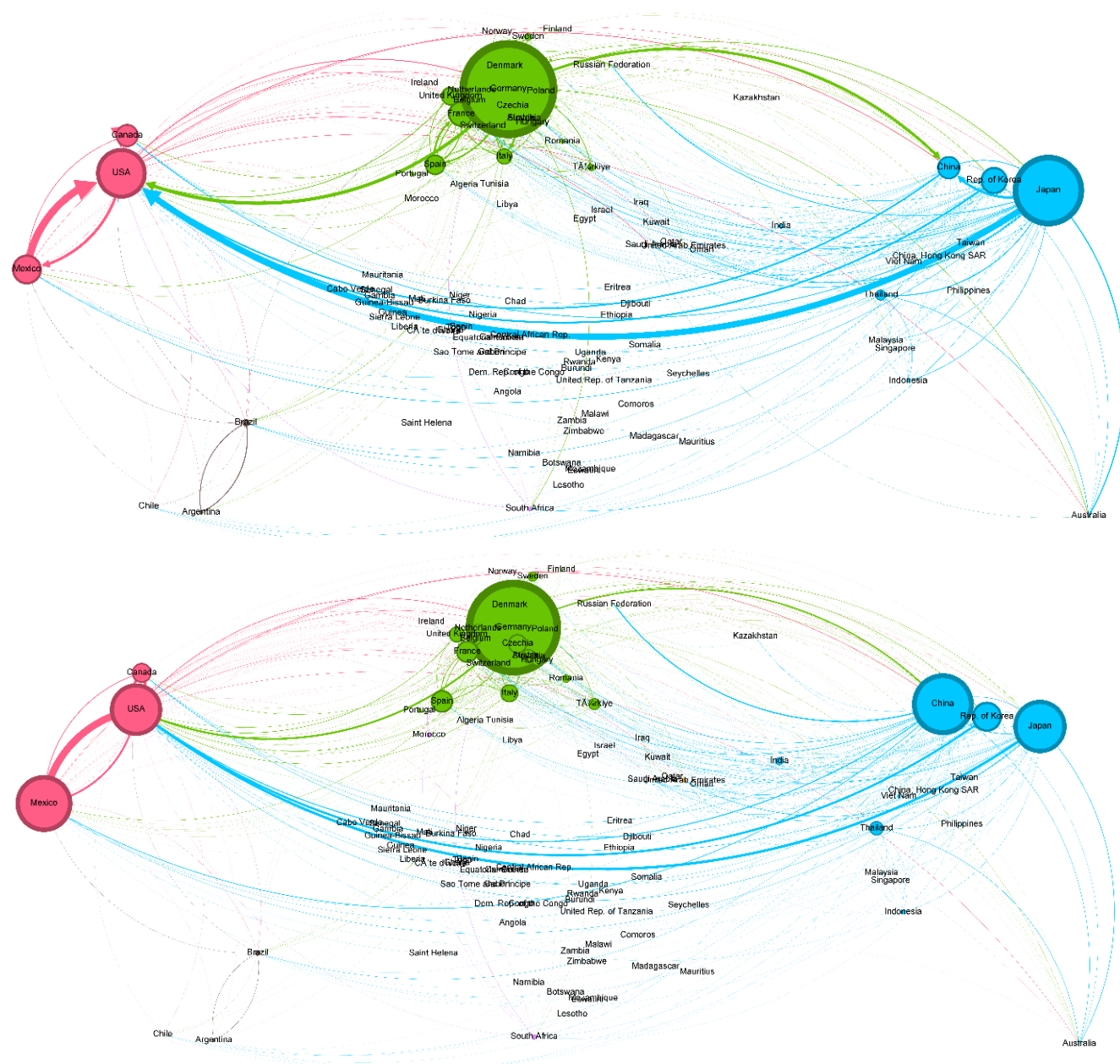
Table 3 Origin and destination of FDI in the automobile value chain (% of total)

2008–2010		2022–2024	
Outward			
Germany	23.6	China	22.2
US	22.8	Germany	18.7
Japan	20.4	Japan	14.6
France	6.7	Italy	11.2
Italy	5.4	South Korea	8.8
South Korea	5.2	US	8.2
China	4.8	France	3.2
India	1.5	Netherlands	2.3
Sweden	1.3	Canada	2.1
Canada	1.2	Viet Nam	1.9
UK	1.1	Hong Kong	1.3
Rest	6.2	Rest	5.5
Inward			
China	24.3	US	21.9
Brazil	8.9	Mexico	15.1
India	8.7	India	6.9
Mexico	8.5	China	5.9
US	6.6	Malaysia	5.6
Russian Federation	3.7	Spain	4.9
Canada	3.3	UK	4.7
Thailand	3.0	Canada	4.1
Spain	2.7	Saudi Arabia	3.1
Hungary	2.5	Turkey	2.7
Africa	2.5	Africa	2.0
Rest	25.2	Rest	23.0

Source: Own elaboration based on fDi Markets

As in the general case, these deep changes in investment flows have not yet translated into changes of the same significance in the global trade flows of automobiles and components. The increase in China's share as an exporter relative to the exports of Japan and Korea in Asia and the further increase in bilateral trade between the US and Mexico can be highlighted (Figure 8).

Figure 8 Automobiles and components trade flows in 2010 (top) and 2023 (bottom)



Source: Own elaboration based on BACI

Note: Automobiles parts and components are those defined by the US Trade Representative (www.trade.gov/automotive-parts-tariff-codes).

2.4.2 Factors behind the transformation of the sector

A number of factors have contributed significantly to the transformation of the sector globally:

Technology

The energy transition away from fossil fuels has increased demand for more fuel-efficient vehicles or those with a completely different energy source. In this sense, the automobile sector has experienced

a radical transformation in the product, generated by a sharp change in demand in Europe and Asia and, to a lower extent, the US. EVs (including hybrid vehicles), although still representing just around 3% of the global share of cars, are increasing this very fast in China and in Europe and representing the new global frontier.

The product change has imposed significant changes on the GVC. In particular, there is a need to source batteries to power the vehicles, and thus to set up mineral value chains. This has led to global attention to the mining of lithium, nickel and other minerals used in the production of batteries, which in itself brings an increased sensitisation on the geopolitics around critical minerals.

In addition, the increased use of sensors, components and other electronic chips, not only in EVs but also in traditional petrol/diesel cars, creates stronger links with the electronics value chain, itself with important geopolitical and industrial policy dimensions, as we have identified. Consequently, technological transformations in the automobile sector are notably increasing the sensitivity of the value chain to most if not all the geopolitical dynamics identified above.

Economic nationalism and protectionism

At the same time, and with significant connections to the point above on technology, the value chain has been shaken by a wide range of measures designed as part of industrial development initiatives in large centres of production.

The tariffs the US Government has recently announced or is already implementing cannot be considered a surprise for economic actors. They constitute the latest acceleration of a trend whose start can be traced to the first Trump administration in 2016 and that continued during the Biden administration as part of Inflation Reduction Act policies. These tariffs, subsidies and other measures are likely to have been powerful enough to reverse flows of investment and made the US the first destination of investment in this sector.

In the EU, the rise of China as a producer and exporter of EVs has brought concerns about the ability of its automobile sector to compete. This led to the introduction of safeguards on the importation of EVs from China in 2024. This not only constitutes a policy incoherence but also brings challenges for the rest of the world as it is expected that the unsold vehicles that Chinese exporters cannot market in China will be exported elsewhere (Mendez-Parra, 2024b). Chinese efforts to dominate the EV space are a consequence of decisive actions and support from the Government to develop the sector and make China a global major producer and exporter of EVs and automobiles in general.

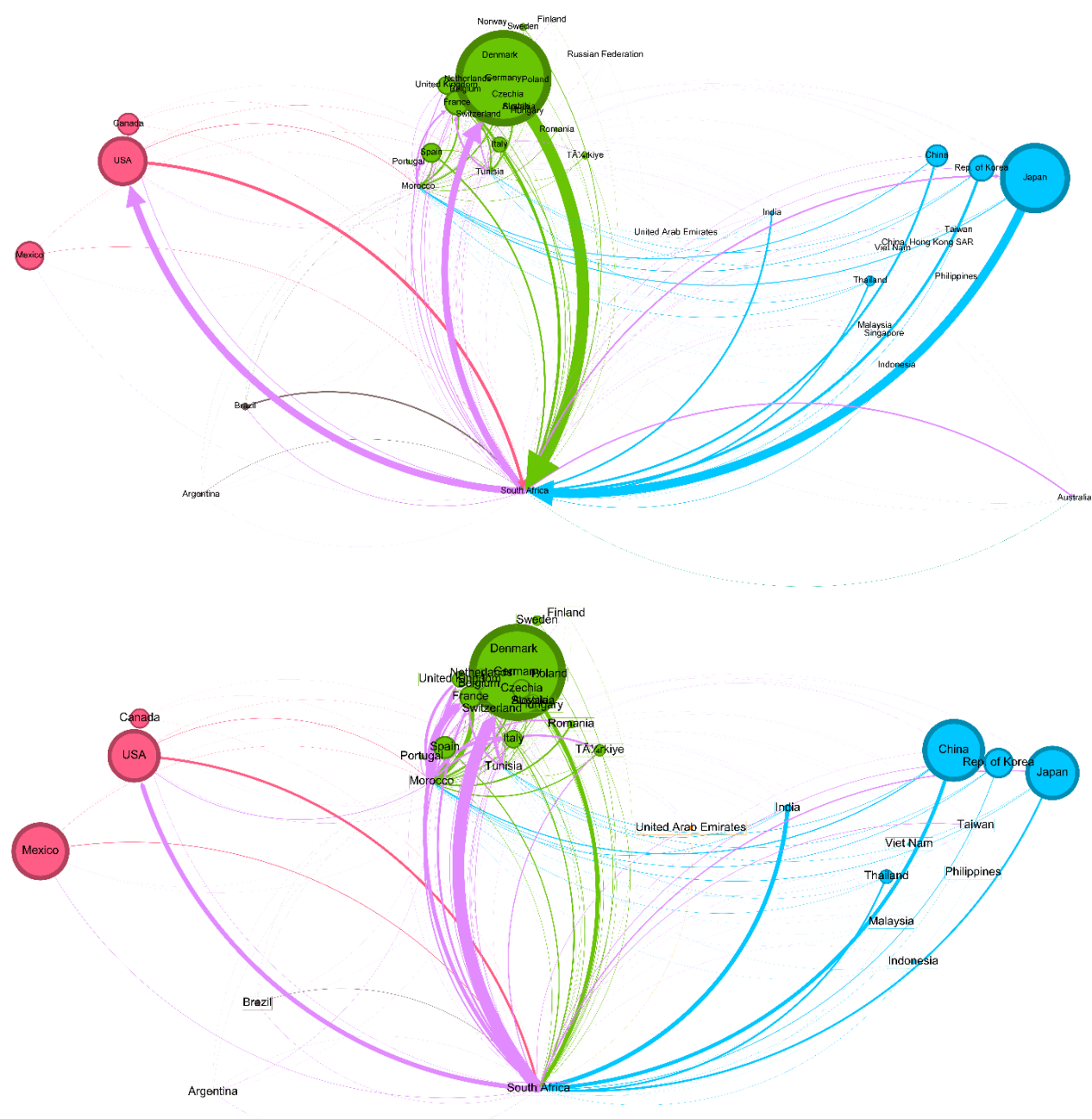
As such, the global competition space is becoming increasingly smaller as the global centres of production are becoming increasingly protective. This presents a significant challenge for producers and

firms located in the rest of the world, as they are struggling to engage with these centres in the provision of components.

The African dimension

These global dynamics have had important impacts in the sector in Africa. In particular, it is possible to see that Africa is increasingly disengaging from the US in terms of imports and exports of automobiles and components. It is also engaging less with Japan and becoming particularly dependent on the imports of components and vehicles from China and India (Figure 9).

Figure 9 African trade of automobiles and components in 2010 (top) and 2023 (bottom)



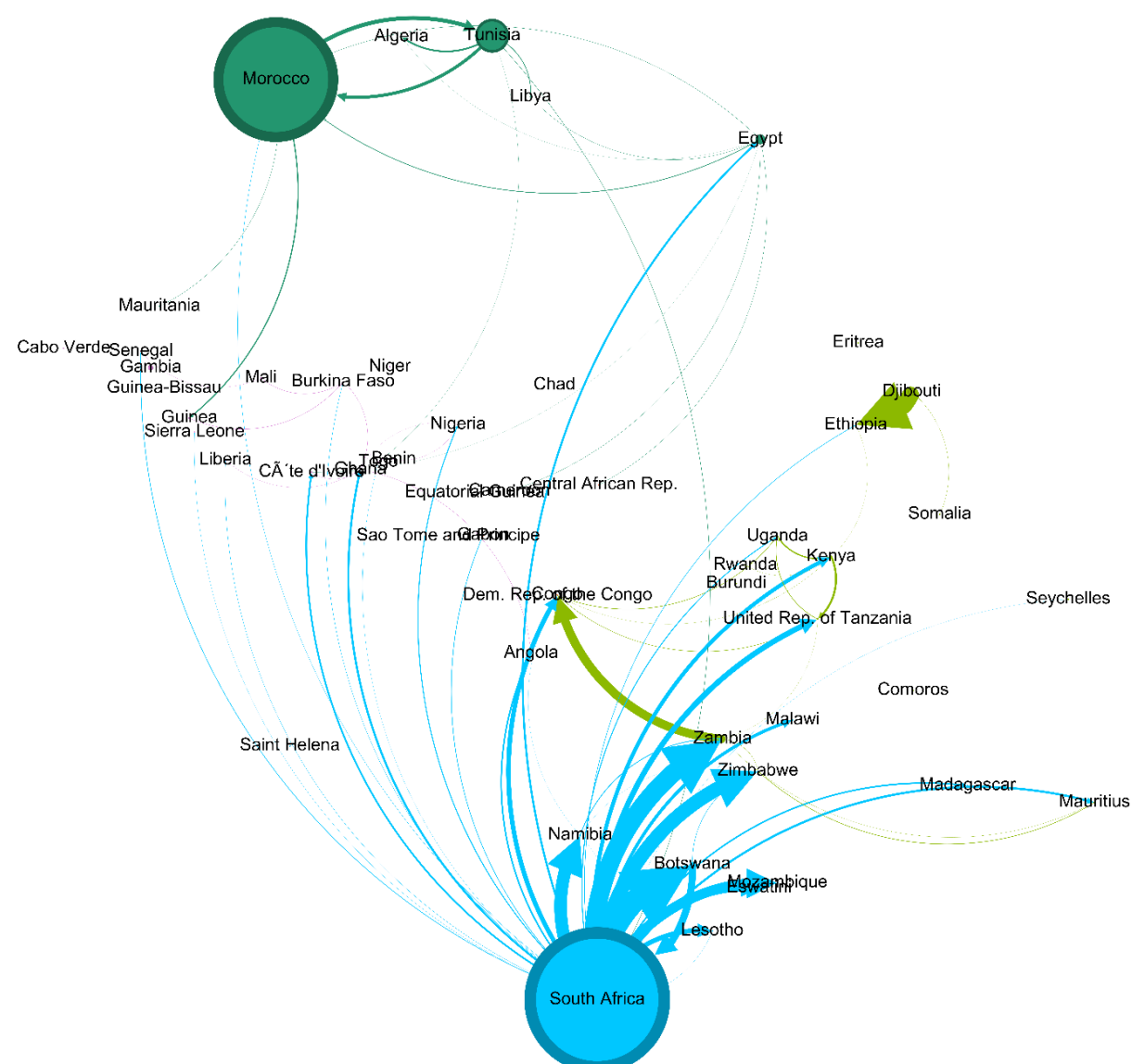
Source: Own elaboration based on BACI

As a result of these global dynamics and corporate decisions, there are two significant different models of value chains in Africa. In South Africa, with the longest history of automobile production in the continent, there is a clearly defined 'African' automobile value chain (Figure 10). South Africa appears as the main hub, sourcing components and final products from China and Europe to be used in the production of vehicles exported primarily to Europe and the rest of Africa. In this sense, the South African value chain presents a certain degree of diversification in relation to markets, which can help address some of the uncertainties and risks.

The contrast is the value chain centred around Morocco. This value chain is primarily integrated into the European value chain, where Morocco sources its inputs to be assembled and exported to Europe. Morocco, in contrast with South Africa, presents few forward linkages with the rest of Africa (except Tunisia). This is further discussed later in this report.

However, both value chains present very weak backward linkages with the rest of the continent. Very little in terms of number and volume of components and inputs originates from the rest of Africa.

Figure 10 Intra-African trade of autos and components, 2023



Source: Own elaboration based on BACI

3 Africa's automotives story

Africa's automotives sector remains a small but growing industry, valued at \$30.44 billion in 2021, with projections of \$42.06 billion by 2027 (Agarwal et al., 2022). Despite this growth, Africa relies heavily on imported vehicles, particularly second-hand cars, which dominate sales in most markets.

Historically, fragmented economies, limited industrial capacity and competition from cheaper imports have hindered large-scale vehicle manufacturing (Agarwal et al., 2022). While state-led assembly initiatives emerged in the 1960s and 1970s, many declined in the 1980s and 1990s as a result of trade liberalisation and economic structural adjustments, which made it difficult for local industries to compete (Agarwal et al., 2023). However, recent policy shifts, trade agreements and rising consumer demand have sparked renewed efforts to develop local automotives industries in countries like South Africa, Morocco and Ghana (Agarwal et al., 2022).

The AfCFTA aims to unify Africa's markets, stimulate regional production networks and enhance Africa's integration into GVCs. However, the industry still faces significant obstacles, including weak infrastructure, policy inconsistencies and dominance of used imports, which must be addressed for Africa to emerge as a competitive automotive manufacturing hub.

Africa's automotive landscape is shaped by a mix of well-established producers, growing manufacturing centres and emerging markets with significant potential.

South Africa has been the dominant automotive producer on the continent since the 1920s. Initially protected by tariff barriers, the industry underwent structured local content programmes from the 1960s onwards, requiring progressively higher levels of domestic manufacturing. The Motor Industry Development Programme (MIDP), introduced in 1995, encouraged exports and provided duty rebates, strengthening South Africa's global market position. This was followed by the 2013 Automotive Production and Development Programme (APDP), which linked incentives to production volumes. Today, South Africa is home to seven light vehicle manufacturers and remains highly export-oriented, with vehicle exports totalling \$10.7 billion in 2020, despite disruptions caused by Covid-19. Europe remains the largest market for these exports, while expansion into the rest of Africa has been sluggish. The South African Automotive

Masterplan (SAAM), introduced in 2021, aims to increase production, local content and employment in the industry (Agarwal et al., 2022).

Morocco has become Africa's second-largest automotive producer, surpassing South Africa in passenger car exports in 2018. The country's success is driven by major investments from Renault, Peugeot, BYD and Hyundai, along with a growing network of component suppliers like Valeo, Yazaki and Sumitomo. Morocco benefits from FTAs with the EU and North Africa, tax incentives like zero corporate tax for the first five years and purpose-built infrastructure such as the Tangier Med port. These policies have turned Morocco into a key production and export hub for global markets (Agarwal et al., 2022).

Egypt's automotives industry began in 1961 with El Nasr Automotive Manufacturing Company and developed under protectionist policies, serving its domestic market rather than focusing on exports. However, this model resulted in low-volume, inefficient production. The FTA with the EU removed protective barriers, making it difficult for Egyptian manufacturers to compete, leading to a sharp industry decline. Exports remain minimal, and the sector has struggled to modernise (Agarwal et al., 2022).

Nigeria has historically had a robust automotives industry, gaining prominence in the 1970s and 1980s with a production capacity of 149,000 vehicles per year. However, economic downturns, currency volatility and the end of the commodity boom led to a sharp decline. Today, Nigeria has a growing middle class but domestic production remains low, with most vehicles imported. In 2021, imports reached \$2.3 billion, 60% of which were passenger cars, including used cars. The National Automotive Industry Development Plan was introduced to encourage local production by imposing a 35% levy on imported vehicles. However, semi-knocked-down (SKD) plants have proliferated, delaying a shift towards full-scale manufacturing (Agarwal et al., 2022, 2023).

