Africa's interregional trade and regional value chain integration: facts and considerations for future policy action

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Introduction

In recent years, Africa has made substantial progress, with an average annual GDP growth rate of 4 per cent between 2000 and 2016, and 3.2 per cent in 2018. However, this growth has been uneven and lacks distributive and inclusive growth dimensions. According to UNECA (2020), COVID-19 has further exposed the vulnerability of African economies on account of their limited economic diversification and integration, with GDP projected to slow down to 1.8 per cent in 2020 from the earlier projections of 3.2 per cent in the best-case scenario or a contraction of 2.6 per cent in the worst case, threatening the livelihoods of 27 million people.

To boost Africa's economic growth, industrial transformation within states and across borders will need to be activated and its resources managed carefully. In light of this, industrial development policies in Africa need to be re-examined and realigned to respond to changing conditions, including the establishment of the African Continental Free Trade Area (AfCFTA), which supplies an internal market of USD 3 trillion with 1.2 billion consumers and the potential for developing regional industrial value chains.

Regional value chains (RVC)s can be described as production systems that range from input provision to commercialization, going beyond national borders to exploit existing competencies and complementarities within a region or continent, such as differentiated labour costs, productive capabilities and natural resource endowments. RVCs enable sequential value addition across country borders and growth corridors; primary production, value addition, by-product utilization and commercialization are spatially separated in accordance with local demand and competitive advantages in firm networks.

The development of RVCs is a means to reboot industrial development in Africa, building the necessary industrial capacity for Africa's integration beyond colonial and post-colonial trade imbalances. RVC development can also be viewed as part of the bigger plan to increase manufacturing value added on the continent, increase the consumption of African products, boost both competitiveness and exports and grow industries. This can further contribute to producing a larger share of goods on the continent that are otherwise imported. RVCs and the integration of its regional economic commissions will support Africa's industrialization – and offset the many uncertainties and challenges of global competition.

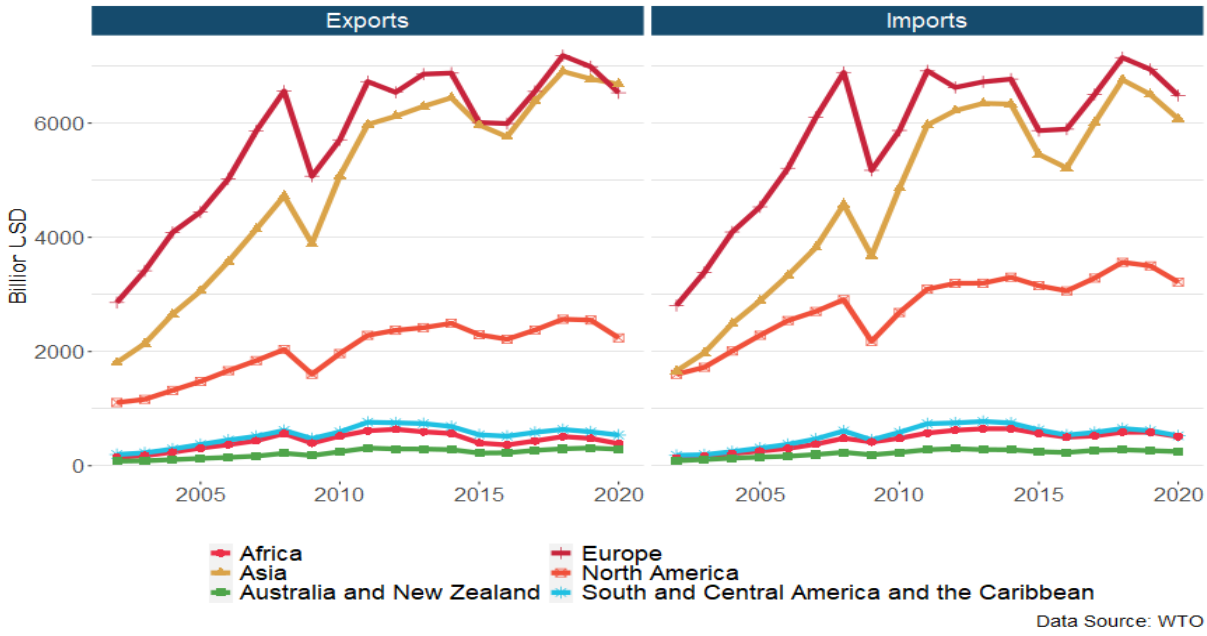
Evidence provided by various trade and industry think tanks[1] in Africa and beyond since 2010 indicate that there is immense potential for RVC development on the continent. What is still lacking, however, is guidance on setting up concrete RVC upgrading programmes. One major task that remains is the translation of well-studied macro data on trade integration and global value chains (GVCs) into meaningful policy action for industrial development on the ground.