Positioned within the Economic Community of West African States market, Ghana is developing its automotives sector. It has significant regional potential, as its domestic market is expected to grow from 110,000 to 230,000 vehicles per year by 2030 (Agarwal et al., 2022). To support local assembly, the Ghana Automotive Development Policy (GADP) has attracted Volkswagen, Toyota, Nissan and Sinotruck, establishing SKD plants. By leveraging AfCFTA provisions, Ghana aims to expand regional exports, attract FDI and reduce reliance on imports, strengthening its role in Africa's automotive value chain (Agarwal et al., 2022).

Kenya leads East Africa's automotives sector, but its industry remains small. It has three assembly plants, primarily engaged in SKD production with minimal local content. Some small-scale component manufacturing and motorcycle assembly exist, but the

country lacks the scale to compete with larger African automotive hubs (Agarwal et al., 2022).

Africa's automotive trade is shaped by global integration, with Morocco and South Africa acting as key production hubs linked to European markets, while the rest of the continent remains largely dependent on imports (Agarwal et al., 2022). Germany, France, Spain, the UK, Belgium, Italy, the US and Japan dominated vehicle exports to Africa, reflecting the region's reliance on foreign supply chains (Agarwal et al., 2022). Despite efforts to develop local industries, intra-African trade remains low, at 15% of total automotive trade, hindered by fragmented supply networks and limited regional manufacturing capacity (ibid.). As a result, Africa continues to play a marginal role in global automotive production, with trade patterns reinforcing its position as an importer rather than an integrated producer.

3.1 Integration into automotive GVCs

As a concept, 'global value chains' derives from the observation that all production entails several steps and actors, with each instance delivering based on own resource endowment, existing logistical capacity and geography, and the speed at which it can get to market, at the country level. Therefore, elements of the final product can be produced in many parts of the world and assembled into the final product in other parts, according to demand conditions, cost of production and ease of market access. For Africa, the key question is how to exploit current and emerging GVCs while avoiding pitfalls (AfDB, 2013).

Automotive value chain production stages

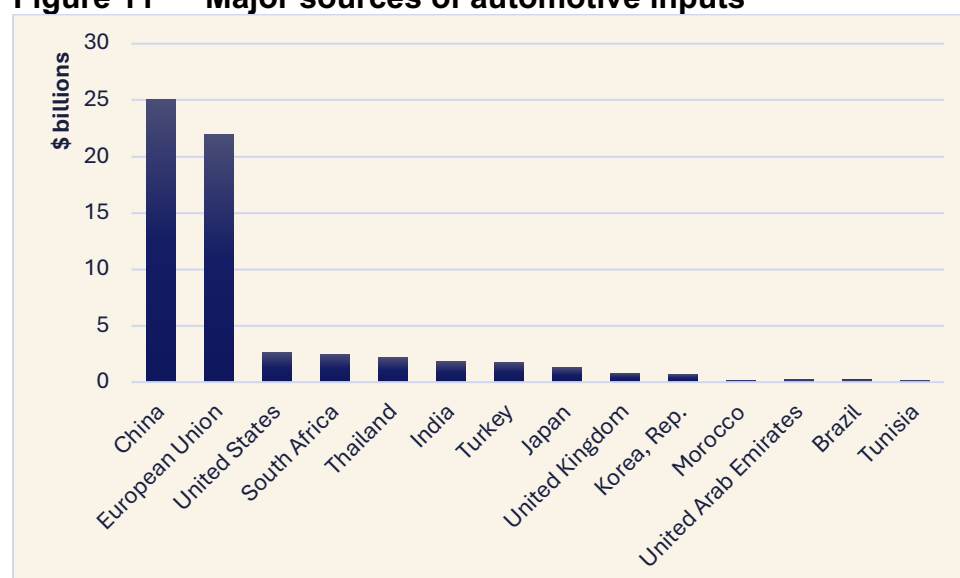
- 1 Tier 3 suppliers of basic materials (steel, aluminium, leather, rubber, plastic, glass)
- 2 Tier 2 suppliers of subcomponents (body welding, fabrication, shearing, bending, stamping)
- 3 Tier 1 suppliers of major components (drive train, gearboxes, steering, electronics)
- 4 Assemblers (assembly and production of vehicles)

Source: Adapted from UNDP (2021)

Africa's automotives industry is only marginally integrated into GVCs, primarily through assembly activities in a few countries. In the traditional automotive GVC, vehicle assemblers typically contribute ~20% of value addition, with upstream suppliers (Tier 1, Tier 2, etc.) contributing the bulk (80%) (Agarwal et al., 2022). In Africa, the value chain is less developed locally; even in South Africa, the most advanced case, vehicle assemblers and Tier 1 suppliers together account for ~80% of value added, while lower-tier (local) suppliers contribute only 20% (ibid.). This indicates a shallow domestic supply base: most high-value components are imported, and relatively few

parts are made by local small suppliers. African assembly plants often operate on a kit assembly model (semi- or completely knocked-down, CKD, kits), importing most inputs from abroad and doing final assembly domestically. For example, Ghana's new SKD plants import nearly all components from parent companies in Germany and China, and Nigeria's assemblers rely on imported kits while adding minimal local content (*ibid.*). In North Africa, Morocco's factories import substantial inputs but have also attracted global component manufacturers owing to the scale at which they operate (e.g. wiring harnesses, electronics suppliers like Valeo, Yazaki, Sumitomo) to invest locally (*ibid.*), gradually building a local supplier network linked into the European automotive chain. Overall, Africa's role in the GVC is largely at the assembly and basic manufacturing stage, with design, engineering and advanced component manufacturing conducted by multinational firms outside the continent.

Figure 11 Major sources of automotive inputs



Note: Intermediate product HS-4 2012 codes: 7007, 7009, 8301, 8302, 8707, 8708, 9401, 4009, 6813, 7318, 7320, 8421, 8482, 8708, 8414, 8415, 8501, 8507, 8511, 8512, 8519, 8525, 8527, 8531, 8536, 8539, 8544, 9029, 9104, 4010, 4016, 8407, 8408, 8409, 8413, 8414, 8421, 8483, 3819, 3820, 4016, 7315, 8301, 8425, 8426, 8708, 8716, 4011, 4012, 4013.

Source: Authors' compilation based on WITS

Figure 11 shows the largest sources of intermediate products used in Africa's automotive sector, highlighting the external dependency of African automotive assemblers on non-African suppliers. The values presented represent total trade value of imported automotive inputs in 2023.

The EU and China are the dominant suppliers, sending over \$25 billion and \$22 billion worth of automotive-related intermediate goods into Africa, respectively. Within the EU, Germany (\$6.1 billion), Spain (\$3.6 billion), France (\$3.5 billion) and Italy (\$2.5 billion) are the most significant contributors, playing a key role in providing essential

components for vehicle assembly. Other extra-regional contributors include the US (\$2.7 billion), Thailand (\$2.3 billion), India (\$1.9 billion), Japan (\$1.4 billion), the UK (\$865 million), South Korea (\$771 million), UAE (\$241 million) and Brazil (\$218 million). While these regions play a smaller role compared with the EU and China, they remain integral parts of Africa's extensive automotive import network. Within the continent, South Africa, Morocco and Tunisia are the largest sources, with a combined share of 3.5% in total imports.

The reliance on imported intermediate goods underscores the limited development of Africa's local supplier base for automotive manufacturing. South African auto assemblers, for instance, source a substantial portion of their components from Europe and Asia, even as domestic content promotion policies exist. Similarly, Morocco's industry remains integrated into EU-based supply chains, leveraging geographic proximity and trade agreements (Agarwal et al., 2022). Even in simpler vehicle segments like motorcycles, dependency persists – Nigeria imported \$224 million in motorcycle parts in 2021, while exporting virtually none, indicating that its assembly sector is almost entirely reliant on foreign inputs (Agarwal et al., 2023).

Such dependence poses a challenge for deeper GVC integration, as it limits local economic benefits and exposes African assembly industries to global supply disruptions. Strengthening domestic production capacity and supplier networks will be key to reducing reliance on external inputs and increasing the competitiveness of African automotive manufacturing.

3.1.1 Regional production networks and the AfCFTA

Intra-African automotive trade and production networks remain nascent, but there is growing interest in developing RVCs. Historically, African countries have not heavily supplied each other with vehicles or parts. For example, only about 12% of Africa's automotive trade is intra-African (most trade is with global partners) (Agarwal et al., 2022). One standout is South Africa, which exports vehicles and kits within Africa (e.g. to Southern African Development Community, SADC, neighbours) and in 2019 accounted for around 60% of intra-African automotive trade (ibid.).

Regional specialisation is expected to increase under new initiatives. The African Association of Automotive Manufacturers (AAAM) is working with governments and the AfCFTA Secretariat on a Pan-African Auto Pact vision (Agarwal et al., 2022). This envisions countries specialising in certain models or components and trading with each other. For instance, a bilateral arrangement between South Africa and Ghana is being explored as a building block, where one might focus on certain vehicle types and the other on different models (ibid.). Such coordination would allow sharing of the production across countries, creating regional production networks similar to those in Southeast Asia or Latin America.

Afreximbank and AAAM have worked with the AfCFTA Secretariat and the AU Commission (AUC) on details regarding rules of origin (RoO) in the automotives sector, as well as other supportive components of an African strategy for development and industrialisation (AfCFTA Secretariat, 2023). The AAAM argues that a simple RoO-based system is not sufficient and favours a separate plurilateral agreement for the sector. However, this approach has drawbacks as it may encourage fragmentation and make it harder for less industrialised countries to join the pact and grow alongside others in the automotives sector. This remains under debate.

The AfCFTA automotives strategy highlights a conventional package of measures regarding RoO that takes into account the current level of industrialisation. The strategy centres on three components:

- **Value of non-originating material (VNOM):** The AAAM suggests a VNOM threshold of 60%, implying a 40% requirement for originating material. In contrast, some existing regional agreements have thresholds as low as 25% for originating material (i.e. 75% VNOM). This lower level corresponds with limited industrialisation, and, as manufacturing capacity increases, originating material thresholds are expected to rise. More developed countries tend to favour a higher threshold, which may disadvantage the least developed ones.
- **Processing:** This refers to the progression from SKD to CKD assembly – a developmental pathway for the sector. However, varying factors can threaten this progression. While CKD assembly does help develop domestic sectors, it typically relies on imported inputs from China, Europe and Japan. Governments also find it hard to incentivise SKD assemblers to upgrade to CKD given the need for incremental large-scale investment.
- **Cumulation:** Although cumulation encourages sourcing from other African economies, it is complex in the automotives industry owing to uneven industrial capacity across countries. For example, extending diagonal cumulation under the AfCFTA could limit the prospects for new entrants.

Gains continue to be uneven because regional integration arrangements in the automotives sector tend to cluster in a few locations, raising political complexities. Geopolitical tensions and shifts in global trade and investment policies exacerbate these challenges. Diverging national interests impact both RoO negotiations and the overall integration process, complicating the incorporation of African countries into GVCs and RVCs (Agarwal et al., 2022).

The AfCFTA is poised to significantly influence automotive value chain integration in Africa. By eliminating intra-African tariffs and establishing common RoO, the AfCFTA directly addresses scale and fragmentation issues. The automotive-specific RoO under the AfCFTA are designed to encourage local sourcing – for example,

requiring around 40% African content in vehicles to qualify for tariff-free trade (Agarwal et al., 2022). Such content rules are intended to incentivise assemblers to purchase more inputs within Africa, spurring the growth of regional suppliers. Cumulation provisions further allow parts made in any Member State to count as 'local', thereby fostering cross-country supply chain linkages.

Moreover, the AfCFTA creates a larger duty-free market that can justify bigger investments. An automaker setting up in one country can export to all of Africa without facing tariffs, which increases the viability of such ventures. Studies predict that intra-African trade in autos could rise sharply – with an additional \$2 billion in exports by 2025 – making the automotive sector the largest gainer among industrial sectors (Agarwal et al., 2022). The agreement also facilitates the free flow of investment and services, making it easier for multinational auto firms to invest across multiple African locations and integrate them. For instance, Ghana is emerging as a West African automotive hub under its GADP, attracting major brands such as Volkswagen, Toyota, Nissan and Sinotruck to establish SKD assembly plants while simultaneously increasing tariffs on fully built cars to boost local assembly.

However, the effectiveness of the AfCFTA in boosting value chain integration will depend on the details of its implementation. If the RoO are too stringent or complex, firms may opt to import fully built cars rather than navigate compliance. Conversely, if the rules are too lenient, there is a risk of trans-shipment – where non-African vehicles enter via the lowest-tariff country – rather than fostering genuine local manufacturing. Policy-makers are thus aiming for a balanced, 'simple, flexible and reasonable' approach, with discussions even including a two-tier RoO regime to accommodate less developed countries initially.

RoO alone cannot drive industrialisation; they are just one element in building RVCs. It is important to take a broader view and remain focused on the overarching goal, which is the creation of a single African market. The RoO adopted today are not permanent, and there must be room for learning and adaptation over time. Given the global context and the varying levels of industrialisation across the continent, a developmental approach may be more effective than a prescriptive one of choosing one over the other. Rather than rigid rules, a flexible framework that accounts for current national contexts while allowing for future adjustments could be more suitable.

Beyond tariffs, the AfCFTA also emphasises improvements in trade facilitation and infrastructure. Reducing border delays, enhancing transport corridors and harmonising standards across Africa will lower distribution and sourcing costs for automakers. Additionally, AfCFTA Phase 2 policies on investment and intellectual property could support technology transfer and joint ventures, setting the stage for Africa's transformation from a collection of import-

dependent markets to a more integrated automotive production zone. The coming years will be critical as AfCFTA implementation and multinational investment decisions determine how swiftly African firms and workers can climb the automotive value chain and realise the continent's automotive aspirations.

3.1.2 Foreign factors

The success of the AfCFTA's automotives strategy relies on the outcomes of the RoO negotiations to facilitate trade across the continent. However, RoO are just one piece of the puzzle in developing RVCs, and complementary policies, such as industrial policy, also play a crucial role. That said, the focus here will remain on RoO, as this remains a point of contention. The question remains: which rules are most appropriate for Africa's industrialisation in the automotives sector, given the ongoing global disruptions?

From a European perspective, EU's protectionist policy, including the CBAM adopted in May 2023, came after the AfCFTA's automotives strategy that was developed in February and is not accounted for in the plan. Given this global shift, a green industrial strategy is needed to address carbon emissions in SKD and CKD production processes. Developing a green automotives industry will be important for the AfCFTA, not only to retain access to the EU market but also to address the unavoidable challenge of climate change, ensuring production aligns with sustainability considerations.

For instance, (i) without a green industrial policy, the transition from SKD to CKD as a developmental pathway could face challenges; (ii) the reliance on non-originating inputs may persist or even increase if there is limited capacity to produce inputs that meet green standards, affecting the decision on the most appropriate RoO; and (iii) Africa risks falling behind in intra-African trade if its automotives sector does not align with global sustainability standards. Ultimately, the AfCFTA's ability to navigate these challenges and support Member States will depend on its approach but being proactive rather than reactive will be key to staying competitive and sustainable.

From a China–US perspective, Donald Trump's presidency has escalated tensions, with the US imposing a 20% tariff on Chinese imports and China responding with its own tariffs while strengthening ties with Africa (Johnston, 2025). A closer relationship with China could lead to a reorientation of Chinese exports to Africa, such as an influx of EVs diverted from the US as a result of tariffs. African countries are seizing these opportunities – but at what cost? Growing China–US tensions, which are strengthening Africa–China ties, may pose challenges to Africa's efforts to develop its own RVCs, particularly in battery manufacturing and EVs.

Dealing with these global challenges from an African perspective entails balancing external influences while prioritising the continent's own industrialisation, regional integration and developmental goals.

Africa must take a proactive, strategic approach to align implementation plans with a unified continental vision. CBAM has left both countries that are more industrialised and least developed countries scrambling, further fragmenting Africa's position and weakening its global influence (Gilder and Rumble, 2024). To drive long-term industrialisation and economic transformation, regulatory reforms are key alongside a coordinated stance on CBAM. AfCFTA Member States must speak with one voice, especially on critical minerals like lithium, manganese and cobalt, essential for EV battery production. The AU has an opportunity to move beyond being a raw material supplier and play a key role in shaping the global agenda that influences the AfCFTA's implementation – and this extends to AfCFTA RoO negotiations.

3.1.3 Foreign direct investment

Integration into GVCs is further shaped by FDI in Africa's automotives sector. Most assembly activity in Africa is the result of global automotive firms (original equipment manufacturers, OEMs) investing or partnering locally. For example, Japanese, US and European automakers invested heavily in South Africa over decades, making it a key node in their global networks (Agarwal et al., 2022). European automakers led investments in North Africa – Renault's sprawling plants in Morocco and Nissan's investments in Egypt connected these countries to Euro-Mediterranean supply chains (ibid.). Newer investors from Asia are now entering: Chinese automaker BYD and Korea's Hyundai are reportedly setting up in Morocco (ibid.), and Chinese firms (BAIC, FAW, etc.) have established SKD assembly in South Africa and Algeria.

These FDI projects not only bring capital but also link African production into the multinationals' global production systems. For instance, Morocco's success owes partly to Renault and Stellantis integrating their Moroccan operations into Europe-focused production and export plans, supported by local feeder factories (Agarwal et al., 2022). In emerging markets like Ghana and Kenya, FDI often comes via strategic partnerships or joint ventures. Volkswagen has opened small assembly plants in Ghana and Rwanda, aiming to cultivate new markets. These ventures remain in their early stages (assembling a few thousand units from imported kits), but they signal growing GVC linkages: vehicles assembled under global brands in Africa, intended for African consumers. The presence of global part suppliers (e.g. tire manufacturers, battery makers) is also increasing in Africa, often following the OEMs to provide local just-in-time supply. For instance, Morocco's automotive ecosystem includes foreign-owned plants for wiring and seats (ibid.).

Moreover, specifically for battery makers, the sector is seeing notable developments that underscore Africa's growing role in the global supply chain. Chinese battery giant Gotion High-Tech has announced a €2.5 billion investment to establish battery production

facilities in Morocco, reinforcing its strategic position as an emerging battery hub (Naim, 2024). Additionally, the joint venture Giga-Africa 1 – formed by the South African energy company Megamillion and Chinese entrepreneur Henry Mao – is set to develop a gigafactory, further embedding Africa in the global EV value chain. These investments enhance local production capacity and support the continent's integration into the broader transition to electric mobility.

In summary, FDI is a driving force for GVC integration, effectively relocating segments of global automotive value chains into Africa. Sustaining this integration will require keeping investors engaged through stable policies and market growth.

3.1.4 Challenges in GVC integration

African countries face multiple challenges in deeper integration into automotive GVCs. A fundamental issue is lack of scale – individually, most national markets are too small to support cost-competitive manufacturing of vehicles (the optimal scale for an auto plant is hundreds of thousands of units/year, which far exceeds demand in any single African country aside from perhaps South Africa) (Agarwal et al., 2022). This fragmentation has historically made Africa unattractive to major auto investments (*ibid.*), as firms have prioritised larger or more unified markets.

The dominance of used car imports is another challenge: easy availability of cheap used vehicles undercuts demand for new locally assembled cars, making it hard for nascent industries to reach volume. Consumers often opt for an \$11,000 second-hand import over a much costlier new vehicle (Agarwal et al., 2022). Given it is a difficult policy issue, governments struggle to balance the underlying dichotomy, protecting industry versus providing affordable personal transport.

Underdeveloped supply chains and skills also impede GVC integration. There are very few local manufacturers of complex auto parts (engines, electronics, precision components) in Africa outside of South Africa and Morocco. This means local assemblers must import nearly everything, which raises production costs and complexity. Building a network of local suppliers is difficult as a result of the limited industrial base, technology gaps and skills shortages; in fact, automotive engineering skills are in short supply, and many countries lack the technical training infrastructure (Agarwal et al., 2022). Infrastructure deficits add to costs – unreliable electricity and high logistics costs in parts of Africa make manufacturing more expensive and less reliable (*ibid.*).

Policy and regulatory uncertainties add another hurdle: some past attempts at automotives industry development were hampered by inconsistent policies or premature trade liberalisation. For example, Egypt's auto assembly industry, nurtured behind high tariffs, struggled once a free trade deal with the EU came into effect, leading

to a decline in local production as a result of competition from imports (Agarwal et al., 2022). Additionally, when new assembly investments do occur, they tend to cluster in a few countries ('winners'), raising political economy issues across the continent (ibid.). Not every country can have an auto plant; managing the expectations of 'losers' in regional specialisation is a challenge for integration efforts (ibid.). Finally, compliance with global standards and keeping up with technological change (like EVs, autonomous tech) is a moving target – African producers must meet international quality and emissions standards to export or even to compete with imports, which can be tough without significant upgrades and investment.

3.1.5 Opportunities and enablers

Despite these challenges, there are significant opportunities for Africa to integrate more deeply into automotive GVCs. First, the continent's rapidly expanding middle class and urbanisation indicate rising demand for vehicles – the African car market is projected to grow substantially in the coming decades (Agarwal et al., 2022). This creates an opportunity for local manufacturing to replace imports if cost and quality can be achieved. Second, implementation of the AfCFTA is a game-changer that will unify Africa's market of 1.3 billion people, helping overcome the scale problem by enabling manufacturers to serve multiple countries tariff-free. A larger integrated market could attract the kind of large-scale investments needed for competitive production (ibid.). Third, regional industrial policies and partnerships are being put in place: initiatives like the AAAM's Pan-African Auto Pact aim to coordinate investment and specialisation across countries. If realised, this could create regional hubs for different parts of the value chain. For example, one country could focus on engine assembly, another on final vehicle assembly; this could foster intra-African supply chains.

Africa's abundance of raw materials needed in automotive production, particularly for EVs, presents a significant opportunity to advance up the value chain. Countries like DRC, Ghana, Mozambique and South Africa possess substantial deposits of critical minerals such as copper, cobalt, lithium and platinum. Leveraging these resources can attract battery manufacturing and EV assembly projects, integrating Africa into the burgeoning global EV supply chain. Notably, initiatives like the proposed Memorandum of Understanding among DRC, Morocco and Zambia aim to bolster RVCs for electric mobility, facilitating mineral refining and diversifying exports beyond raw materials. Morocco's ambition to produce up to 100,000 EVs by 2025 and establish battery factories exemplifies this strategic move. Such collaborations could help Africa become a minor EV producer, which could serve markets including Europe (Elhiraika, 2025). This concerted effort aligns with the AfCFTA framework, enhancing the feasibility of African-made EVs in the long term.

Lastly, case studies of success within Africa provide a model. Morocco's industry shows that, with the right mix of policies (tax incentives, infrastructure like ports, training programmes) and connectivity to global markets, an African country can become a competitive exporter (Agarwal et al., 2022). South Africa's longstanding industry demonstrates the importance of consistent policy support (e.g. the MIDP and its successors, which incentivised local value addition and exports) (ibid.). These experiences, along with emerging stories from countries like Ghana (with its new auto policy) (Agarwal et al., 2022) and Rwanda (piloting innovative distribution models) provide lessons that other African nations can draw on to craft strategies for integrating into automotive GVCs.

3.2 The electric vehicle revolution

The global transition to EVs is reshaping the automotives industry, and Africa stands at a critical crossroads of opportunity and challenge. With developed countries planning to phase out internal combustion engine (ICE) vehicles by 2035 and global EV demand growing exponentially (Agarwal et al., 2022), Africa must navigate its role in this transformation. Currently, EV adoption on the continent remains minimal – accounting for less than 1% of new sales even in South Africa, Africa's largest automotive market (ibid.). However, this transition presents a unique opportunity for Africa to leverage its abundant resources and strategic positioning.

The continent holds vast reserves of essential battery minerals, including lithium and cobalt, with DRC, South Africa and Zambia playing key roles. Yet much of this raw material is exported for processing, limiting Africa's participation in the high-value segments of the EV supply chain. While Morocco has successfully attracted EV-related manufacturing thanks to its proximity to European markets, many African nations remain on the periphery of GVCs (Agarwal et al., 2022). That said, the continent has the potential to 'leapfrog' into new technologies, as EV manufacturing requires lower optimal scale investments compared with traditional ICE vehicle production (ibid.).

Yet significant barriers remain: high EV costs, inadequate infrastructure, a lack of charging stations and the need for long-range battery efficiency. Moreover, ensuring an ethical and sustainable supply of critical minerals remains a challenge, as many are extracted under conditions associated with human rights violations (ibid.). While global markets surge ahead – driven by advancements in battery technology and policy incentives – African policy-makers must act decisively to integrate the continent into the EV revolution, ensuring its rich resources translate into economic growth rather than missed opportunities (Agarwal et al., 2022, 2023).

3.3 The role of two-wheelers

Two-wheelers (especially motorcycles) play an outsized role in African mobility and are a critical part of the automotives sector's future on the continent. In many countries, motorcycles are the most common motor vehicle, providing affordable transportation and employment (e.g. motorcycle taxis). This segment has unique characteristics and opportunities:

Huge market demand

Africa already has a large and growing motorcycle market. In 2015, African countries collectively imported \$1.86 billion worth of motorcycles, about 9.9% of global motorcycle imports (Agarwal et al., 2022). Nigeria alone imported \$447 million in motorcycles that year (2.4% of global imports) (ibid.), and by 2021 Nigeria's motorcycle imports had grown to around \$680 million (Agarwal et al., 2023). These figures show that the two-wheeler market is significant in scale, offering alternate and affordable mobility solutions, rivalling the car market in some countries. Unlike cars (where used imports dominate), the motorcycle market is largely for new units (used motorcycle imports are less common), meaning local assembly could more easily compete without facing a flood of second-hand imports (Agarwal et al., 2022).

Low technological barriers

Motorcycles are technically simpler to assemble and manufacture than cars. The engineering and capital investment required are lower – an advantage for late-industrialising countries. In fact, several Asian countries (China, India, Indonesia, etc.) began their automotive industrialisation with motorcycle or scooter production before moving up to cars (Agarwal et al., 2022). Africa can follow a similar path. Some local assembly of motorcycles is already happening in Africa (in Nigeria, Kenya, Rwanda and elsewhere), generally involving importing kits from China or India and assembling them with minimal local parts (ibid.). Even at this basic level, it creates jobs and can be a stepping stone to parts manufacturing.

Industrial development potential

Because of the above factors, motorcycles present an important development opportunity within the broader automotives sector (Agarwal et al., 2022). The market size is closer to the critical mass needed for efficient production, and the product complexity is manageable. Additionally, governments can more feasibly provide light protection or incentives for motorcycle assembly without severely impacting consumer prices, since new bikes are already relatively affordable and widely used. Analysts note that used motorcycle imports are a much smaller factor than used cars, which 'greatly facilitates' the possibility of nurturing local industry with some protective measures (Agarwal et al., 2022). Moderate tariffs or import

bans on very old used motorcycles can be imposed to support nascent producers without the socioeconomic backlash that banning used cars might entail.

Electric two-wheelers – leapfrog opportunity

Perhaps the most exciting aspect is the potential for electric two-wheelers (e-bikes, e-scooters) to take off. Major Asian cities have demonstrated the viability of e-motorcycles at scale: China has hundreds of millions of e-scooters in use, and other countries, like India, Vietnam and Thailand, are rapidly adopting them (Agarwal et al., 2022). Electric two- and three-wheelers are becoming popular as low-cost taxis and delivery vehicles in Asia. For Africa, this is an opportunity to leapfrog to cleaner technology in the two-wheeler segment. Many African cities (Lagos, Nairobi, Kampala, etc.) struggle with air pollution and noise from fleets of ageing motorcycles. Transitioning these to electric could dramatically cut urban emissions and fuel import bills.

Moreover, e-motorcycles are relatively cost-competitive (the technology is simpler than that of electric cars) and could be charged even in areas with limited grid power using solar stations or battery swapping. African entrepreneurs are beginning to recognise this – for instance, start-ups in East Africa are introducing e-motorcycles for taxi fleets, and some governments are setting targets for two-wheeler electrification. The African auto sector could see its first significant EV manufacturing in two-wheelers before cars, given this favourable economics. Importantly, as noted earlier, Africa’s lack of existing motorcycle manufacturing means there is no entrenched ICE industry to resist the change, and no sunk costs to write off (Agarwal et al., 2022). If supported, local firms could assemble e-motorcycles (using imported battery and motor components initially) to meet the booming demand for affordable transport, while cutting carbon emissions.

3.4 Learning from the ASEAN success story

The ASEAN automotives industry has grown into a globally integrated production hub, driven by economic integration, multinational investments and resource-driven specialisation. RVCs enable ASEAN nations to specialise in different aspects of vehicle production, creating an ‘ASEAN car’ assembled from components made in multiple Member States, collectively forming a competitive auto manufacturing ecosystem. Currently, combined motor vehicle sales in 6 major ASEAN countries (Indonesia, Malaysia, Thailand, the Philippines, Vietnam and Singapore) amounted to 3.4 million units in 2022, an increase of 2.7 million units in 2021. Additionally, sales in two-wheelers jumped 12% from 3.5 million units in 2021 to 4 million units in 2022. Production of motor vehicles rose 19.2% year on year between 2021 and 2022. It grew to 4.3 million units in 2022 from 3.5 million units in 2021 (Invest in ASEAN, n.d.).

3.4.1 Key enablers of ASEAN's automotives success

- **Trade and policy integration:**
 - The ASEAN Free Trade Area, launched in 1992, eliminated tariffs (0–5% rates), fostering cross-border production (MITI, n.d.).
 - ASEAN Industrial Cooperation and Brand-to-Brand Complementation joint venture schemes facilitated regional specialisation in parts and components (Kobayashi, 2014).
 - The ASEAN Economic Community harmonised auto regulations, creating a single production base for 600+ million consumers.
- **Strategic product specialisation for scale:**
 - Thailand has become a pickup truck hub, exporting globally.
 - Indonesia dominates multi-purpose vehicles and is an EV hotspot owing to vast nickel reserves.
 - Malaysia's national car strategy (Proton, Perodua) fosters local industry growth.
 - Vietnam is emerging in EV production (VinFast).
 - Two-wheeler boom: With growing a middle class, motorcycles and scooters have become primary modes of transport, given their affordability and efficiency. In 2019, two-wheeler sales in key ASEAN countries peaked at nearly 15 million units, with Indonesia as a key source as the world's third largest motorcycle producer (Le and Yang, 2022).
- **Multinational investments and technology transfer:**
 - Japanese automakers (Toyota, Honda, Mitsubishi) dominate, using ASEAN as a key export base.
 - Chinese brands (BYD, Great Wall) invest heavily in EVs, battery manufacturing and raw material extraction (Indonesia's nickel).
 - Government incentives attract FDI, ensuring sustained industrial growth.
 - Manufacturers treat ASEAN as one production base under the 'ASEAN car' concept. For example, Toyota manufactures its diesel engines in Thailand, gasoline engines in Indonesia and manual transmission production in the Philippines. (Toyota Global, n.d.).
- **Population growth and labour cost advantage:**
 - ASEAN's large population (670+ million) ensures a strong domestic consumer base for vehicles.

- Vietnam, for example, offers low-cost labour and a rapidly expanding middle class, making it attractive for foreign manufacturers shifting production from China.
- **ASEAN's EV transition: a future-proof strategy**
 - Chinese investment drives EV growth (BYD plants in Thailand, Indonesia, Malaysia, Cambodia and Lao PDR).
 - Governments provide EV incentives, tax breaks and charging infrastructure expansion.
 - ASEAN's nickel supply is crucial for EV batteries, creating a raw material advantage.

3.4.2 Adaptation for Africa: replicating ASEAN's model

Africa, like ASEAN, has a rich supply of raw materials (cobalt, lithium, nickel) that can be harnessed. Additionally, a growing middle-class consumer market as ASEAN had will increase demand for affordable mobility. To replicate ASEAN's success, Africa can:

- **Create a regional auto value chain:**
 - Specialisation: Countries should focus on specific vehicle types (e.g. Nigeria: passenger cars, South Africa: trucks, Kenya: motorcycles).
 - Resource-driven hubs: Leverage DRC's cobalt for EV batteries, South Africa's steel for vehicle frames and Kenya's assembly plants.
- **Implement trade and policy integration:**
 - Expand the AfCFTA to remove tariffs on auto components.
 - Introduce regional industrial incentives for cross-border supply chains, as with ASEAN Industrial Cooperation.
- **Attract FDI and encourage technology transfer:**
 - Partner with Japanese, Chinese and European automakers for local production hubs.
 - Invest in EV infrastructure to attract global battery manufacturers.
- **Develop domestic brands and industrial policy:**
 - Follow Malaysia's model with government-backed automakers, keeping in mind to maintain a favourable business environment for FDI-linked production.
 - Support local component suppliers (e.g. tire, battery, wire harness production).

By adapting ASEAN's regional trade policies, production specialisation and FDI-driven industrialisation, Africa can develop a competitive auto sector, creating jobs, attracting investment and positioning itself as a global manufacturer with regional multi-hubs.

3.5 The African Continental Free Trade Agreement

This section examines the geopolitical opportunities that could foster the development of RVCs in Africa, as well as the geopolitical challenges that could hinder its progress.

3.5.1 Africa needs to industrialise through the development of value chains

Africa is experiencing a notable economic transformation, wherein regional integration and industrialisation are pivotal in promoting sustainable development. The preceding chapters have referenced the AfCFTA, inaugurated in 2019 as a key initiative of the AU. The AfCFTA seeks to unify the 55 member nations of the AU and eight Regional Economic Communities (RECs) into a single trading area, thereby facilitating regional integration and development (AU, 2023). In addition, the AfCFTA fosters job creation and investment to improve Africa's long-term competitiveness. The AfCFTA constitutes the largest FTA worldwide since the formation of the WTO (Haruna, 2022). One of the pathways for economic growth in the AfCFTA is the development of RVCs, which enables African nations to add value to their raw materials, create employment and enhance economic resilience.

The preceding chapters have highlighted the influence of geopolitics on Africa's regional integration and industrialisation initiatives. The AfCFTA should embrace a development regionalism strategy in its endeavours to industrialise instead of depending on the ideologically motivated open regionalism model (Ismail, 2021). Developmental regionalism addresses the opportunities and challenges posed by evolving geopolitical dynamics.

A study by the United Nations Economic Commission for Africa (UNECA) (2015) argues that Africa should avoid trade policies that expose emerging industries to competition that may result in deindustrialisation. The study highlights the importance of trade in advancing industrialisation and structural transformation in Africa, thus reaffirming the notion of developmental regionalism. African countries are becoming more integrated into GVCs, although they serve as primary suppliers of raw materials and low-value manufactured goods, which has positioned them in the lowest tier within these chains (ibid.). The UNECA report posits that industrial development should be central to trade and industrial policy for African countries to benefit from GVCs.

The Africa Export Competitiveness Report 2023 shows a 16.8% increase in Africa's exports in 2023, resulting in \$665.4 billion, mostly from minerals and IT services (Institute for Competitiveness Africa et al., 2023). This analysis indicates that, while Africa's exports are still dominated by raw materials, there is increasing potential in the IT services sector. The AfCFTA enables African countries to optimise laws and standards to enable a more reliable business climate that

promotes regional collaboration. The current geopolitical tensions, characterised by rivalry among the dominant global economies, present opportunities and challenges for the AfCFTA. Furthermore, Africa is encountering evolving dynamics with major global players such as Europe, Russia, China and the US. These geopolitical dynamics require a coordinated strategy from the African continent to take advantage of the changing geopolitics (Yaw et al., 2024).

The AfCFTA offers the components that are vital to promoting socioeconomic development in Africa and creating a unified continent with a diversified economy. This encompasses enhancing value-added export portfolios, promoting manufacturing and industrialisation, broadening services, and enabling the unrestricted movement of individuals (AU, 2019).

The AfCFTA industrialisation process is aligned with AU initiatives to promote industrialisation and trade within the continent, such as Accelerated Industrial Development for Africa (AIDA) and the Programme for Infrastructure Development in Africa (PIDA) (AU, 2020). The focus of these initiatives is on improving infrastructure, enhancing manufacturing capabilities and promoting intra-African investment. By aligning national policies with these continental frameworks, African countries can create a more conducive environment for the growth of RVCs.

Africa's industrialisation strategies should be contextualised. Industrialised nations typically advocate for free trade to promote their export interests while endorsing protectionism to safeguard their domestic interests (Krugman et al., 2018). Consequently, the GATT had a bias favouring richer nations. The previously GATT, and now WTO, framework integrated the principle of special and differential treatment to mitigate this inconsistency within the trade system (Stiglitz, 2002). Nevertheless, developing nations criticised the execution of special and differential treatment for failing to address their essential development issues concerning the necessity for structural transformation and industrialisation of their economies. They contended that special and differential treatment was inadequate and insufficient, advocating for the integration of development within the WTO framework.

African countries should leverage the experiences of developing nations in the WTO during the AfCFTA discussions and implementation phase (Gathii, 2020). The AfCFTA must include the requirements and concerns of least developed countries and small and vulnerable economies. It should be noted that special and differential treatment alone will be inadequate to guarantee these countries gain from the AfCFTA (El-Sayed, 2018). Consequently, the notion of developmental regionalism is recommended for policy-makers and negotiators to contemplate as they initiate the implementation of the AfCFTA.

Africa's industrialisation must emphasise the rapid advancement of commodity-based industrialisation as a driver for growth, productive employment and economic diversification via RVCs that leverage the continent's natural resources. The priority value chains include health and pharmaceuticals, automotives, mineral beneficiation, food and nutrition, and cotton apparel sectors (AU, 2022).

Africa needs better coordination of investments in infrastructure and energy through collaboration with financial institutions and partners, thereby reducing production costs and improving the competitiveness of African economies. Additionally, Africa needs domestic resource mobilisation for sustainable financing of its industrialisation. Another area of focus is the establishment of sustainable Special Economic Zones and Industrial Parks, while also collaborating with and supporting existing ones in member states, to address current industrial infrastructure limitations and facilitate RVC integration (AU, 2022).

3.5.2 Global supply chains and enhancing regional value chains

Global supply chains

Africa's industrialisation will address global supply chain challenges by attracting foreign investment in labour-intensive manufacturing sectors, such as textiles, automobiles and critical minerals, while also responding to concerns within these supply chains such as dependency on imports for certain inputs as well as the need to broaden export markets.

The geographical closeness of North Africa to Europe, particularly regarding automobile exports, needs to be harnessed as it is a typical example of nearshoring, while addressing a gap in global supply chains. Most exports and imports across various sectors are influenced by friendshoring, facilitated by both existing and new alliances, while simultaneously excluding those perceived as adversarial to specific nations. The China–US trade conflict and supply chain interruptions, such as those caused by Covid-19, have compelled corporations to reevaluate their dependence on Chinese manufacturing. This transition presents African nations with an opportunity to establish themselves as alternative manufacturing and sourcing centres, particularly in industries such as textiles, medicines and electronics (Doe, 2023).

The AfCFTA aims to augment intra-African trade by diminishing tariffs and promoting regional integration; however, it remains significantly reliant on global shipping networks for essential inputs, including machinery, intermediate commodities and industrial raw materials (UNECA, 2022). Current supply network vulnerabilities jeopardise Africa's industrial aspirations to foreign disruptions, constraining regional manufacturers' capacity to competitively expand operations (IMF, 2023c).

Africa's automotives sector is significantly dependent on imported components from China, Japan and Europe. Disruptions in marine trade routes impede production cycles, elevate import costs and hinder African enterprises from achieving the AfCFTA's goals of industrial self-sufficiency (UNCTAD, 2022). Furthermore, inconsistent supply chains impede FDI in Africa's industrial sector, as investors favour regions with more reliable trade logistics (WTO, 2023a).