This paper provides evidence based on international data of the level of RVC integration in Africa and its participation in global trade (both in total trade and in manufacturing trade, in particular). Section 1 discusses Africa's role in world trade; section 2 explores intra-African trade; section 3 examines Africa's integration into global manufacturing value chains, while section 4 focuses on intra-African value chains. Sections 5 and 6 provide some elements on the need for policy action to promote further regional integration. Section 7 concludes with some considerations for the road ahead of RVC development.

1. Africa lacks integration in world trade

Africa is less integrated in international trade than other continents such as Europa, Asia or North America. Figure 1 shows that the position of Europe and Asia—and to a lesser extent of North America—in world trade has increased over the last 20 years. This is consistent with other analyses that confirm that Africa's growth in world trade has been limited. Afreximbank (2019), for example, finds that Africa only accounted for 2.6 per cent of global trade in 2018.

Figure 1: World merchandise trade of continents



Data Source: WTO

Not only is Africa trading less with the world than other continents, but the majority of trade is concentrated in a handful of countries. Among the largest exporters in Africa (Figure 2) are countries with large populations and ample resource endowments (oil, minerals, agriculture).[2]

[1] The most recent studies have been carried out by Tralac, IMF, UNCTAD, International Growth Centre, Brookings Institute, UNIDO, UNECA, IMF, FAO, World Bank, OECD and WEF covering various products and regions on the continent.

[2] The data is gathered from the 5th revision of the COMTRADE Broad Economic Categories (BEC) dataset. The set for which detailed trade data was available covers 36 out of 55 member states of the African Union.