The restructuring of global supply chains has increased the strategic significance of African minerals. African nations can capitalise on their mineral resources to negotiate improved trade agreements and investment collaborations, as Western countries and China compete for reliable supplies of essential minerals (World Bank, 2023b). The US Inflation Reduction Act incentivises US firms to procure important minerals from areas beyond China, presenting Africa with the chance to emerge as a favoured supplier (IEA, 2023). The EU's Critical Raw Materials Act seeks to diversify mineral supply chains, hence enhancing Africa's bargaining leverage in trade agreements (OECD, 2023a).

China's Belt and Road Initiative has significantly invested in African mining infrastructure; yet apprehensions regarding resource dependency and worker rights are leading African governments to advocate for value-added processing rather than raw exports (UNCTAD, 2023c). African authorities must guarantee that investment agreements emphasise local value addition, sustainable mining methods and technology transfer, so averting a recurrence of historical resource exploitation trends (IMF, 2023b).

Enhancing regional value chains

In their efforts to mitigate risks associated with China, multinational corporations may pursue alternative suppliers. African enterprises can leverage the AfCFTA framework to integrate RVCs, so capitalising on heightened demand (AU, 2020). Prioritising regional processing of raw materials, such as lithium for batteries, might decrease the export of unprocessed commodities (UNCTAD, 2021a).

Africa has historically been a major exporter of raw commodities, neglecting the economic advantages of downstream processing, job creation and industrialisation (World Bank, 2023a). The transition to green energy and battery technologies offers an opportunity to create RVCs, ensuring minerals are processed, purified and utilised in Africa prior to entering global markets.

The following initiatives are critical for establishing green energy RVCs in Africa encompass:

- **Enhancing refinement and processing capabilities:** Currently, China leads the world in mineral refining, processing over 60% of lithium, 70% of cobalt and 90% of rare earth elements (IEA, 2023). African countries can diminish reliance on foreign

processors by investing in domestic beneficiation facilities and refining infrastructure (UNCTAD, 2023c). DRC and Zambia have commenced negotiations to create a regional battery manufacturing hub, hence diminishing raw material exports (AfDB, 2023d).

- **Establishing domestic production for battery and EV sectors:** Countries such as South Africa and Morocco are establishing themselves as manufacturers of lithium-ion batteries and EV components (OECD, 2023). Combining mineral processing with local assembly facilities for EVs and renewable energy storage systems can position Africa as a competitive centre for sustainable technology manufacturing (IMF, 2023b).
- **Utilising the AfCFTA:** The AfCFTA provides a structure for transnational mineral processing and supply chain cooperation, diminishing dependence on external markets (UNECA, 2023). Enhancing intra-African commerce in processed minerals enables nations to establish regional industrial clusters that bolster local economies and offer employment opportunities.

3.5.3 Opportunities presented by the changing geopolitical dynamics in the AfCFTA

China has markedly enhanced its economic involvement in Africa via initiatives like the Belt and Road Initiative, which has enabled substantial investments in infrastructure, energy and telecoms (Brautigam, 2020). The China-Africa Research Initiative reports that China's entire FDI stock in Africa amounted to over \$44 billion by 2020, with notable investments in Nigeria, Kenya and Ethiopia (Johnston, 2021). The US aims to counteract Chinese influence in Africa with projects such as Prosper Africa and the Build Back Better World alliance, which promote private sector investments, trade agreements and governance changes (Brown, 2022). These infrastructure initiatives can be extended to regional integration under the AfCFTA by guaranteeing cross-border connection and promoting trade. The AfCFTA can establish a conducive framework that optimises these investments for regional advantage, facilitating economic corridors that link landlocked nations to international markets.

The rivalry between these two economic powers provides African states with leverage to negotiate trade agreements that are aligned with their development objectives. Countries participating in the AfCFTA framework can gain advantages by showcasing a cohesive market that draws more FDI. Research indicates that regional economic integration increases trade efficiencies and bolsters investor confidence (UNECA, 2021). Additionally, trade blocs like the East African Community and the Economic Community of West African States can leverage their combined bargaining power to obtain advantageous terms from both the US and China (Mlambo, 2020).

The AfCFTA, recognised as the largest free trade area globally by number of member countries, enables African nations to enhance intra-African trade by more than 50% via tariff reductions and enhanced trade policies (World Bank, 2020a). This integration enhances Africa's bargaining power with external investors where the AfCFTA strategically positions the continent. African nations can diminish their reliance on raw material exports, which have traditionally exposed them to global market volatility, by promoting industrialisation and value-added exports (Rodrik, 2018).

Amid heightened geopolitical tensions between China and the US, both nations have intensified their efforts to expand their economic and political influence in Africa. This strategic rivalry broadens trade and investment channels and offers African states an opportunity to get investment in critical sectors such as infrastructure, industry and technology (Sheehy, 2022). The AfCFTA offers a distinctive platform for African nations to capitalise on this interest, strategically positioning themselves to negotiate favourable trade deals and augment FDI inflows from global powers. One of the priority areas for the AfCFTA is infrastructure projects, which should be planned and executed at a regional level, rather than just nationally, to maximise impact. This means developing cross-border railways, roads, energy grids and digital networks to facilitate trade and integration.

The escalating China–US competition in Africa presents African governments with a strategic chance to secure investment and promote economic development. Success in capitalising on these opportunities will hinge on the capacity of African governments to enact cohesive policies, fortify institutions and negotiate trade agreements that emphasise sustainable economic growth. By leveraging the AfCFTA and regional trade agreements, Africa may establish itself as a significant global economic entity while maintaining relations among competing superpowers.

The global shift to renewable energy is transforming industrial supply chains, presenting a unique opportunity for resource-abundant African countries to capitalise on their extensive reserves of essential minerals. As nations endeavour to decarbonise their economies and transition from fossil fuels, the demand for lithium, cobalt, graphite, nickel and rare earth elements – essential components in EV batteries, solar panels, wind turbines and energy storage systems – is surging dramatically (IEA, 2023). Africa, possessing substantial deposits of natural resources, has a distinctive chance to transcend raw material exports and develop RVCs centred on local processing, refining and manufacturing (UNCTAD, 2023c).

Africa possesses a substantial endowment of important minerals such as cobalt, lithium and graphite, with numerous countries containing globally significant reserves. While these minerals have traditionally been exported in their raw form, the increasing global demand for sustainable and ethical supply chains is pushing African

economies to develop domestic processing and manufacturing capabilities (IEA, 2023).

3.5.4 Sectoral support

Industrialisation in Africa will enable the continent to substitute imports and establish Africa as a manufacturing hub and a significant exporter of manufactured goods on a global scale, particularly as geopolitical factors drive the search for alternative markets. The AfCFTA advocates for policies that enhance domestic production and processing sectors. This diminishes reliance on imports, especially for products that Africa can manufacture domestically. Through the integration of RVCs, the AfCFTA promotes African nations to obtain raw materials and intermediate goods domestically rather than from foreign markets (OSAA, 2023).

Import substitution diminishes Africa's dependence on foreign currencies for trade, hence stabilising economies and alleviating external economic shocks. Bolstering local enterprises promotes self-sufficiency and encourages export-oriented industry, a fundamental component of the AfCFTA through utilising tariff reductions and market access. The AfCFTA facilitates duty removal on intra-African trade, enhancing the competitiveness of African-produced commodities relative to imports from outside the continent. This encourages enterprises to favour localised sourcing instead of intercontinental imports (Agyapong and Anyars, 2022). The AfCFTA specifically targets agribusiness, pharmaceuticals, textiles and automobiles, sectors that possess significant potential for import substitution. Africa imports a substantial amount of its pharmaceuticals and processed foods, despite the availability of indigenous manufacturing resources (Institute , 2023).

3.5.5 Rules of origin that support Africa's industrialisation initiative

The AfCFTA offers a substantial opportunity to advance Africa's automobiles sector by utilising RoO to enhance intra-African trade, industrialisation and global competitiveness. RoO establish the conditions that ascertain a product's eligibility for preferential tariff treatment under a trade agreement (WTO, 2023a). By implementing strategic RoO, African states can cultivate RVCs, diminish reliance on international automobile imports and enhance domestic manufacturing.

The geopolitical dynamics of the global automobile industry, marked by trade conflicts among the US, China and the EU; evolving supply chains; and the EV transformation, present both opportunities and problems for Africa. The AfCFTA must formulate and execute efficient RoO to guarantee that African nations optimise advantages from automobiles while adapting to global trade changes. RoO can serve as an essential policy instrument within the AfCFTA to:

- **Promote the advancement of RVCs:** RoO can promote the local procurement of automotive components, including steel, aluminium, tyres, batteries and electronic systems, thereby ensuring African manufacturers utilise regionally sourced inputs instead of relying on non-African suppliers (UNCTAD, 2023c). This may facilitate cross-border industrialisation, wherein nations with robust manufacturing sectors (e.g. South Africa, Morocco and Egypt) provide essential components to burgeoning automotive centres in Ghana, Kenya and Nigeria (AfDB, 2023d).
- **Reduce dependence on foreign automobile imports:** Africa currently exhibits significant reliance on vehicle and auto parts imports, with China, Japan and the EU comprising over 80% of these imports (Afreximbank, 2023). Stringent RoO may restrict the entry of foreign-assembled automobiles into Africa under AfCFTA advantages, thereby promoting investment in domestic assembly facilities (World Bank, 2023b).
- **Enhance the competitiveness of Africa's emerging EV market:** The worldwide transition to EVs offers Africa the chance to establish itself as a significant contributor to EV component production (IEA, 2023). RoO may stipulate a minimum percentage of domestically derived lithium, cobalt and nickel in batteries, so ensuring Africa's vital mineral resources are utilised to establish EV value chains instead of being exported as unprocessed materials (UNCTAD, 2023c).
- **Attract FDI and facilitate technology transfer:** African states might entice major automakers to develop assembly plants and production facilities on the continent by implementing RoO thresholds that necessitate local collaborations and knowledge transfer (OECD, 2023c). This strategy has been effectively utilised by Morocco and South Africa, where Renault, Volkswagen, Toyota and Ford have invested in domestic manufacturing plants owing to advantageous trade policies (AfDB, 2023e).

Geopolitical factors significantly influence the implementation of RoO, particularly in response to shifting global trade patterns. The ongoing trade tensions between China and the US have driven corporations to diversify their supply chains, creating opportunities for Africa to strengthen its automotives sector (IMF, 2023a). By structuring RoO to incentivise global automakers to establish assembly and component manufacturing plants within Africa rather than relying on Chinese supply networks, the continent can enhance its role in global trade. Additionally, aligning with US initiatives such as Prosper Africa can attract US investment into Africa's vehicle manufacturing industry, reinforcing economic ties with the US while reducing dependence on Asian supply chains(ibid).

The EU's evolving trade policies, particularly its stringent environmental regulations and the CBAM, are reshaping global

supply chains by compelling automakers to seek sustainable, lower-carbon alternatives (Supplyon ESG, 2024). The AfCFTA can leverage these changes by structuring RoO to promote African-manufactured EV components as a viable substitute for Asian imports.

Furthermore, strengthening EU–African collaborations in battery production and vehicle assembly aligns with Europe’s Green Deal objectives, positioning Africa as a key player in the global transition to sustainable mobility. This strategic alignment could enhance Africa’s access to European markets while fostering local industrialisation.

China’s Belt and Road Initiative has deepened its engagement in Africa’s automotives sector, particularly through infrastructure development and the establishment of car assembly plants in Ethiopia, Egypt and Nigeria (UNCTAD, 2023c). While this investment has contributed to Africa’s industrial capacity, it has also increased reliance on Chinese supply chains. To mitigate this dependency, the AfCFTA’s RoO could mandate a minimum percentage of components to be sourced from within Africa, fostering intra-African trade and industrialisation. Additionally, implementing tariff differentials that favour automobiles manufactured with domestically produced components over foreign inputs would help level the playing field and reduce the competitive dominance of Chinese imports. Through these measures, Africa can assert greater control over its automotive value chains and enhance regional economic integration.

To fully harness the potential of the automotives sector under the AfCFTA, it is essential to establish comprehensive and flexible RoO that support regional industrialisation, encourage local production and enhance Africa’s position in GVCs. The following key recommendations outline how RoO can be optimised to drive the growth of Africa’s automotives industry:

- Mandate a minimum of 40–50% local content for automobiles to qualify for AfCFTA tariff benefits, fostering the development of regional supply chains.
- Distinguish between ICE automobiles and EVs, advocating for more localisation of EV battery supply chains.
- Address the challenge of disparate automobile safety and pollution laws among African nations by developing a cohesive AfCFTA automotive regulatory framework to enhance intra-African trade in automobiles and components (AfDB, 2023c).
- Put in place lower tariffs on AfCFTA-compliant vehicles to promote domestic production in Africa.
- Implement provisional tariff safeguards for nascent automotive centres, allowing native industries to mature before engaging in competition with imports.
- Engage in negotiations with China, the EU and the US to obtain preferential access for African-manufactured vehicles and

automotive components while protecting local businesses from being reduced to simple assembly operations for foreign enterprises.

- Establish Special Economic Zones dedicated to vehicle manufacturing, particularly in nations with robust industrial infrastructures such as South Africa, Morocco and Egypt.
- Encourage collaborative enterprises across African nations to establish cohesive supply chains for the manufacture of steel, plastics, electronics and rubber.

The RoO established by the AfCFTA can effectively enhance Africa's automotives sector, establish RVCs and diminish reliance on international vehicle imports. By meticulously crafting RoO that correspond with geopolitical trade realities, Africa may entice investment from international automakers while preserving its industrialisation goals. Nonetheless, the efficient execution and enforcement of these regulations will be crucial to avert loopholes that may compromise local production.

Amid escalating global demand for EVs, evolving supply networks and intensifying trade tensions among leading nations, Africa must capitalise on this chance to establish itself as a competitive and self-reliant entity in the global automotives sector.

3.5.6 Opportunities presented by the AfCFTA Implementation Review Mechanism

The AfCFTA Implementation Review Mechanism (AFIRM) was established in July 2024 to assess advancements in the execution of the AfCFTA. The formation of AFIRM represents a significant advancement in guaranteeing that the continent capitalises completely on the advantages of economic integration via systematic monitoring, evaluation and policy modifications (Yaw et al., 2024). The mechanism is intended to monitor implementation milestones, recognise difficulties and capitalise on emerging possibilities, rendering it a vital governance instrument for advancing Africa's industrialisation and trade competitiveness.

AFIRM functions as a systematic framework to evaluate the efficacy of AfCFTA policies and their influence on trade liberalisation, industrial development and economic transformation. It conducts periodic evaluations to ensure member states comply with established obligations, hence promoting accountability and transparency in trade governance (UNCTAD, 2023a). The tool emphasises inadequacies in tariff liberalisation, enforcement of rules of origin, trade facilitation measures and infrastructure development, enabling policy-makers to rectify weaknesses before they evolve into systemic barriers (ibid).

Improving regional and continental value chains

AFIRM offers a significant opportunity to incorporate the enhancement of value chains into the evaluation process. RVCs are essential for industrialisation, employment generation and economic diversification. AFIRM enables African nations to evaluate the advancement and competitiveness of intra-African value chains and pinpoint sectors necessitating further investment, policy enhancement, or regulatory modifications (UNCTAD, 2023a). The review system facilitates the alignment of industrial policies with AfCFTA objectives, ensuring trade liberalisation results in improved production capacities and greater local value creation.

Capitalising on emerging opportunities in trade and investment

AFIRM empowers African governments to recognise and use growing trade and investment prospects within the AfCFTA framework. Through the systematic analysis of trade patterns and industrial performance, AFIRM can assist governments and businesses in identifying sectors with increasing demand, investment influx or changes in comparative advantage (African Peer Review Mechanism, 2022). The review system can also enable the early identification of global economic trends – such as supply chain realignments and the rise of digital trade – that can be utilised to Africa's benefit.

Guaranteeing policy consistency and institutional coordination

An effectively organised review process such as AFIRM improves policy consistency and institutional collaboration at national, regional and continental tiers. The mechanism guarantees that AfCFTA-related policies are consistent with national development objectives and REC frameworks (African Peer Review Mechanism, 2022). AFIRM facilitates collaboration towards the development of the AfCFTA Implementation Review Mechanism (AfIRM). African Peer Review Mechanism). This harmonisation is essential for preventing policy fragmentation and optimising the collective impact of trade and industrialisation activities throughout the continent. Through the rigorous assessment of policy implementation deficiencies, AFIRM facilitates ongoing policy enhancement to guarantee the AfCFTA pledges result in concrete economic advantages.

Enhancing capacity development and providing technical support

AFIRM offers significant potential through its capacity-building and technical support for member states. Numerous African nations have institutional and technological limitations in the successful implementation of AfCFTA requirements. AFIRM can address these deficiencies by assessing capacity requirements, suggesting specialised training initiatives and promoting knowledge-sharing platforms (OECD, 2024). Furthermore, the approach can assist

development partners and international organisations in allocating financial and technical resources to areas of most necessity.

AFIRM is a crucial instrument for guaranteeing the effective implementation and enhancement of the AfCFTA Agreement. AFIRM strengthens Africa's capacity to optimise the economic potential of intra-African trade through rigorous progress tracking, deficiency identification, RVC fortification and policy alignment. For the mechanism to be genuinely effective, it must be inclusive, data-driven and underpinned by robust institutional frameworks. Advancing and utilising AFIRM's findings to promote industrialisation, trade facilitation and economic transformation will be crucial for Africa's sustained success.

4 Key automotives case studies in Africa

This section provides two case studies, of South Africa and Morocco, to highlight the essential characteristics of the automotives industry, as well as current trends and challenges. The industry in the two countries share some features, including strong OEM investment, technology and partnerships. However, while the South African industry has spawned a supply chain for some inputs across the continent, the Morocco industry operates mainly within the European value chain, with weak African backward linkages. On the other hand, much emphasis has been placed in Morocco on research and development (R&D), training and skills-building. This has supported the rapid growth of the industry and the pioneering of the 'made by Morocco' Nam X's Hydrogen Utility Vehicle with potential for scale and exports.

4.1 South Africa

The South African automotives sector is touted as a success for the African continent; however, the reality behind its growth and success is more nuanced. Shifting geopolitics and economic requirements have created new complications for the sector's growth. This case study assesses the impact of global trade and investment policies on the automotive value chain in Africa, with a particular focus on South Africa. The study has three key focus areas:

- 1 technological shifts and advancements for automotive production, and their impact on the South African automotives industry
- 2 geopolitical tensions and changing requirements in South Africa's main export markets, including possible challenges arising from a Trump-led presidency in the US, the EU's requirements for EVs and the influence/impact of Chinese automotives production on the South African sector
- 3 the possibility for RVC creation, South Africa's ability to help develop the 'hub and spoke' model and South African automotives opportunities under the AfCFTA.

4.1.1 Overview of the sector and implications of looming technological advancements

South Africa has the largest automotives industry on the continent; on average, 600,000 vehicles have been produced since the mid-

2000s, from a range of multinational manufacturing plants (Monaco and Wuttke, 2023). The sector is a strong contributor to the domestic economy. In 2023, the auto sector comprised 16.7% of total trade and made a 5.3% contribution to GDP (naamsa, 2024). It made up 31.9% of the country's manufacturing output, with \$14.7 billion in total automotive exports and \$3.6 billion in value component exports (NAACAM, 2022). This is the result, in part, of strong export participation underscored by favourable policies encouraging FDI, substantial state incentives to grow and support the sector⁹ as well as import rebates to offset import duties for exporters of automobiles vehicles and components (Miao, 2023). Table 4 provides a brief overview of the various policy instruments used to date in supporting the development of South Africa's automobiles sector.

Table 4 Overview of changing policies overseeing the South African automobiles industry

Policy/legislation	Overview and target areas
Motor Industry Development Programme (MIDP) 1995–2007	Lowered import tariffs on both vehicles and components from 80% in 1999 to 30% in 2007. Incentives offered under the MIDP to attract FDI resulted in significant export growth. Foreign ownership increased.
Automotive Production and Development Programme (APDP) 2013–2020	Maintained the same level of import tariff, but aimed to increase economies of scale, promoting greater diversification and growth, and to create jobs at the assembly level. Did not substantially alter government's position of compensating local production with import credits, to the disadvantage of efforts to localise manufacturing operations.
APDP II 2021–2035*	Implemented within the confines of the SAAM, this is a Trade-Related Investment Measure (TRIM) allowing for safe and secure FDI and for duty rebates for the localisation of activities. The TRIM allowances drive the existing export trends in the country.
South African Automotive Masterplan (SAAM)	An extension of the APDP but more ambitious, and has higher targets related to increased production, local content and employment across the sector.