Figure 2: Total country trade, 2018

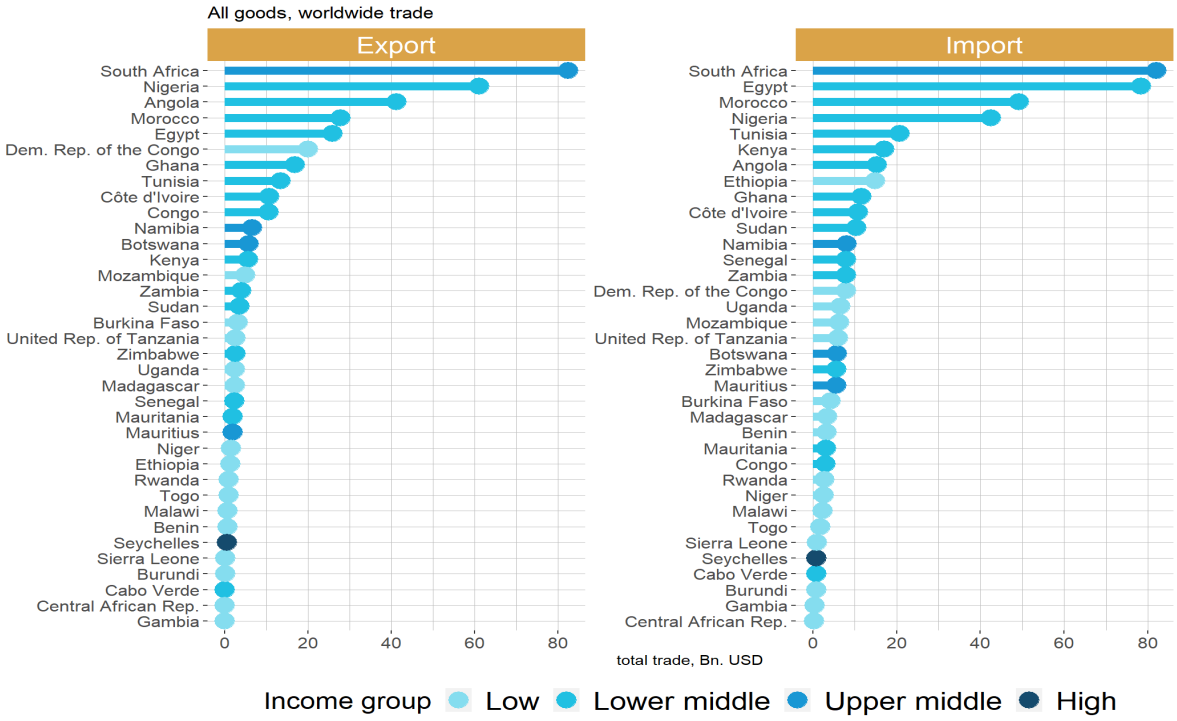
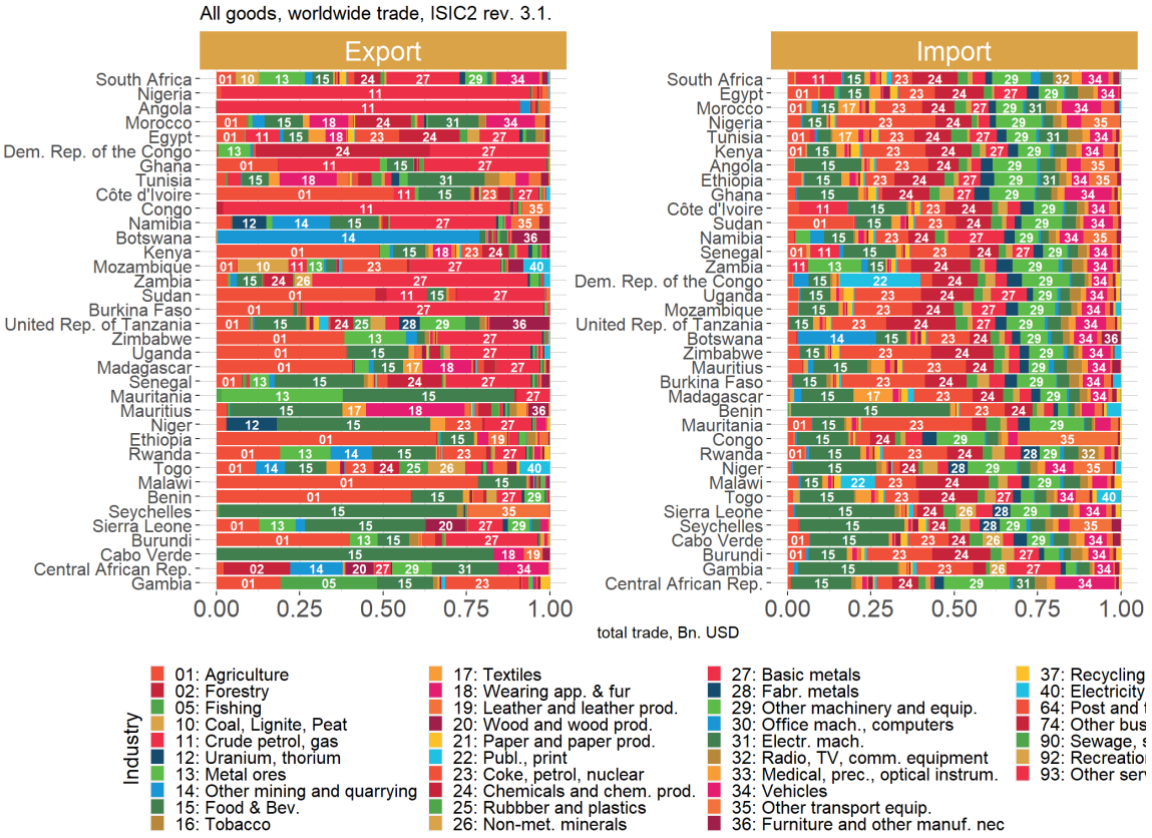


Figure 3 breaks down the composition of traded goods (ISIC 2-digit). We find that exports in many countries are dominated by agriculture or low-tech manufactured goods while the majority of imports seem to be food, coke, petrol, chemicals, machinery and vehicles.

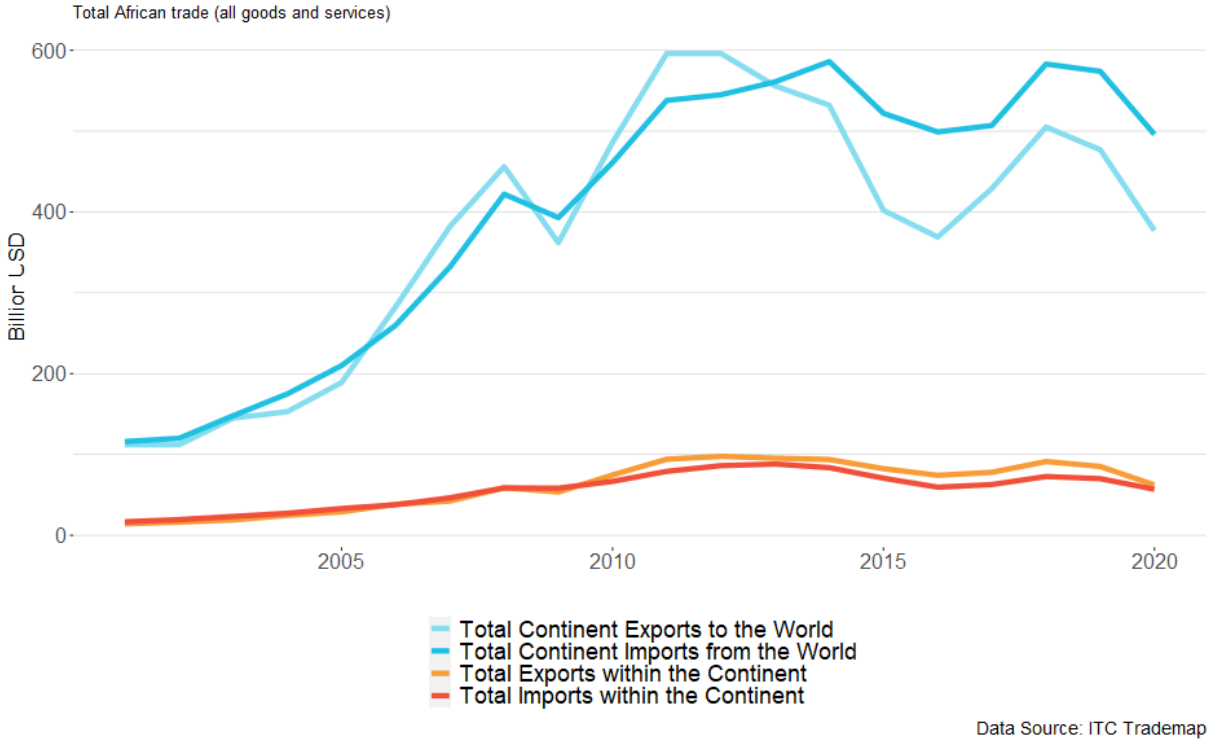
Figure 3: Total African world trade by ISIC activity, 2018



2. African countries lack integration in regional and continental trade

What does intra-African trade look like? We find that compared to Africa's world trade, intra-African trade has grown far less over the last two decades (**Error! Reference source not found.**). This is confirmed by Afreximbank (2019) for example, which finds that intra-African trade has increased less than Africa's world trade over the last 20 years.