Source: Authors (* = AIEC, 2023)

A number of global OEMs have established manufacturing facilities across the country: Ford, BMW and Nissan/Renault are located in Pretoria, Volkswagen and General Motors are in Gqeberha, Mercedes Benz is in East London and Toyota is located in Durban. Accompanying a tri-clustered OEM operation in South Africa exists a fairly large local supplier base that has developed across the country.

⁹ As much as R25 billion per year, which accounts for more than half of the government's spending on industry incentives (see Stern and Ramkolowan, 2021, and Department of Planning, Monitoring and Evaluation, 2018).

While the automotives sector has grown over the past 30 years and tells a successful FDI and export story, the effects on localisation and industrialisation are more complicated. Efforts to grow the automotives industry resulted in sharp increases in foreign ownership of OEMs. This has impacted local industry development, as local suppliers have increasingly become reliant on the acquisition of a global partner in order to ensure access to international markets. While 80% of the sector are Tier 1 producers, approximately 65% of these are multinational manufacturers. Domestic manufacturers are largely Tier 2 and Tier 3 suppliers.

The components industry mainly involves the assembly of imported component parts rather than local manufacturing. In this case, investment is superficial and does not cost the supplier much. The components manufacturing sector employed 82,560 people in 2023 (NAACAM, 2022), with vehicle manufacturers employing 33,509 people (naamsa, 2024). Neither vehicle nor component design nor R&D activities are undertaken in South Africa, entrenching the country's inability to capitalise on localisation of manufacturing activities (with the exception of catalytic converters, the only component that is produced *en masse*, and which accounted for 48.3% of the total share of component exports in 2022: Moshikaro-Amani and Mahlangu, 2024). What is localised domestically is the manufacturing processes for a variety of different vehicle components for different models and assemblers, known as 'shared technologies' (Monaco and Wuttke, 2023).

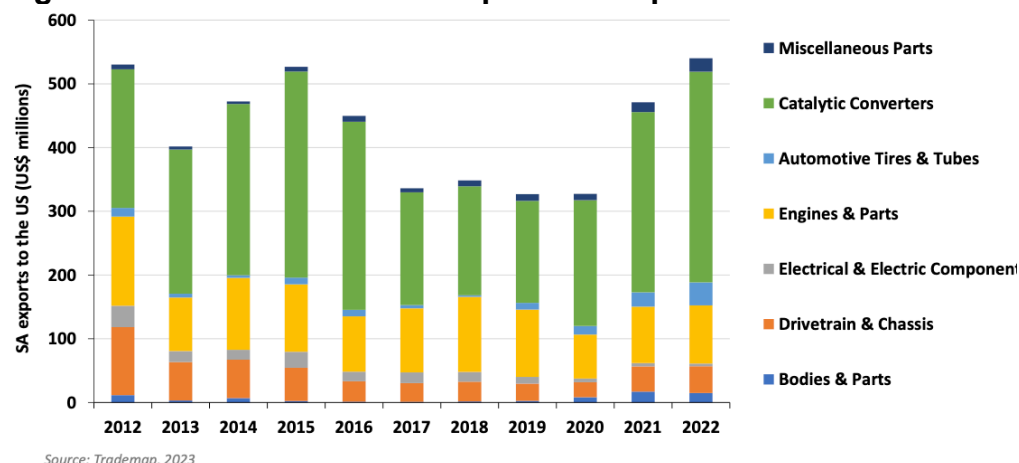
For component manufacturers, there are four key challenges (Monaco and Wuttke, 2023):

- 1 Policy incentives and the rebate mechanism have allowed for increased imports of components. This has deterred the development of local component manufacturers, leading to a reduction in Tier 2 and 3 component suppliers (AUC and OECD, 2022). This structural challenge persists, and in 2023 component exports declined by R3.4 billion, from R70.3 billion in 2022 to R66.9 billion in 2023 (naamsa, 2024).
- 2 South Africa does not have a sufficiently large international footprint and has higher producing costs compared with cheaper competitors (i.e. China).
- 3 The distance from main export markets makes component exports from South Africa largely unattractive.
- 4 Capacity challenges mean lower-volume production, which has not helped promote component manufacturing and exports, with the country unable to meet economies of scale.

In 2022, 46.8% of all component exports went to the EU, followed by Africa at 24.3% and North America at 13.8% as the top three markets. Oceania and Asia both came in as recipients of 10.7% of component exports (NAACAM, 2022). It is important to note,

however, that, for both the EU and the US markets, catalytic converters – used predominantly in ICE vehicles – constitute the vast majority of component exports – and they have been on the decline (Figure 12).

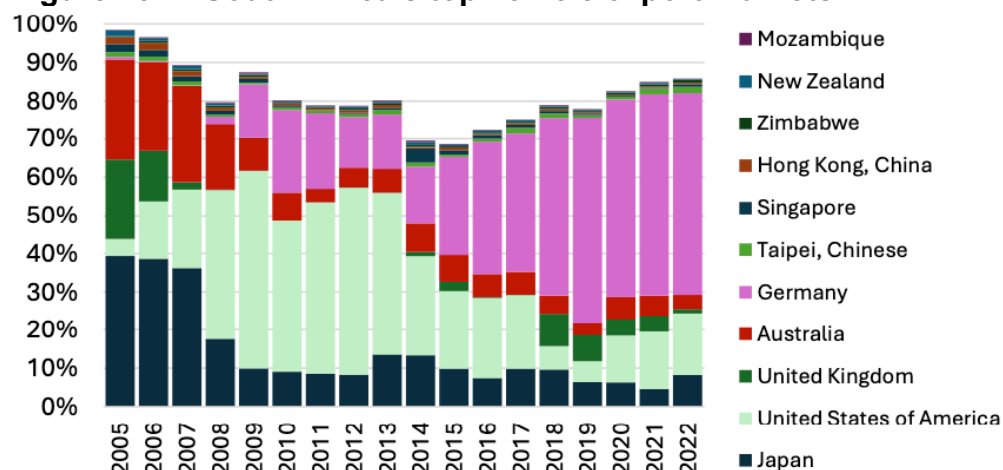
Figure 12 South African components exports to the US



Source: NAACAM (2022)

Exports of automotive vehicles have experienced more success. In 2022, South Africa exported 63% of all vehicles produced (the dtic, 2023). Exports in 2023 were at an all-time high, gaining 13.6% compared with 2022 exports, and vehicle exports remain critical for domestic OEMs' financial viability and sustainability in the country (naamsa, 2024). The strong investment from OEMs has given rise to extensive exports of vehicles to the EU (Germany specifically) and the US as key export markets (Figure 13).

Figure 13 South Africa's top vehicle export markets



In terms of light vehicles (passenger cars and light commercial vehicles) exported in 2022, the UK, Germany, France, Japan and the US were the top export destinations. In 2022, VWSA, with its Polo model, maintained its top position for the fourth consecutive year (AIEC, 2023).

Nevertheless, South Africa remains a second-tier player in the global automotives industry, producing less than 1 million vehicles annually. South Africa's automotives sector has a particularly unique set of challenges – while export intensity increased from 25% in 1995 to nearly 40%, foreign value-added content increased from 27% to 35% – placing South Africa in the unique position of relatively average performance compared with peer developing countries, with higher than world average backward GVC participation but lower than world average export intensity (based on 2018 data) (Miao, 2023). Importantly, South Africa has also not been able to differentiate itself by specialising in the production of specific parts and components, as many Eastern European countries have done (ibid.) – as a cumulation of the challenges around lack of R&D and localisation identified above. The absence of specialisation may also help explain why backward integration and GVC participation continues to dominate South Africa's productivity and participation in the global automotives market.

Traditional challenges also continue to impede the sector's development, including (i) an inefficient logistics system, (ii) the country's remote geographical location (a bigger challenge for component exports compared with fully assembled vehicles, whereby the policy incentives have helped offset the logistical disadvantages; Monaco and Wuttke, 2023), (iii) challenges around power cuts (loadshedding), which have improved in recent months but nonetheless have resulted in diminished returns for the manufacturing sector at large for the past few years and (iv) shortage of the skills needed to support greater levels of diversification.

To address some of the sector's imbalances, the South African Government has implemented the SAAM (Table 5).

Table 5 Overview of targets under the SAAM

Key industry development objectives	Key statistics
Grow South African vehicle production to 1% of global output	Becoming a Tier 1 producer will help South Africa attract greater levels of investment but also support greater opportunities for R&D, innovation and technological advancement.
Increase local content in South African assembled vehicles to up to 60%	Local content has hovered around 35% despite efforts to grow local content. The SAAM aims to address this, through 60% attainment for locally assembled vehicles and a 50% objective for high technology and high-value passenger assembly.
Double total employment in the automotives value chain	Employment efforts are focused on growth from 112,000 to 124,000 people employed in the sector

Key industry development objectives	Key statistics
Improve automotives industry competitiveness levels to that of leading international competitors	Increase domestic vehicle production to 1.4 million units by 2035, representing approximately 1% of global output.
Transform the automotives industry through the employment of Black South Africans, upskilling of Black employees, empowerment of dealerships and authorised repair facilities and substantially increasing the contribution of Black-owned automotives component manufacturers within the automotives supply chain	The SAAM ambition is to have 25% black-owned involvement at Tier 2 and Tier 3 supply level.
Deepen value addition within South African automotives value chain	Growth of R&D and innovation within the automotives value chain.

Source: Department of Trade, Industry and Competition (2018)

There are, however, two important caveats to these ambitions: (i) the SAAM was prepared prior to the Covid-19 pandemic, and domestic manufacturing levels have only now returned to pre-Covid levels;¹⁰ and (ii) the SAAM was also prepared prior to the UK and EU's commitments to ban the sales of new fossil-fuelled ICE vehicles by 2035, and prior to the release of the White Paper on Electric Vehicles 2018. As an industry, there is a big catch-up game to play in implementing the SAAM.¹¹

While the SAAM ambitions could help promote increased competitiveness and local industry development in a business-as-usual context, the past few years have proven to be anything other than that. Regional exports are lacklustre, domestic consumption has diminished and promoting the development of a local manufacturing base is increasingly complicated, given the variety of WTO requirements and requirements in select FTAs, such as the EU–SADC Economic Partnership Agreement, which blocks the use of import substitution measures, tariff barriers, local content prescriptions and quotas (Monaco and Wuttke, 2023). There are a multiplicity of challenges that the SAAM is required to address concurrently, and it is not yet clear that all targets will actually be met.

Nevertheless, South Africa remains a destination country for investment. For both ICE and new energy vehicle (NEV) technology, there have been numerous investments made:

- Ford invested R15 billion/\$1 billion in 2021 to expand production of its new Ranger vehicles to 200,000 units per year. Following this, in November 2023, Ford announced a R5.2 billion investment in its Silverton plant to produce the Ranger plug-in hybrid vehicle (PHEV) and build a battery assembly line for the

¹⁰ Interview with NAACAM representative, February 2025.

¹¹ Ibid.

PHEV. The new PHEV Ranger will be exported to Europe, Australia and New Zealand (Monaco and Wuttke, 2023).

- BMW investment of R4.2 billion in NEV technology
- Mercedes Benz has invested R10 billion in modernising its East London plant.
- VW has invested R4 billion in Kariya for a new model.
- 16 component companies have invested R4.86 billion, associated with an additional 10,700 new and maintained jobs.

These investments come on the back of previous rounds of FDI, and projects undertaken in 2019 (AUC and OECD, 2022):

- Toyota completed a R454 million project to upgrade its light passenger vehicle plant in the Durban area.
- Isuzu invested in a R1.2 billion upgrade for its small truck production plant at Struandale.
- KLT Automotive and Tubular invested R525 million to expand a chassis manufacturing plant in Brits.

In addition, the US has identified investment opportunities for NEVs in terms of local lithium battery manufacturing and the electrification of public transport, specifically the minibuses ('taxis') used by the vast majority of South Africans for their daily commuting, valued at \$27 million (ITA, 2024). Greening public transport options would not only assist South Africa in its Just Transition process but also provide cleaner, safer and cheaper options for commuting for South Africans.

Ultimately, South Africa will have to balance meeting market shifts and regulatory requirements in export countries against domestic needs to stimulate growth and local manufacturing participation to support improved livelihoods and greater job creation efforts. The lessons learned in growing the automotives sector thus far serve as important frameworks on how NEV and NEV-related manufacturing can be done differently. Achieving the objectives of the SAAM, supporting the growth of the NEV value chain and improving access to export opportunities will require a careful balancing act from the government – the ultimate fruits of which will only be seen in years to come.

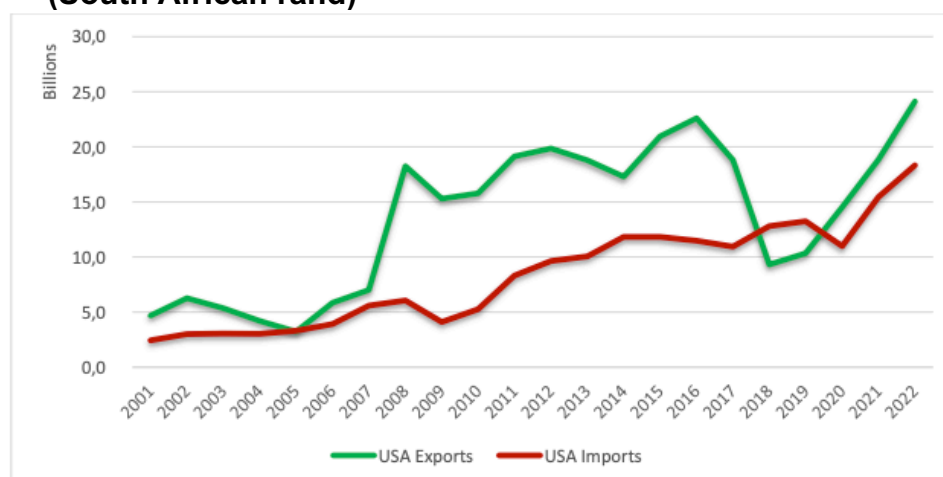
4.1.2 Implications of the Trump presidency

Through AGOA, the US is an important export market for the South African automotives and component industries (Figure 14). In 2022, the US was the automotives sector's second-largest export destination and second-largest trading partner (Table 6). South Africa is the continent's largest beneficiary of AGOA, in terms of which it is the 14th-largest supplier of passenger cars to the US. The relationship is also beneficial for the US, which was the eighth-largest market for imported vehicles in 2022. Light vehicles, catalytic converters, engine parts, tires, radiators and parts are among the top

automotives exports to the US; OEM components, light vehicles, engine parts, transmission shafts, cranks and axles were the top components imported into South Africa (AIEC, 2023).

Auto sector exports to the US have high utilisation of AGOA, supported by deep industrialisation opportunities across Africa promoted by a 35% RoO requirement. US investors in Africa at large benefit from duty-free access for vehicle and component exports, and AGOA has helped deepen technology transfer and investment in African countries – notably South Africa (NAACAM, 2022).

Figure 14 Automotives exports and imports from the US (South African rand)



Source: AIEC, SARS

Table 6 US total trade with South Africa, valued at R42,453.5 million in 2022

Main products	Exports from SA R24 123,7 million	Main products	Imports into SA R18 329,8 million
Light vehicles	15 332,3	Original equipment components	6 572,4
Catalytic converters	5 379,1	Light vehicles	4 542,0
Engine parts	1 264,8	Engine parts	722,4
Tyres	591,4	Transmission shafts / cranks	519,1
Radiators / parts	318,8	Axles	477,9
Silencers / exhausts	72,8	Automotive tooling	410,9
Axles	70,3	Gauges/ instruments / parts	393,6
Automotive tooling	62,4	Steering wheels / columns / boxes	323,6
Gear boxes	59,8	Engines	291,0
Clutches / shaft couplings	35,9	Brake parts	218,0
Other	936,1	Other	3 858,9

Source: AIEC, SARS

Recent political developments have put South Africa in the firing line with President Trump. While the relationship has been tense for some time, the new political developments have greatly heightened threats of a political stand-off, with the risk of South Africa being excluded from AGOA. The negative spillovers from a loss of AGOA

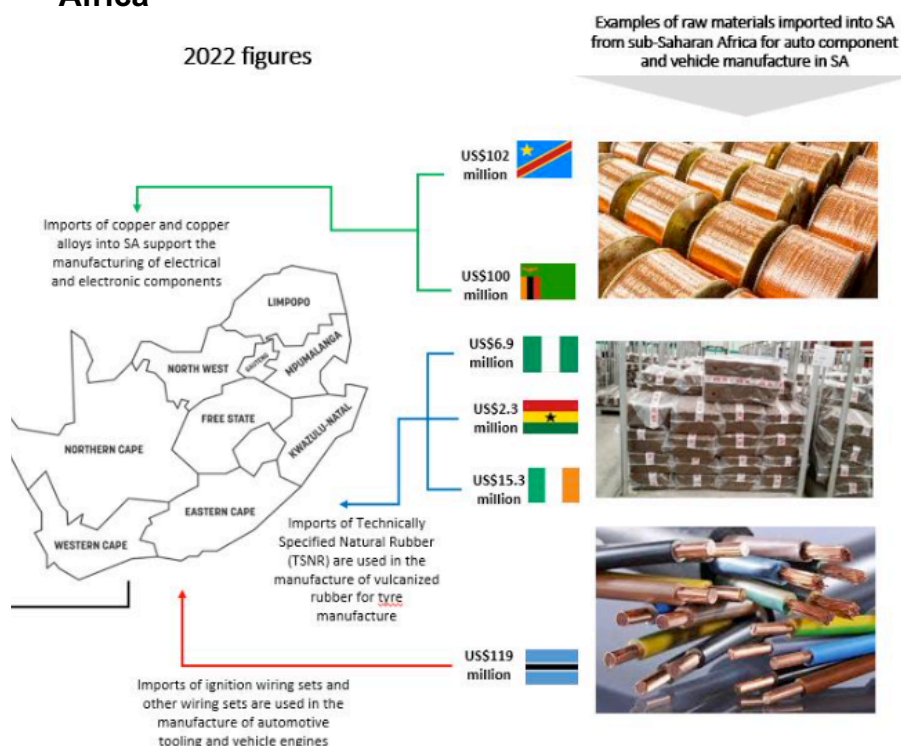
access could be severe for both exports and the employment generated by the automotives industry, leading to reduced competitiveness and deindustrialisation, loss of skills and technological innovation, and a reduction in the opportunities for the industry to pivot towards EV production, batteries and other components that could better position the country globally. While South Africa does account for the vast majority of automotives exports to the US from Africa, the rules of cumulation allow for the many other countries feeding into the South African automotives sector to continue to do so in supplying parts and components (Figure 15). Removal of South Africa from AGOA will dismantle nascent RVCs currently growing their inputs into the South African automotives sector, negatively impacting them as well.

If South Africa is excluded, its main trading opportunity will be through the Generalized System of Preferences, which is likely to exclude the export of vehicles, in addition to making it more administratively cumbersome to export. For South African exporters to the US, it also means competing in the absence of any preferences, with likely few gains for South Africa. Manufacturers such as Mercedes Benz and BMW, both of which have capitalised extensively on AGOA in the past years, will lose their preferences to export duty-free to the US (AIEC, 2023). Currently, the industry is still engaging in figuring out options that could work in ensuring South Africa retains access to AGOA under a Trump presidency, and no clear strategy has been identified just yet.¹² There are plans underway to arrange for a South African trade delegation to head to the US to meet with their counterparts to discuss the matter further.¹³

¹² Interview with NAACAM representative, February 2025.

¹³ Interview with dtic representative, March 2025.