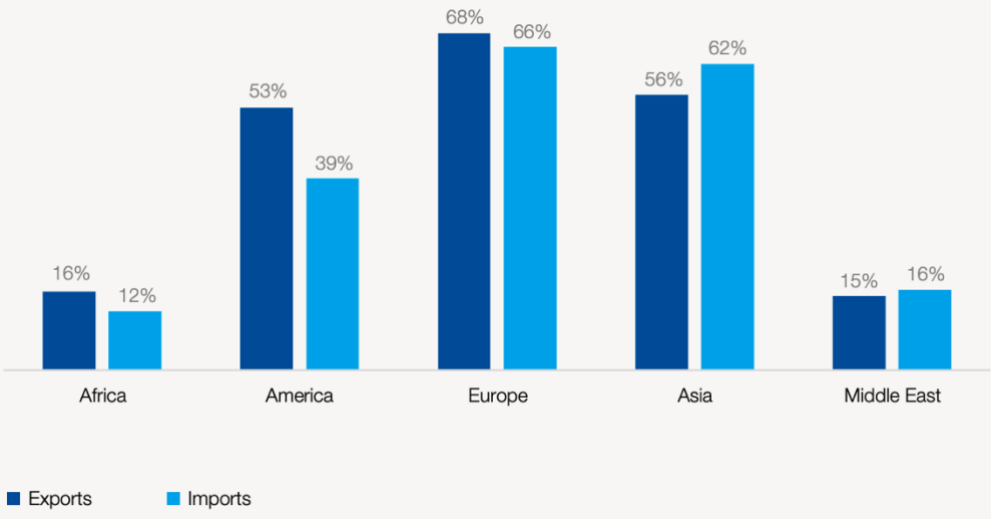
Figure 4: Overall African trade with the world and within the continent



Data Source: ITC Trademap

We also find that extra-African trade dominates total trade; in 2019, intra-African exports accounted for only 16 per cent of total exports, while imports only accounted for 12 per cent of total imports (see Figure 5 and WEF, 2021). At this low level, trade between African economies is likely to be insufficient to further accelerate economic growth. This reveals the growth potential of intra-continental trade flows, however.

Figure 5: Intra-continental trade as % of total trade with the world, 2019



Source: ITC trade map, based on UN COMTRADE, 2020

Table 1 presents the share of interregional trade in Africa in 2018, demonstrating that Africa also lags behind much of the world in terms of the integration of its regional economic communities, including the Economic Community of West African States (ECOWAS), the East African Community (EAC), the Southern African Development Community (SADC), the Economic Community of Central African States (ECCAS) and the Arab Maghreb Union (AMU/UMA).

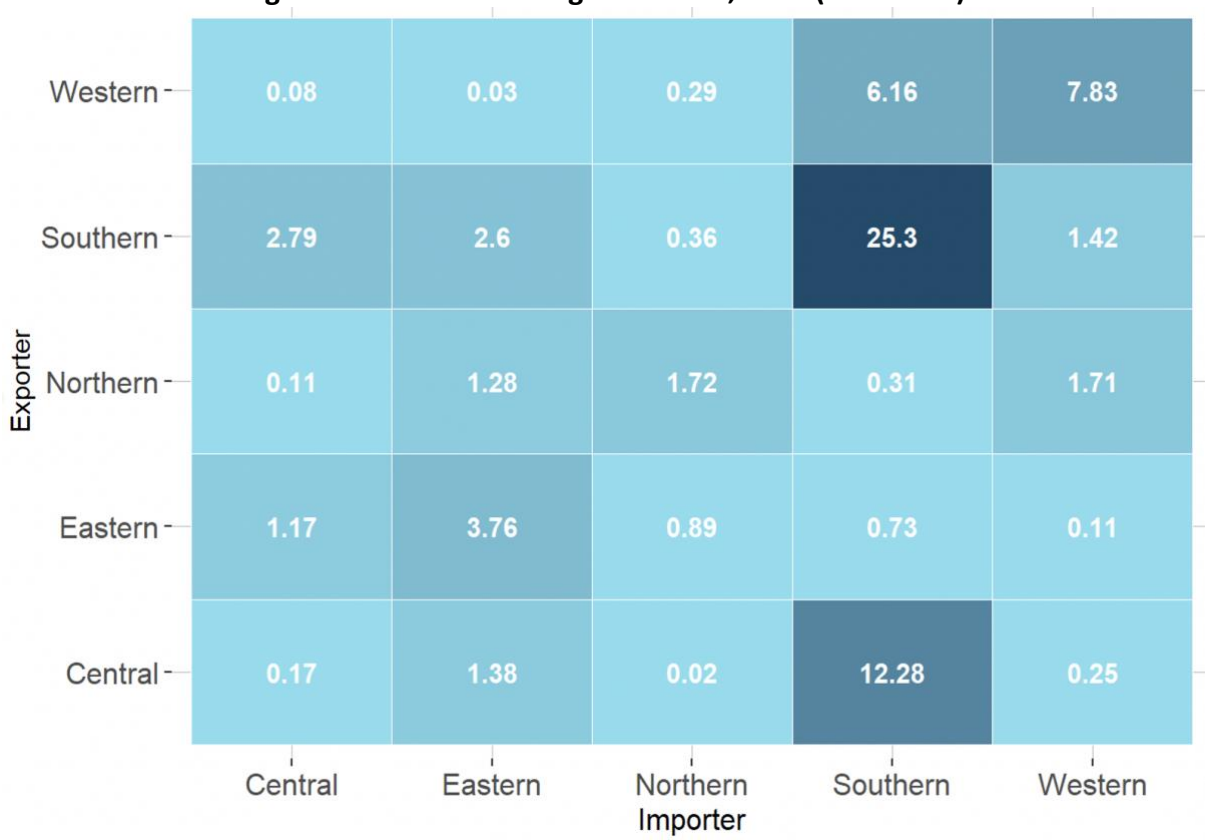
Table 1: African regional trade, 2018

Trade group	Exports		Imports	
	Intra-group	Rest of the world (incl. other African regions)	Intra-group	Rest of the world (incl. other African regions)
ECCAS	1.12%	98.88%	0.81%	99.19%
ECOWAS	8.01%	91.99%	6.35%	93.65%
SADC	29.24%	70.76%	18.94%	81.06%
EAC	26.17%	73.83%	7.06%	92.94%
AMU	1.27%	98.73%	0.73%	99.27%

Note: Based on UN COMTRADE HS. Trade groups are either defined based on the