Figure 15 AGOA support to the development of RVCs in Africa



Source: NAACAM (2022)

4.1.3 The EU's changing legislative requirements and EV production in South Africa

Access to the EU market is critical for the South African automotives sector, with the EU market accounting for 72% of all vehicles exported from the country in 2022 (AIEC, 2023).¹⁴ Catalytic converters, once destined primarily for the EU, and which previously held an export share of 80%, have decreased to 68% in the EU, as European markets focus increasingly on NEV production. This is reflective of a broader loss in component exports to the EU (transmission shares, ignition equipment and exhaust parts), all of which experienced reductions in market share in 2022 (Moshikaro-Amani and Mahlangu, 2024).

Electrification requirements have had the most immediate and notable impact on the global automotives sector. The South African automotives industry has faced increased pressure to adopt regulatory changes that accommodate this shift in vehicle demand from its main export markets. The introduction of the European Green Deal and the CBAM, designed to price carbon emissions of imports reflecting the EU's carbon pricing, places South Africa on a back footing, in terms of the dominant ICE vehicles produced in the country, the export of catalytic converters, the far-from-markets

¹⁴ In order to qualify for zero tariffs into the EU, South African vehicles and components must contain at least 60% local content. Cumulation applies. Local content covers South African raw materials, labour, parts, transport and manufacturing costs, together with the value of EU-sourced components and subcomponents.

production site and the use of fossil fuels (i.e. coal-powered fire stations) in the production of vehicles and components.

The South African Government is well aware of the risks to the sector should a transition towards NEV production fail to take place domestically – jobs, economic growth, GDP contribution and international trade opportunities are all on the line. In response to these changing global policies, as well as to provide policy certainty, in 2023 South Africa published the Electronic Vehicles White Paper, the primary goal of which is to establish the transition of the automotives industry from primarily producing ICE vehicles to a dual platform producing both ICE and NEVs in South Africa by 2035. In addition to efforts to utilise trade agreements to support the sector's growth and to crowd in FDI to promote the growth of EV manufacturing, several other key areas of intervention are identified:

- developing an electric battery RVC, including beneficiation of critical minerals
- introducing temporary reductions on import duties for batteries in vehicles produced and sold in the domestic market
- R&D tax incentives to deepen domestic value addition, including technology agnosticism for attracting investment
- commercialising green hydrogen production as a source for sustainable fuels
- developing an EV certification programme in collaboration with industry for skills development
- scaling up investment in charging infrastructure.

EV manufacturing is nascent in South Africa, with only Mercedes Benz and Toyota producing NEVs locally – the former exclusively for the export market, the latter for both domestic and export markets (Toyota is producing a hybrid) (Moshikaro-Amani and Mahlangu, 2024). Localising battery technology production is another critical step in securing NEV market access and competitiveness in global markets. South Africa will have to secure essential critical minerals, invest in R&D and strategic partners for local battery production, and secure substantial investments for battery gigafactories (ibid.). Nevertheless, that OEMs are investing in South African automotives with the aim of incorporating NEVs in their production line is a positive sign and a step forward in terms of the country's ability to participate in NEV and related component manufacturing.

Trying to stay ahead of the curve in a very competitive market involves South Africa incentivising NEV manufacturing. Policy certainty is a critical requirement for enhancing South Africa's attractiveness to OEM investors. In the 2024 budget speech, the minister of finance announced an investment allowance for new NEV investments starting 1 March 2026, which will be implemented in addition to existing support under the APDP II. The NEV incentive will

allow producers to claim 150% on qualifying investment spending on electric and hydrogen-powered vehicles in the first year (UNCTAD, 2024). In addition, investments in NEV projects can earn a cash grant of 30%, available to encourage OEMs and component manufacturers to invest in a manner that supports productive capacity upgrading, with a minimum annual volume of 50,000 units required (naamsa, 2024). At present, the Department of Trade, Industry and Competition (the dtic) has developed a set of incentives that are with the National Treasury and will likely be gazetted soon – this will provide clarity on which components will be incentivised in terms of manufacturing of electrical battery components.¹⁵

South Africa will also have to address existing infrastructure challenges to support the assembly of NEVs and batteries; to incorporate a renewable energy mix in manufacturing plants (to reduce the carbon footprint of production); and to identify new opportunities for the components sector that include technology partnerships supportive of localisation of production for NEVs. Lastly, a forward-looking approach also entails implementing dual production platforms, so as to produce ICE and NEVs for different markets – servicing different consumers and preferences, including the South African base.

Some changes are already underway. In 2023, Mercedes Benz announced an investment of R40 million to expand the local charging infrastructure for EVs by installing more than 120 charging stations throughout South Africa. The initial phase of the investment is R15 million, with a further R25 million for expansion in the second phase. Despite not being a local OEM manufacturer, Audi has invested approximately R45 million in the past two years in cutting-edge charging technology (Moshikaro-Amani and Mahlangu, 2024). It is important to highlight, however, that such infrastructural investments are to support their own manufacturing capabilities for their own exported vehicles, rather than being broad-based infrastructure investment in the automotives sector as a whole. Nevertheless, it is encouraging that there is willingness among OEMs to invest in diversifying their operations in South Africa by supporting the necessary infrastructure changes needed for the NEV value chain.

Stakeholder insights seem to suggest that, while there are plenty of policy discussions and advocacy efforts taking place, industry is largely waiting to see what the incentives will look like before further investments are possible, which will also help inform how, and to what extent, the multipath (i.e. NEV and ICE) production will work.¹⁶ Lastly, there is also an opportunity for South Africa to develop its NEV and related battery manufacturing capabilities through investment and partnership with European partners, with which high-level policy discussions are currently underway.¹⁷ South Africa can

¹⁵ Interview with dtic representative, 3 March 2025.

¹⁶ Interview with NAACAM representative, February 2025.

¹⁷ Ibid.

play an important role as an alternative supplier, especially as the EU seeks to diversify its reliance on Chinese battery imports (in 2024 the EU levied an additional 37% duty on Chinese EV imports), in a clear effort to limit their presence within EU Member States (Mendez-Parra, 2024b).

As indicated in the White Paper, South Africa also intends to collaborate under the AfCFTA and SADC frameworks to coordinate efforts to leverage a mineral resource base. This will be carried out with the purpose of securing partnerships with manufacturers in a range of countries, including China, the EU, India, Japan, the UK and the US, which would enable both full-value production of the continent and supply of minerals for production in these partner countries. Such efforts include working with SADC counterparts to take up the industrialisation opportunity created by the supply chain changes in the automotives industry (such as developing a regional battery value chain) and establishing explicit conditions to enable domestic and regional industrialisation in engagement with export partners. South Africa fully understands that minerals beneficiation is an important strategic objective if Africa (regionally and continentally) is to have a valuable stake in the global automotives sector, and the country is already strategically engaging its African partners to gather the momentum and political will needed to support the development of a collective regional minerals value chain.¹⁸

4.1.4 China's growing presence in automotive exports to South Africa

In recent years, car imports from South Asia and East Asia have grown significantly: 11 out of the top 20 most popular passenger cars in South Africa are of Indian origin, and 42% of all imported passenger vehicles sold in South Africa were imported from India (Moshikaro-Amani and Mahlangu, 2024). There has also been rapid growth in the import (and variety) of Chinese-made ICE and EV cars sold on the South African market. Chery and Great Wall Motors (Haval) has climbed to the ninth spot in the ranking of top-selling vehicle brands in South Africa for 2023, and, overall, Chinese light commercial vehicle sales increased to 7.4% of the domestic market for light commercial vehicles in 2023. China is the largest single-country new vehicle market globally, selling as much as the EU and the US combined (naamsa, 2024). Its value proposition and competitive pricing has made it appealing to South African consumers increasingly stretched by hardened economic conditions. South Africa's trading environment is extremely competitive compared with global standards, reflecting the greatest selection of market size ratios found globally (ibid.).

China's share in component exports to South Africa has also grown, from going 1% to 4% in 2022; while this is a small change, it could signal an expanding role for China in the South African components

¹⁸ Interview with AAAM representative, March 2025.

market. Chinese imports have eaten into domestic vehicle production sales, which are struggling because domestic consumption is not growing.¹⁹ While their presence may benefit consumers, this influx in foreign vehicle imports poses challenges to the SAAM 2035 goal of increasing domestic demand for locally manufactured vehicles and their growth in the domestic industry has, naturally, resulted in a decline in the share of South African-built cars (Moshikaro-Amani and Mahlangu, 2024). Added to this, there are concerns in the industry at large regarding Chinese spheres of influence; in most cases, partnerships would be established with OEMs to drive investment in South Africa; however, worries remain around the extent to which China will support skills development and localisation, and the industry wishes to avoid yet another situation of components influx from China.²⁰

South Africa (and other countries') conundrum around the China market share relates to (i) the sheer scale of production and export of relatively affordable ICE and EVs globally and (ii) China's staggering control over critical minerals through its significant ownership of mines across the African continent.²¹ The importance of the critical minerals value chain is not lost on South Africa: the dtic has taken the lead, together with the Department of Mineral Resources and Energy and with contributions from the Industrial Development Corporation and the Development Bank of Southern Africa, in developing a roadmap on critical minerals value chain development. This will be used to engage neighbouring countries on how such efforts and resources can be undertaken collectively to support upstream value chain addition activities.²² Whether the opportunities on offer within the roadmap will be attractive enough for South Africa's neighbours to invest in such a collective effort, as opposed to selling minerals directly to China, remains to be seen, however.

South African OEMs are also in the process of preparing an industry-wide response to the growing presence of China in the vehicles and components sector – the contents of which are not yet available in the public domain.²³ The reality remains that China cannot be ignored, and potential Chinese investors are important. However, the means of engagement may need to be framed differently to ensure local industry can be competitive, and rather to prioritise structuring engagements as partnerships going forward.²⁴

4.1.5 Building RVCs and making the automotives sector a reality under the AfCFTA

Africa's automotive exports originate from Morocco and South Africa, the top two countries in Africa in vehicle production and sales (Table

¹⁹ Interview with NAACAM representative, February 2025.

²⁰ Ibid.

²¹ China has an approximately 80% share of cobalt, 60% of lithium and more than 90% of manganese added-value mineral compounds (naamsa, 2024).

²² Interview with dtic representative, March 2025.

²³ Interview with AAAM representative, March 2025.

²⁴ Ibid.

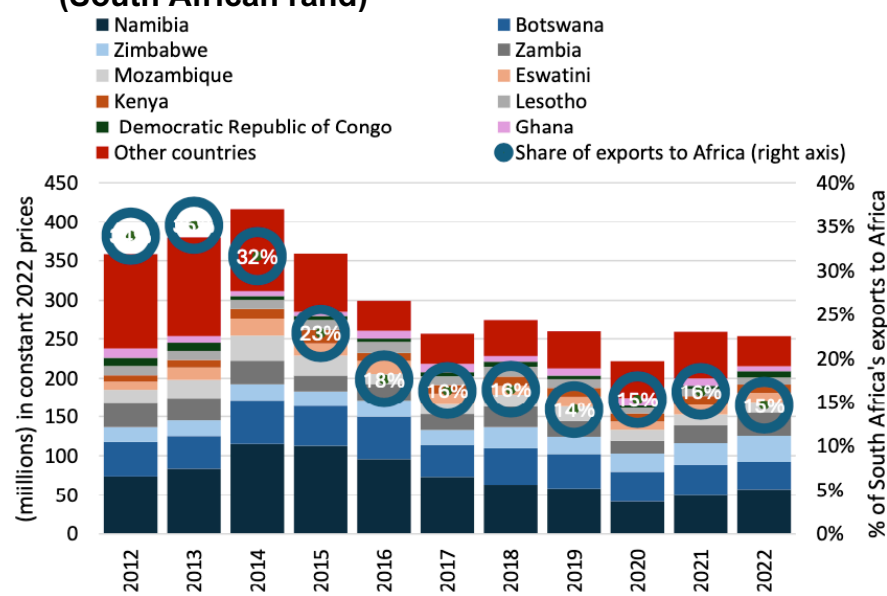
7). Namibia, Botswana, Zimbabwe and Zambia play a significant role in receiving South African vehicle exports (Figure 16). Over time, South Africa has also experienced growth in its export volumes to Kenya and Ghana. Trucks and bus exports are primarily to the SADC region, with Zimbabwe, Zambia, Mozambique and Malawi emerging as the top importing countries, collectively making up 95% of the total export volume (Moshikaro-Amani and Mahlangu, 2024). Southern Africa remains the dominant region for exporting automotive products – \$1.5 billion for finished products and \$2 billion in intermediate products (2019, Figure 17).

Table 7 Vehicle production and sales – top African countries

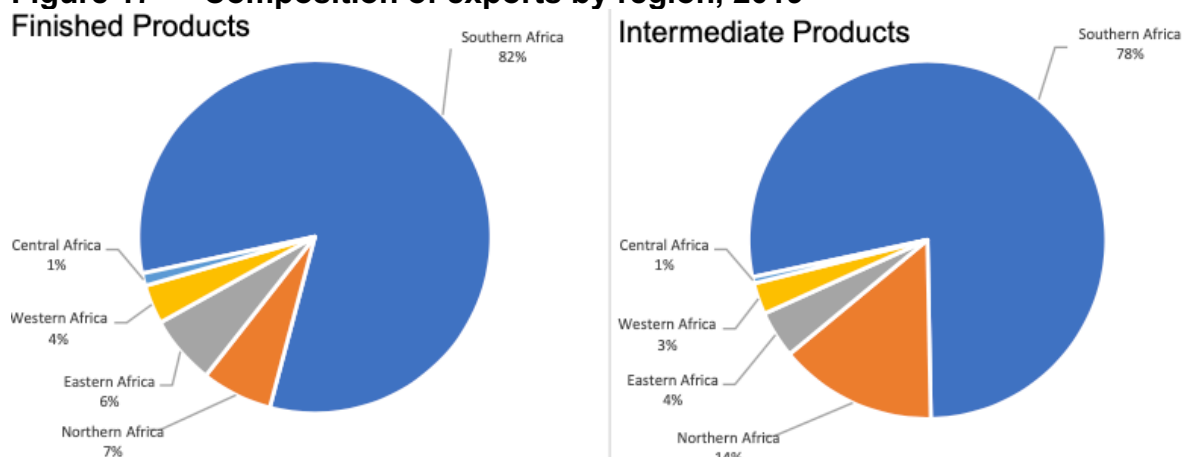
	Vehicle production		Vehicle sales	
	2021	2022	2021	2022
South Africa	499,087	555,889	464,493	529,562
Morocco	403,007	464,864	175,435	161,409

Source: naamsa (2024), sourced from OICA

Figure 16 South Africa's vehicle exports to Africa, 2012–2022 (South African rand)



Source: Moshikaro-Amani and Mahlangu (2024), calculated from ITC Trade Map

Figure 17 Composition of exports by region, 2019

Source: Agarwal et al. (2022)

African countries, in varying degrees, also feed into South Africa's automotives industry. Among the Southern African Customs Union (SACU) countries, Lesotho houses seat kit manufacturers (that relocated from South Africa owing to lower labour costs and fewer strikes) but no direct investment from OEMs; Botswana's efforts to establish OEM operations have been unsuccessful and assembly operations closed over time (World Bank, 2016). It has, however, experienced success in supplying electric wiring (as has Angola), car seats and upholstery to vehicle manufacturers in South Africa (UNDP and AfCFTA, 2021), having attracted FDI from two wiring harness component manufacturers producing for the South African-based OEMs (Sanon and Slany, 2023). In comparison, Namibia is the prime market for vehicle and vehicle parts imported from African countries in value terms, primarily because its automotives imports consist entirely of completely built motor vehicles for the transport of goods and motor cars, which are high in value (WEF, 2021). As it is a customs union, rules within SACU also complicate how and in what format South Africa can receive imports from its neighbours. For example, in Namibia, a joint venture SKD²⁵ operation was established between Peugeot and Opel Assembly Namibia to undertake SKD assembly of Peugeot and Opel vehicles in Walvis Bay. However, because this is an SKD plant, it cannot export to South Africa, as this contravenes SACU rules, which require full-scale assembly (AUC and OECD, 2022).

While SACU countries may not have sophisticated automotives sectors as yet, these developments reflect growing capabilities in terms of manufacturing participation. The proximity to South Africa – in the 'hub and spoke' model – means there could be greater opportunities for such countries to supply more value-added products into the South African automotives sector. To some extent, this has happened in ASEAN and South America's Common Market of the

²⁵ SKDs take place in very low volumes that entail either minor assembly only, with almost no value addition or significant opportunities for employment.

South (Mercosur) (Mondliwa and Roberts, 2018), which are often cited as examples of how such value chains could be developed in the African context. Insights from players within the automotives sector also highlight the growing interest among SACU countries in feeding into South Africa's automotives sector, while the South African Government has also become increasingly attuned to the automotives export possibilities under the AfCFTA but also the need to invest in and support manufacturing capabilities regionally for the purpose of holistic regional development (AUC and OECD, 2022).

Currently, however, South Africa imports very little from its African peers – Botswana, Eswatini, Lesotho, Morocco, Tunisia and Egyptian imports amounted to less than \$100 million in 2020 (AUC and OECD, 2022). Therefore, RVC automotive trade remains, fundamentally, one-way, consisting of South African exports to other African countries. Truly developing regional production capacities will require RVC manufacturing to become more complex and sophisticated beyond the current trade dynamics.

The AAAM is largely supportive of RVC creation, with the option of complementarities being developed within regions to co-support automotives sector manufacturing – for example focusing on different vehicles manufacturing within a region.²⁶ Such complementarities make sense in RVC generation and would support the development of specialisation manufacturing among different countries within a REC. To this point, South African OEMs have started looking at the possibility of having parts traditionally imported from outside Africa, to possibly be produced within the region – a current point of discussion with Namibia.²⁷ Nevertheless, it remains to be seen whether OEMs – which tend to co-locate with their suppliers, all of which are housed in South Africa – would be willing to invest in and support the development of a SACU-wide RVC (World Bank, 2016).

Deficits in high-quality technical standards and skills, infrastructural constraints and logistics challenges will also need to be overcome if an automotive RVC is to be seriously developed. For example, when a high-level technical problem arose at a Botswana component plant, a shortage of skills at the plant resulted in cost delays incurred by experts having to be sent from South Africa (Barnes et al., 2021). These are challenges that, if seen at a regional level, are likely to perpetuate across the continent – raising very serious questions on the viability of establishing a continent-wide automotives industry.

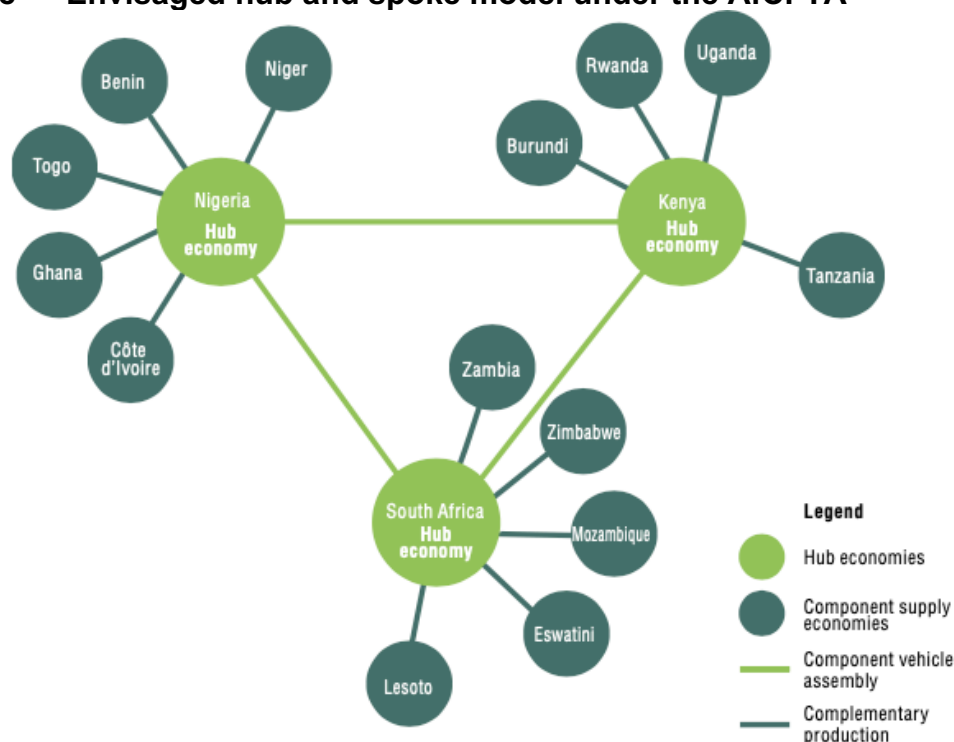
Development of a continent-wide automotives sector is a priority under the AfCFTA. In 2019, intra-African automotives exports accounted for only 16% of Africa's total automotives exports globally (WEF, 2022). In 2022, Afreximbank made available a \$1 billion financial facility dedicated to growing and stimulating the automotives sector value chain (AEIC, 2023). The AAAM, established in 2015 by

²⁶ Interview with AAAM representative, March 2025.