African Union or the Regional Economic Communities. Rwanda and Tanzania are both part of two economic communities. For this table, they are counted towards both.

Figure 6 presents the absolute values corresponding to the intra-group exports in Table 1. We find that trade between Africa's main trade blocks does not even exceed USD 1 billion in half of the cases.

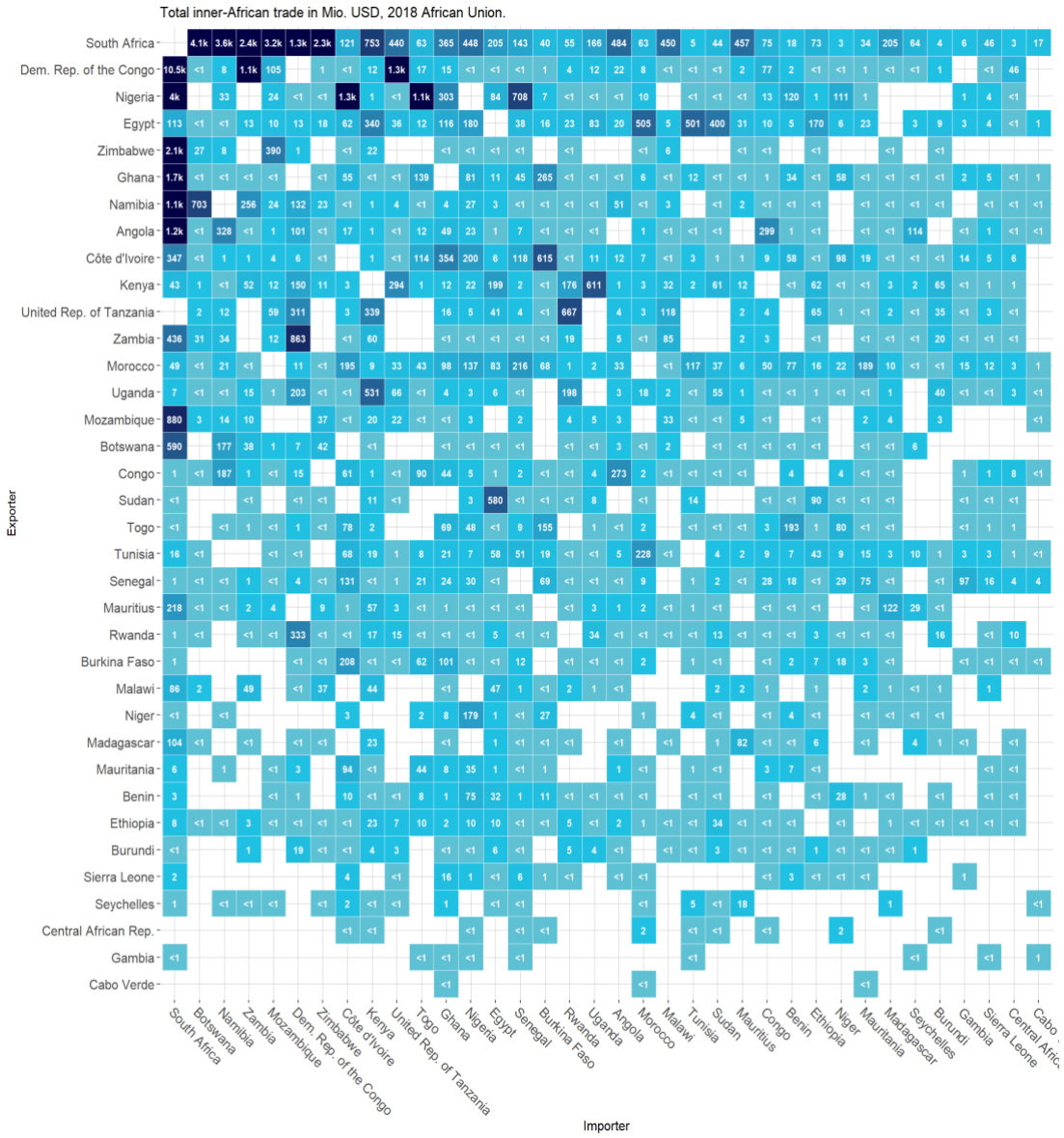
Figure 6: Intra-African regional trade, 2018 (in USD bn)