²⁷ Ibid.

various multinational car companies with continental headquarters in South Africa, is working with governments across the continent and the AfCFTA Secretariat to develop capacity, with the goal of 5 million cars being built and sold in Africa by 2035 (Furlonger, 2022). Part of such efforts involves assisting several prospective African countries with formulating their automotive policy development options aimed at replicating an automotive ecosystem similar to the South African model with participation from OEMs, suppliers, financiers, government and other relevant industry role-players (AIEC, 2023). Support for growing the African automotive industry is also identified via the hub and spoke model by the AAAM, with the diversified economies acting as hubs and less complex economies servicing the spokes as suppliers of intermediate goods participating in forward integration (Figure 18).

Figure 18 Envisaged hub and spoke model under the AfCFTA



Source: Barnes et al. (2019)

Unfortunately, growing the automotive sector across the continent and regionally faces significant challenges:

- Limited industry capabilities and an absence of infrastructure constrain manufacturing development.
- The absence of suitable vehicle financing options, coupled with competition from second-hand, cheaper imports of both vehicles and components (up to 40% of global used light commercial vehicles are exported to Africa and across most sub-Saharan African countries 85% of all four-wheel vehicles sales are used vehicles), has deterred the growth of the sector (Conzade et al.,

2022). Only Algeria, Egypt, Morocco, South Africa and Tunisia have legislated bans on importing second-hand vehicles.

- Vehicle density remains low, with a motorised rate of around 42 vehicles per 1,000 inhabitants – far below ‘peer’ regions such as Latin America (176 vehicles per 1,000 inhabitants) and the Middle East and Asia (79 vehicles per 1,000 inhabitants) (WEF, 2022).

These hurdles raise questions as to whether the continent’s consumers will be able to afford locally made automotives, brand new, especially when such cars will likely be accompanied by a price increase. Countries with fledgling SKD industries will likely be under pressure to protect them, while those that would be required to ban the import of used cars would also lose out on an important source of tax income.

A viable solution is for the continent to push for more sustainable mobility, to become a part of the manufacturing processes for EVs (and not just exporters of the rare minerals needed for EV production) and to avoid becoming a dumping ground for second-hand ICE vehicles no longer wanted in developed economies, owing to their transition to NEVs, or even dumping of Chinese EVs in Africa to meet the growing demand of affordable transportation (Mendez-Parra, 2024b). Electric two-wheel adoption is likely to grow across the continent first, before other NEV adoption (Conzade et al., 2022), and there is an opportunity for production of these vehicles to feed into automotives industrialisation strategies at regional and continental level. According to The Automotive Business Council (naamsa), making this a reality requires developing RVCs for each critical mineral, installing new capabilities and capitalising on comparative advantages, while holistically expanding the industry’s capacities to ensure ultimate beneficiation and the exports of higher value-added critical minerals internationally (naamsa, 2024).

For South Africa, there would be opportunities to supply vehicles and component parts across the continent and to support local industries’ development linking back to the creation of Africa-wide automotive RVCs. There are also opportunities to support manufacturing in other African countries through purchasing agreements that are also mutually beneficial for South Africa. For example, during South Africa’s ongoing discussions with Algeria, there is the possibility to import entry-level cars from Algeria (rather than China), and for South Africa to export bakkies (light commercial vehicles) to Algeria.²⁸ Efforts could focus on developing a components value chain²⁹ and a critical-minerals-to-batteries value chain, helping position African countries as key players in the supply and manufacturing chains using critical minerals. These efforts could be supported through a collaboration of like-minded countries, such as Ghana, Kenya, Morocco and Rwanda, which have all introduced policy measures to

²⁸ Interview with AAAM representative, March 2025.

²⁹ Approximately 80% of the value of a car lies in the components, and this presents the bulk of industrialisation opportunities for the development of RVCs (AUC and OECD, 2022).

stimulate e-mobility and tax waivers to support sustainable solutions for transporting goods and people (naamsa, 2024).

South Africa's role in supporting the AAAM through promoting its own industry structure – and learning from its own industrialisation process to date – would also help SACU countries specifically comply with local content requirements and value addition stipulations needed to export to the South African market. However, any positioning will require building shared consensus among the customs union – and there are already divergent interests. For example, during AfCFTA negotiations, some countries wanted to import in kit format to re-export to South Africa, whereas South Africa want stronger RoO in order to promote value addition industrialisation in the region.³⁰ Successful public–private partnerships (such as the Durban Cluster and the Mercedes Benz Learning Academy geared at skills development) could also form part of regional outreach efforts, to support skills development necessary in neighbouring countries for the purposes of RVC development.

4.2 Morocco

The automotives industry in Morocco dates back to 1959, only a few years after the country's independence from France, with the creation of the former state enterprise SOMACA (Société marocaine de la constructions automobiles, the Moroccan Automobile Construction Company) in the suburbs of Casablanca. During its first years, the ownership structure was as follows: 38% held by the Moroccan state, 20% by Fiat, 20% by Simca, 14% by various Moroccan shareholders and 8% by Renault (DEPF, 2015). SOMACA was initially established to assemble cars (Fiat and Simca models) from imported parts from Italy and France. Shortly after, the company started to manufacture other brands like Renault, Opel and Austin, to encourage investment. However, this expansion affected local value, leading to a 1970 decree that temporarily banned importing parts made competitively in Morocco and required 40% of vehicle components to be locally produced.

In 1982, the integration-compensation law was created to support the integration of car components produced locally and to compensate for the use of imported materials. This law set integration-compensation rates at 40% for passenger cars and light commercial vehicles and 50% for heavy vehicles, increasing to 60% by 1994. In 1995, a significant agreement between Fiat and the Moroccan government aimed to shift demand from used to new cars by producing an affordable vehicle. This was followed by a 1996 agreement with Renault and Sopriam for light commercial vehicles with a 100% integration-compensation rate (DEPF, 2015).

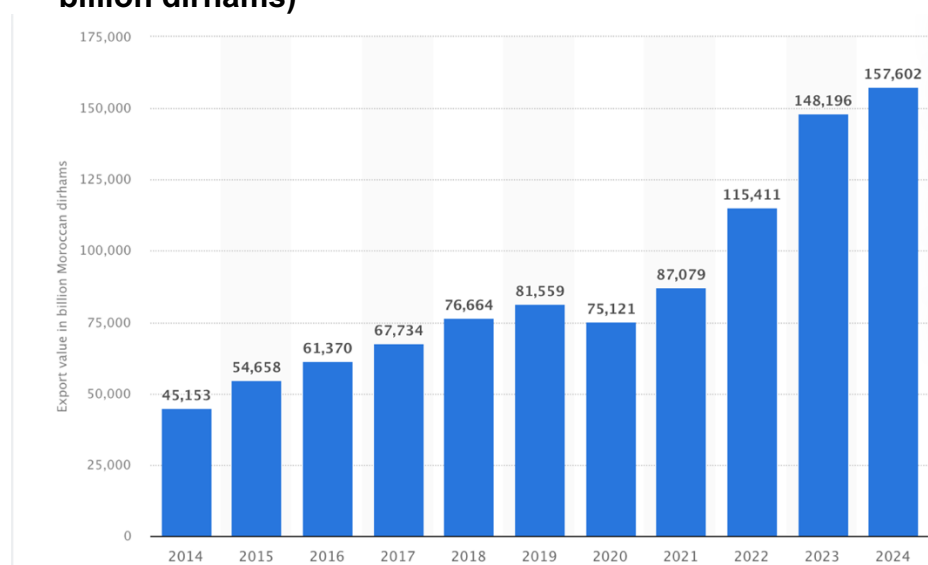
³⁰ Interview with NAACAM representative, February 2025. See also interview with AAAM representative, March 2025.

In 2003, Renault signed a memorandum of understanding with the Moroccan government to acquire its full 38% stake in SOMACA. Renault's project for the Dacia Logan, primarily for export, led to further investments and expansions. Renault became the majority shareholder by buying Fiat's shares in 2005, and by 2019 it had acquired the remaining shares from PSA Group. Today, SOMACA is 99% owned by Renault Group (El Khatir, 2021).

4.2.1 Current state of the automotives industry in Morocco

The automotives sector has become a key industry for Morocco, which is the second-largest producer of utility vehicles in Africa, behind South Africa, and the leading producer of passenger cars on the continent (Vedie, 2020). By 2022, the automotives industry had created over 220,000 jobs in the country (Ed-Daou, 2024). Morocco aims to boost its annual vehicle production from 700,000 units in 2024 to 1 million by 2025. In 2024, exports from the automotives sector reached nearly 158 billion dirhams (see Figure 19), with a local integration rate of 67% and the involvement of 260 suppliers (Walaw, 2025).

Figure 19 Exports from the automotives sector in Morocco (in billion dirhams)



Source: Statista 2025

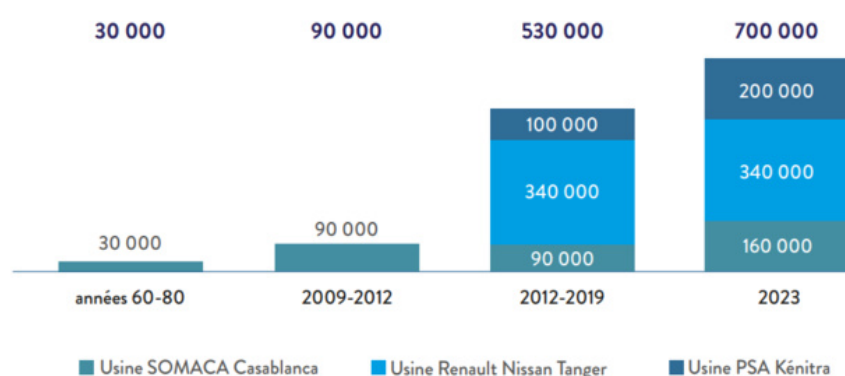
The secret behind the automotives industry's success in Morocco lies in the country's ability to attract OEMs, the main ones being as follows:

Renault-Nissan Maroc: The Renault-Nissan Tanger plant is the largest and greenest car factory in Africa. It exports 90% of its annual production to 74 countries. With a budget of over €6.6 billion, the plant was inaugurated in 2012 with a production capacity of 400,000 cars (El Khatir, 2021). This immense project was heavily subsidised by the state – a grant of €200 million from the Hassan II Fund, supplemented by a €105 million financing line from three Moroccan

banks (Benabdejlil et al., 2016). The plant features two production lines that handle the entire manufacturing process, from stamping to assembly, including bodywork, painting, seats and chassis. It focuses on producing the Lodgy, Dokker, Dokker Van, Sandero and Sandero Stepway models. Employee training is provided locally at IFMIAs (instituts de formation aux métiers de l'industrie automobile, or training institutes for automotive industry professions. In 2023, the plant had a production capacity 340,000 cars (Figure 20) and employed 6,700 workers, achieving a local integration rate of 55–60% (Vedie, 2020).

PSA (Stellantis): This group has established itself as a market leader, achieving a turnover of 13.6 billion dirhams in 2022 (Ed-Daou, 2024). Although PSA had a presence in Morocco before Renault, it was initially reluctant to set up a manufacturing facility, considering the market too small to sustain a profitable production unit. However, Renault's success in Melloussa changed this perspective. On 21 June 2019, PSA opened its first major plant in Africa, located in the Kenitra free zone, with an investment of €500 million. The plant has a production capacity of 200,000 vehicles, beginning with the new Peugeot 208. PSA is unique in Africa for incorporating engine manufacturing at Kenitra, thus covering the entire value chain (Vedie, 2020). Initially, PSA Kenitra aimed to produce 90,000 engines for the 208 model by 2020, with plans to reach 200,000 by 2023. The PSA Group in Morocco is now part of Stellantis, which includes brands such as Peugeot, Citroën, Fiat, Alfa Romeo and Opel. This merger reflects the automotive industry's trend towards strategic alliances to achieve economies of scale and reduce costs. For instance, in August 2021, Opel introduced the new Rocks-e electric car, an enhanced version of the Citroën Ami, which was designed and developed at the Morocco Technical Centre, an R&D facility of Stellantis (Amachraa and Quelin, 2022).

Figure 20 Number of cars produced by OEMs from 1960s to 2023



Source : Hakam, A. (2020). (2023 data are forecast).

Build Your Dream (BYD): Following the success of the two French groups, BYD is the third automotive manufacturer to establish itself in Morocco. The Chinese company is a global leader in electric mobility

and signed an agreement in 2017 to open the first EV battery manufacturing plant in Morocco. The agreement also includes plans to build three additional factories: one for electric batteries, another for electric buses and trucks and a third for electric trains (Ed-Daou, 2024). The project, known as BYD Auto Industry, aims to produce 300,000 units annually by 2025–2030 and to create 2,500 direct jobs (Vedie, 2020), bringing the total production capacity to 1 million passenger vehicles per year, solidifying Morocco's position as a leader in Africa.

Around these big players, there is a whole ecosystem of related industries worth mentioning, including equipment manufacturers and suppliers of various tiers. The auto industry works using a tiered supply chain model (Hahn and Auktor, 2017).

The establishment of Renault Nissan in Tanger Melloussa boosted the entire automotives supplier sector. This includes specialised, high value-added sectors such as wiring harnesses, cables, seat covers, spare parts, embedded electronics and air conditioning systems. By 2014, there were already 17 first-tier suppliers, creating around 1,500 indirect jobs. Notable companies on site include Denso, Snop and Takata. To develop these promising ecosystems, Tanger Med port complex offers integrated industrial platforms dedicated to manufacturing automotives equipment for export. Starting in 2014, two such platforms were launched: Tanger Automotive City and Atlantic Free Zone, each capable of accommodating 1,500 jobs.

The Industrial Acceleration Plan 2014–2020 prioritised industrial ecosystems. For the automotives sector, four ecosystems were launched in 2014: automotive wiring, vehicle interiors and seats, metal stamping and automotive batteries (Vedie, 2020).

However, a key characteristic of FDI flows to the automotives sector in Morocco is that the supply network draws both on this ecosystem of local firms and on an external value chain network associated with the respective OEMs. While South Africa also relies on local suppliers and the OEM supply chain, it also draws on a network of suppliers across African countries. Morocco does not rely on a supply chain that includes inputs from other African countries. Relatedly, unlike South Africa, Morocco has negligible vehicles and component exports to other African countries. The Morocco industry is essentially Eurocentric, with even Chinese investment aimed at exports to Europe. The top destinations for Morocco's vehicle and components exports are France, Italy, Turkey, Spain and the UK.

4.2.2 Key factors in the industry's growth

- **Macroeconomic stability:** Post-1980s economic stabilisation programmes and reforms enhanced Morocco's macroeconomic stability, reduced investment risks and attracted more multinational enterprises (IMF, 2016).

- **Political stability:** Morocco's well-established monarchy and progressive political reforms, combined with its open economic policy and commitment to attracting foreign investments, align with Evans' (1995) concept of 'embedded autonomy' and move away from collusive state–business relationships, creating a favourable investment and business environment.
- **Improved business climate:** Implementation of the 2023–2026 roadmap (MICEPP, 2022) aims to improve the business environment by enhancing investment and business requirements, strengthening national competitiveness and fostering entrepreneurship and innovation. This includes promoting R&D activities and upholding principles of ethics, integrity and anti-corruption, supported by the creation of the Central Authority for Corruption Prevention. Morocco's ranking of 53rd out of 190 countries in the 2020 Doing Business survey reflects these improvements (Ed-Daou, 2024).
- **Strategic geographic position:** Morocco's strategic location, just 14 km from Spain, with the port of Tanger Med, significantly reduces logistic costs and enhances supply chain efficiency. This makes it a favourable location for European multinationals. The country's efficient transport networks and competitive labour costs further enhance its attractiveness for international automotive manufacturers.
- **Infrastructure:** Significant investments in modernising and creating new infrastructure, such as the Tanger Free Zone and Atlantic Free Zone, facilitate production and distribution operations, increasing the productivity of investments (Alfaro-Moreno et al., 2024).
- **Free trade zones:** The establishment of free trade zones offers numerous incentives, including fiscal and tariff benefits, basic infrastructure and efficient customs processing, further attracting FDI into the auto parts sector.
- **Workforce cost and qualifications:** Lower labour costs in Morocco compared with Central and Eastern Europe attract efficiency-seeking FDI. Additionally, Morocco's industrial policy has implemented various training programmes to improve workforce skills, meeting the demands of the auto industry. Four specialised IFMIAs, in Casablanca, Kenitra and Tangier, operate under a public–private partnership model, ensuring practical training and direct interaction with production lines. Financial support for training can reach up to €6,000 per employee (El Khatir, 2021). The IFMIAs, managed by the Moroccan Association for the Automobile Industry and Trade (Association marocaine pour l'industrie et la construction de l'automobile, AMICA) and Renault, play a crucial role in meeting the recruitment and skills requirements of the automotives sector, including continuous training and skills enhancement. These efforts have made

Morocco an attractive platform for global automotives manufacturers.

- **Financial incentives under a supportive industrial policy:** Under the Industrial Acceleration Plan, the Industrial Development and Investment Fund provides direct support to industrial ecosystems. Offshore banking institutions are also available to assist companies with complex foreign trade transactions and various financing operations (Ed-Daou, 2024).
- **Fiscal incentives:** The incentives for the automotives industry in Morocco include a full tax exemption on corporate income for the first five years, followed by a tax rate of 8.75% for the next 20 years in free zones. Additionally, there is no VAT applied on imports or exports, and no tax on dividends, compared with a 10% tax on local businesses. Financial support is also available, with a ceiling of €1.8 million or 10% of the total investment (Haddach et al., 2017).
- **AMICA:** Established in 1974, AMICA acts as an interface between its members and relevant government departments, as well as other economic and institutional actors. It focuses on improving competitiveness, developing training, promoting exports, transferring technologies and attracting investments in the automotives sector (Ed-Daou, 2024).

4.2.3 Ongoing challenges facing the Moroccan automotives industry

Morocco's automotives sector still faces several internal challenges despite attracting significant investment. Achieving higher local integration is crucial, as current levels of participation are below targets, with Moroccan small and medium enterprises struggling to meet quality standards and international cost levels (Hahn and Auktor, 2017). Developing Tier 2 and 3 suppliers and transitioning to higher value-added activities are necessary for growth. Strengthening local capabilities through effective training programmes and addressing gaps in R&D and design are crucial, especially in light of technology-driven trends in the automotives sector (Dahmany et al., 2025). The presence of Japanese automotive companies has contributed to job creation and technology transfer, but real integration in terms of interdependencies and spillovers is still lacking.

Trade agreements

Morocco's integration into the global economy began with the signing of various FTAs starting in the 1980s. Negotiations for preferential trade agreements with the European Economic Community started in the late 1960s and intensified over time. Since then, Morocco has concluded several trade agreements with the EU, including the Neighbourhood Action Plan Morocco and the EU Association Agreement, which granted Morocco advanced status with the EU in

2008. Morocco is also a member of the Euro-Mediterranean Partnership, the WTO, the Greater Arab Free Trade Area and the Arab Maghreb Union. Additionally, Morocco has signed FTAs with Tunisia, Jordan and Egypt (under the Agadir Declaration), the US and Turkey, and has concluded 63 bilateral investment treaties. These agreements have significantly boosted export activities in the sector (Hahn and Auktor, 2017).

However, Morocco's participation in the AfCFTA will be important for expanding its supply chain to other African countries as well as for its exports to African destinations. At the time of writing, negotiations on the AfCFTA RoO for the automotives sector have not been concluded. The AAAM is advocating for intra-African cumulation to be not less than 40% in order to ensure the automotives sector meets industrial development aspirations. Morocco is well positioned to meet this threshold through its local value chain and could exceed it if its supply network encompasses other African countries.

Impact of trade wars

Recent trade developments could significantly impact the Moroccan automotives sector, particularly in the context of trade wars, economic nationalism and protectionism. China's EV exports are facing increasing protectionist measures in Europe and the US. The EU's Green Deal and Open Strategic Autonomy policies aim to protect industrial supply chains and reduce reliance on China, while the US Inflation Reduction Act encourages friendshoring to curb China's growing role in the EV industry. In 2024, the Biden administration increased tariffs on Chinese EVs from 25% to 100%; President Trump threatened to impose 60% tariffs on all Chinese goods during the presidential campaign that led to his re-election. In 2023, China exported 1.2 million EVs, with 47% going to the EU. However, new tariffs in the EU and the US are prompting Chinese manufacturers to move operations abroad to avoid export restrictions. After Mexico, Morocco, with its strategic location and FTAs, is emerging as an attractive destination for Chinese EV manufacturers (Aboudouh, 2024).

Morocco has been part of China's Belt and Road Initiative since 2017, and it benefits from FTAs with the US and the EU, as well as its membership in the AfCFTA. The country controls 72% of global phosphate-rock reserves (Aboudouh, 2024), essential for producing lithium iron phosphate batteries, which are cheaper and greener than lithium-ion batteries. In 2023, Morocco signed a \$1.3 billion agreement with Guchen Hi-tech to build an EV battery gigafactory, which will be the largest in Africa (Zimmermann and Dahl, 2024).

While there are risks that Morocco could jeopardise its relationships with the US and the EU by engaging in agreements with China, Morocco views this as an opportunity to become an industrial hub and a global trade centre. This strategy also allows Morocco to pursue a more independent foreign policy, moving away from

France's influence. Additionally, Rabat seeks Beijing's support for the kingdom's autonomy plan for the Sahara region (Caldero, 2025).

Emerging as an EV manufacturing hub

The post-Covid global semiconductor shortage has severely impacted car manufacturers, highlighting their dependence on Asian suppliers. This crisis led to temporary shutdowns of supply lines for companies like General Motors and Ford in 2020 (Amachraa and Quelin, 2022). In response, US and European automakers are seeking alternative sources closer to home. STMicroelectronics, a leading European semiconductor manufacturer, has opened a new production line in Morocco to produce chips for Tesla, marking a trend of nearshoring. As chips are essential components to an EV, this further catalyses Morocco as a key player in the EV market. Morocco's investment in EV chip production is expected to alleviate the global shortage, support EV automakers, strengthen Western semiconductor supply chain resilience and establish the country as a key hub for EV manufacturing (Tanchum, 2021).

While the impact of the EU's CBAM on Morocco's automotives sector remains uncertain (Haddad et al., 2024), the EU's impending phase-out of most IEC vehicles by 2035 is certainly a concern. Without a supportive ecosystem for electric transport, Africa risks becoming a dumping ground for outdated ICE vehicles, hindering its carbon emission reduction goals (Conzade et al., 2022). However, Morocco is committed to leading the development of fully decarbonised automotives supply chains, aiming to exceed international standards and establish itself as a global advocate for green practices. This commitment is supported by key Moroccan institutions, including the Ministry of Energy Transition and Sustainable Development and the Ministry of Industry and Trade and others (Berahab, 2024).

From 'Made in Morocco' to 'Made by Morocco'

Currently, Morocco's EV production is in its early stages, with an annual output of 40,000 to 50,000 units, including models like the Mini EVs Fiat Topolino, Opel E-Rocks and Citroën Ami. However, this number is expected to rise significantly, driven by the EU's goal to ban new carbon dioxide-emitting cars by 2035. By the end of 2025, Morocco's EV production capacity is projected to reach around 100,000 units; by 2030, EVs are expected to account for up to 60% of the country's car exports, according to the Ministry of Industry and Trade (Ibold, 2024). Morocco's rich reserves of key raw materials for EV battery production, such as cobalt and phosphate, position the country as a crucial player in the global EV battery market.

Renault has announced plans to start producing two-seater super-mini electric vehicles in Morocco. The Dacia brand, acquired by Renault in 1999, will also manufacture its next-generation Sandero, a fully battery-electric vehicle, in the country (Pilling, 2023). In 2022, Renault signed a memorandum of understanding with Morocco's

mining group Managem to supply 5,000 tonnes of cobalt annually for electric and reusable batteries (Ibold, 2024). Stellantis is set to offer small, low-cost automobiles based on its Smart Cars platform, targeting emerging markets, including EVs. The company will also enhance the production and assembly of electric quadricycles for the Citroën and Opel brands (Pilling, 2023).

Founded in 2017, Morocco's first car manufacturer, Neo Motors, manufactures 3,000 units per year of its first model, a three-door car with a price tag of \$20,000. Bloomberg reports that this vehicle is in competition with similarly priced gasoline-powered cars from Renault's Dacia brand and various Chinese manufacturers (Rahhou, 2023b). Neo's success marks a significant milestone in the growth of Morocco's automotives sector, especially as it is aiming to expand into EV production.

Morocco is also committed to developing a green hydrogen industry as part of its broader energy transition strategy. NamX's Hydrogen Utility Vehicle (HUV), founded by the Moroccan entrepreneur Faouzi Annajah, is a pioneering hydrogen-powered car designed in collaboration with the renowned Italian design office Pininfarina. Featuring a Moroccan interior design, the HUV is equipped with a central hydrogen tank and six removable capsules, allowing for quick refuelling in just a few minutes. The plant is set to have a yearly production capacity of 27,000 vehicles for a budget of 156 million dirhams (\$15 million), and is expected to create over 580 jobs (Rahhou, 2023). This innovative vehicle aims to meet the growing demand for hydrogen and hybrid cars, supporting the global shift towards clean energy and decarbonisation, and strengthening the 'Made in Morocco by Morocco' brand and confirming the Kingdom's position as a regional hub for car production.

4.2.4 Summary

In conclusion, Morocco's automotives industry is rapidly evolving into a significant player in the continent and globally, particularly in the EV sector. The country's strategic location, industrial plan, FTAs and rich reserves of essential raw materials like cobalt and phosphate position it as a key hub for EV production and battery manufacturing.

Morocco's proactive approach to trade agreements, especially with China, and its commitment to green energy initiatives, such as the development of a green hydrogen industry and a Moroccan hydrogen-powered car, further bolster its standing. Despite potential risks in international relations, Morocco's strategy aims to establish the country as an industrial hub through the automotives sector.

As Morocco continues to expand its EV production capacity and develop fully decarbonised automotives supply chains, it is well positioned to meet international demand.

5 Conclusion and main takeaways

The geopolitical landscape is undergoing rapid transformation, driven by rising economic nationalism, trade protectionism and shifting global power dynamics. These changes are particularly significant for Africa, which has historically relied on foreign trade, investment and participation in GVCs for economic development. The intensification of China–US economic competition, evolving trade policies in the EU and the increasing localisation of production are reshaping Africa's role in global markets.

While Africa's automotives industry – anchored by South Africa and Morocco – has gained traction, its integration into global production networks remains fragile. Supply chain disruptions, shifting FDI flows and heightened trade restrictions have highlighted the continent's vulnerability. The AfCFTA presents an opportunity to enhance regional trade and reduce reliance on external markets, yet intra-African trade remains underdeveloped.

Beyond the automotives sector, Africa faces a broader economic challenge of adapting to geopolitical shifts. The fragmentation of global supply chains, competition over critical resources (such as rare earth minerals and semiconductors) and the increasing regionalisation of trade require African nations to adopt more coordinated and forward-thinking economic policies. The growing importance of sustainability and decarbonisation, particularly in manufacturing and transportation, also necessitates urgent reforms to align Africa's industries with international standards.

The role of China, the US and the EU in African economic development is evolving. While China remains a major investor in infrastructure and industrial projects, Western nations are reassessing their investment strategies. This shift presents both risks and opportunities, requiring African policy-makers to balance competing interests while fostering strategic partnerships.

Ways forward

For Africa to navigate these complex geopolitical and economic transformations successfully, a comprehensive strategy is required. The following key actions can help strengthen the continent's economic resilience and industrial competitiveness:

1. Enhancing regional trade and supply chains

- Strengthen the AfCFTA framework by removing trade barriers and improving transport logistics to facilitate intra-African commerce. To this end, there is an urgent need to finalise AfCFTA RoO for the automotives sector.
- Develop regional industrial hubs that enable African nations to specialise in different aspects of production, reducing dependency on external suppliers.
- An automotives industry pact will help facilitate collaboration between Egypt, Ghana, Kenya, Morocco, Nigeria and South Africa, to create regional production hubs and stronger supply chains in different aspects of production, to reduce dependence on external suppliers.
- Finalise specific RoO that promote investment and production based on domestic capabilities.
- Coordinated policies across the continent are required with respect to restrictions on the import of second-hand vehicles.

2. Boosting local manufacturing and FDI attraction

- Incentivise domestic production through tax breaks, subsidies and preferential procurement policies for local manufacturers.
- Enhance FDI strategies by diversifying investment sources beyond traditional partners (e.g. China, the EU and the US) to include emerging economies such as India and the Gulf States.
- Expand R&D investment in advanced manufacturing to support the growth of local industries, particularly in automotives, electronics and renewable energy.
- Limit the imports of used vehicles that compete with new cars manufactured in Africa.

3. Adapting to the transition towards EVs and green manufacturing

- Leverage Africa's critical mineral resources (such as lithium, cobalt and nickel) to establish regional EV battery supply chains.
- Develop incentives for EV adoption, including reduced import duties for EV components and investment in charging infrastructure.
- Encourage technology transfer agreements with global automakers to foster local EV production.
- Expand green energy investments to ensure future industrial expansion aligns with sustainability goals.

4. Addressing trade disruptions and regulatory changes

- Align African trade policies with emerging global standards to maintain access to major markets, particularly the EU and North America.
- Mitigate the risks of China–China trade tensions by fostering diplomatic and economic neutrality while diversifying trade partnerships.
- Develop contingency plans for supply chain disruptions, ensuring alternative sourcing strategies for key industrial inputs.

5. Strengthening infrastructure and technological capacity

- Invest in modern transport and logistics infrastructure, including port facilities, road networks and rail connections, to improve trade efficiency.
- Enhance digital infrastructure to support the growth of Africa's tech-driven industries, including semiconductors, software development and smart manufacturing.
- Promote digital trade policies that facilitate e-commerce, fintech and digital financial services across African markets.

6. Building strategic partnerships and strengthening policy frameworks

- Engage with multilateral financial institutions (such as the World Bank, the African Development Bank and the IMF) to secure long-term funding for industrialisation projects.
- Encourage public–private partnerships to enhance investment in key sectors like automotive, energy, and logistics.
- Develop national and regional policy frameworks that provide stability and clarity for investors, reducing uncertainty in Africa's business environment.

7. Supporting workforce development and skills training

- Expand vocational training programmes to equip Africa's workforce with skills in advanced manufacturing, renewable energy and digital technologies.
- Collaborate with global educational institutions to foster innovation and research in engineering, AI and industrial automation.
- Ensure labour policies support industrial growth, balancing productivity with fair labour rights and working conditions.

Africa is at a critical juncture, where geopolitical and economic shifts present both significant risks and unique opportunities. While global trade dynamics continue to evolve, Africa's ability to capitalise on regional trade agreements, attract investment and build resilient industrial capacity will determine its long-term economic trajectory.

By embracing regional cooperation, technological advancement and sustainable industrial policies, Africa can transition from being a peripheral player in GVCs to being a central hub of economic activity. However, achieving this requires bold policy decisions, infrastructure investment and strategic international engagement.

The continent's future will be shaped by how effectively it responds to changing geopolitical realities, balances external partnerships and fosters an inclusive, sustainable and industrially competitive economic environment. The time to act is now.

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Appendix 1 African import origins and export destinations

Origin of African imports (% of total)

	Central Africa	East Africa	North Africa	Southern Africa	West Africa	Total Africa
2010						
<i>EU</i>	29.1	16.1	42.3	24.0	26.0	30.8
<i>UK</i>	3.5	2.5	2.2	4.2	3.8	3.2
<i>Other Europe</i>	1.2	2.1	8.3	0.7	2.0	4.0
Total Europe	33.9	20.7	52.8	28.9	31.8	38.0
<i>China</i>	9.7	13.4	9.7	11.4	17.4	12.1
<i>ASEAN</i>	5.1	6.8	3.6	5.0	5.2	4.7
<i>South Korea</i>	1.0	1.3	3.7	1.6	6.2	3.3
<i>Japan</i>	0.8	3.3	2.1	3.1	3.1	2.6
<i>India</i>	1.9	10.1	2.3	3.7	3.4	3.7
<i>Rest of Asia</i>	0.3	1.4	0.9	1.2	1.2	1.1
Total Asia	18.9	36.3	22.3	25.9	36.5	27.5
Middle East	1.6	13.9	7.3	7.6	3.7	7.1
<i>US</i>	5.4	3.0	5.8	6.1	6.9	5.8
<i>Canada</i>	0.4	0.8	0.8	0.7	0.5	0.7
<i>Mexico</i>	0.1	0.1	0.2	0.3	0.0	0.2
Total North America	5.8	3.8	6.9	7.0	7.5	6.7
<i>Central Africa</i>	7.7	0.4	0.1	0.7	0.8	0.7
<i>East Africa</i>	0.5	9.3	0.5	1.5	0.1	1.6
<i>North Africa</i>	2.2	2.4	4.0	0.5	2.1	2.4
<i>Southern Africa</i>	5.1	9.8	0.5	17.2	2.2	6.4
<i>West Africa</i>	21.2	0.8	0.6	6.1	8.1	4.4
Total Africa	36.8	22.6	5.7	26.0	13.2	15.7
Rest of World	3.0	2.6	5.0	4.6	7.3	5.0
2023						
<i>EU</i>	23.8	9.0	37.2	18.0	24.4	24.8
<i>UK</i>	1.5	1.2	1.4	1.7	1.9	1.6
<i>Other Europe</i>	2.8	3.5	9.8	1.5	4.3	5.4
Total Europe	28.1	13.7	48.5	21.2	30.6	31.7
<i>China</i>	29.0	24.9	15.5	18.8	26.1	20.7
<i>ASEAN</i>	4.3	5.3	2.8	5.8	8.2	5.2
<i>South Korea</i>	2.5	0.7	0.9	1.0	1.3	1.0
<i>Japan</i>	1.0	2.6	0.7	1.6	2.3	1.6
<i>India</i>	4.2	9.2	3.4	7.1	7.3	6.2
<i>Rest of Asia</i>	0.4	0.9	0.7	0.9	1.0	0.8
Total Asia	41.3	43.6	24.0	35.2	46.2	35.6
Middle East	5.8	17.0	10.9	10.9	4.2	10.1
<i>US</i>	3.7	2.7	5.3	4.9	3.8	4.4
<i>Canada</i>	0.6	0.3	0.9	0.5	0.6	0.6
<i>Mexico</i>	0.1	0.1	0.2	0.4	0.2	0.2
Total North America	4.4	3.1	6.3	5.8	4.6	5.2
<i>Central Africa</i>	4.1	0.2	0.0	0.1	0.2	0.2
<i>East Africa</i>	0.4	11.0	0.6	2.3	0.2	2.5
<i>North Africa</i>	2.2	2.5	4.0	0.6	2.1	2.5
<i>Southern Africa</i>	6.8	6.9	0.2	17.2	1.2	5.6
<i>West Africa</i>	3.0	0.5	0.2	3.5	7.8	2.9
Total Africa	16.5	21.0	5.1	23.7	11.5	13.8
Rest of World	4.0	1.5	5.2	3.2	3.0	3.6

Destination of African exports (% of total)

	Central Africa	East Africa	North Africa	Southern Africa	West Africa	Total Africa
2010						
<i>EU</i>	26.4	26.9	50.6	19.1	24.9	32.1
<i>UK</i>	0.9	4.3	2.3	4.7	1.5	2.9
<i>Other Europe</i>	0.5	0.8	3.6	0.9	1.4	1.9
Total Europe	27.8	32.0	56.5	24.8	27.8	36.9
<i>China</i>	13.9	20.2	8.3	17.1	1.5	10.5
<i>ASEAN</i>	4.0	1.9	1.4	2.2	2.4	2.1
<i>South Korea</i>	2.5	1.5	1.2	1.2	0.6	1.2
<i>Japan</i>	1.1	1.4	1.2	4.3	0.6	2.0
<i>India</i>	3.4	1.9	2.8	7.7	9.5	5.8
<i>Rest of Asia</i>	3.8	2.8	1.1	3.0	0.9	1.9
Total Asia	28.6	29.7	16.1	35.5	15.6	23.5
Middle East	0.3	5.7	5.5	2.6	0.8	3.2
<i>US</i>	24.0	4.2	9.7	11.6	26.8	14.8
<i>Canada</i>	1.8	0.2	2.0	2.4	1.5	1.9
<i>Mexico</i>	0.2	0.0	0.2	0.2	0.3	0.2
Total North America	26.0	4.4	12.0	14.2	28.6	17.0
<i>Central Africa</i>	4.8	0.4	0.3	0.6	3.6	1.4
<i>East Africa</i>	0.6	16.5	0.7	3.3	0.3	2.3
<i>North Africa</i>	0.6	3.2	4.4	0.6	1.0	2.1
<i>Southern Africa</i>	3.0	6.9	0.4	14.6	6.9	6.8
<i>West Africa</i>	2.5	0.4	1.2	1.4	7.1	2.7
Total Africa	11.5	27.5	7.0	20.5	18.9	15.4
Rest of World	5.8	0.6	2.9	2.4	8.2	4.0
2023						
<i>EU</i>	27.7	15.7	55.8	19.5	32.8	33.3
<i>UK</i>	1.4	1.1	3.8	4.1	2.2	3.1
<i>Other Europe</i>	1.1	0.6	4.7	1.1	2.1	2.3
Total Europe	30.2	17.4	64.4	24.7	37.0	38.8
<i>China</i>	28.2	25.6	3.5	23.1	8.4	14.5
<i>ASEAN</i>	8.1	3.7	2.4	4.0	5.3	4.0
<i>South Korea</i>	0.2	0.2	0.2	1.2	0.5	0.6
<i>Japan</i>	0.6	0.6	0.6	3.3	0.5	1.5
<i>India</i>	5.1	8.1	2.2	7.8	6.1	5.6
<i>Rest of Asia</i>	1.3	1.5	0.9	1.1	2.6	1.5
Total Asia	43.4	39.8	9.9	40.5	23.4	27.7
Middle East	16.1	14.3	8.3	6.9	16.0	10.6
<i>US</i>	2.6	3.2	4.5	6.8	5.8	5.3
<i>Canada</i>	0.1	0.6	1.0	1.3	2.0	1.2
<i>Mexico</i>	0.0	0.0	0.3	0.2	0.1	0.2
Total North America	2.8	3.9	5.8	8.3	7.9	6.7
<i>Central Africa</i>	2.4	0.1	0.2	0.6	0.4	0.5
<i>East Africa</i>	0.5	17.1	1.4	3.5	0.4	3.5
<i>North Africa</i>	0.2	1.8	4.7	0.3	0.4	1.8
<i>Southern Africa</i>	0.7	4.9	0.4	12.5	3.7	5.5
<i>West Africa</i>	0.8	0.4	1.8	0.9	8.6	2.8
Total Africa	4.6	24.4	8.5	17.9	13.4	14.1
Rest of World	3.1	0.2	3.1	1.6	2.2	2.1