We must also consider the limitations of the statistical data we use in our analysis. Brookings (2021), for example, asserts that the amount of intra-African trade is higher than what average statistics show[3].

In this spirit and further breaking down the data of Figure 6 to the country level, we find that bilateral trade is indeed heavily concentrated in a few exporting countries (see Figure 7). Most country-to-country trade in Africa takes place between South Africa, DRC, Nigeria, Egypt, Zimbabwe, Ghana, Namibia and Angola.

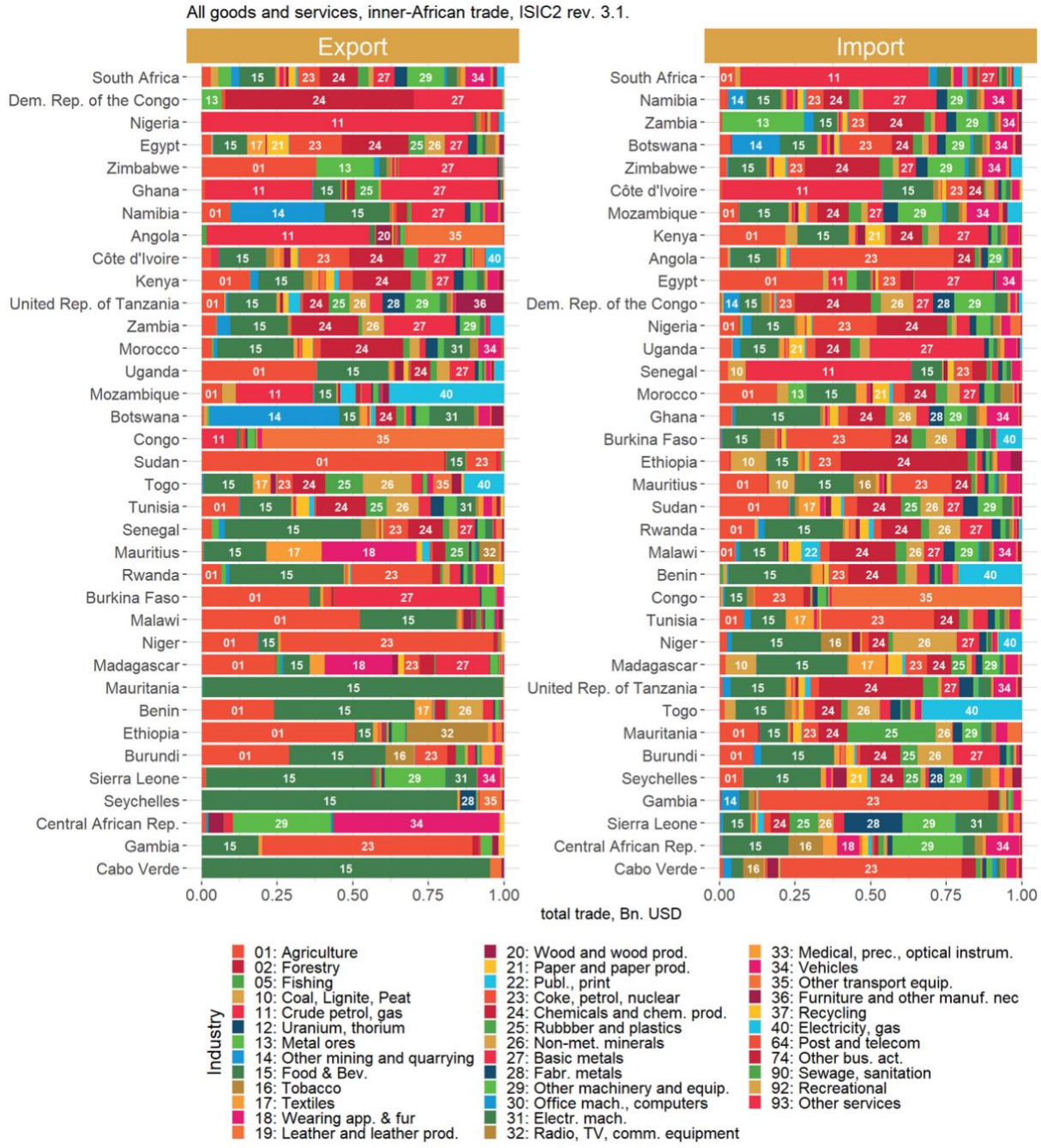
Figure 7: Country-to-country trade, Africa 2018



[3] First, for some countries - particularly landlocked ones - intra-African trade is much more important than for others. Second, a few larger African economies, such as Egypt or South Africa, lower the overall average as they are closely connected to the rest of the world. Third, the dependence and importance of commodity exports to countries outside Africa further decreases the amount of intra-African trade and might underappreciate the intra-continental market's potential. Fourth, informal trade is not measured, but estimates for some countries indicate that informal trade sometimes makes up 75 per cent of formal trade. The conclude that on average, intra-African trade seems to be underreported by between 11 per cent and 40 per cent.

Figure 8 shows the intra-African trade of goods by industry. Some goods (e.g. petrol, gas, chemicals) are exported by a few countries only, while imports are more equally distributed across countries.

Figure 8: Intra-African trade, ISIC breakdown, 2018



3. African countries are integrated in GVC trade to a limited degree

Compared to more traditional generic trade, trade that happens as part of global value chains refers to goods and services that are part of a coordinated production network where some form of importer-exporter relationship allows for the trade in goods of higher specificity beyond that of generic commodities (see Box 1). In the present and following section, we position Africa in terms of its integration in global and African value chains. The analysis focuses on goods from manufacturing industries.

Box 1: GVC versus traditional trade

Traditional trade comprises exports of goods and services that are produced in one country and absorbed in the destination country or the trade of goods that do not require any coordination in production and trade as the goods are more generic and easily tradeable on the (world) market. GVC trade is the trade of goods and services that are subject to contractual arrangements between buyers and sellers that specify the nature and characteristics of the goods.

Intermediate goods and services potentially cross borders several times along the chain and the final products are likely to contain components from many regions and of different origins. GVC trade has been growing in recent decades due to advances in information and transportation technologies and diminishing trade barriers. Consequently, firms can unbundle production into tasks that are performed at different locations to take advantage of varying factor costs.

Integration in GVC trade is measured through forward linkages (where the country provides inputs into the exports of other countries) or through backward linkages (where the country imports intermediate products to be used in its exports). Backward linkages are important for sourcing foreign inputs which is particularly advantageous if the inputs required for production are either not available locally or available but deficient in certain aspects (e.g. quantity, quality and price). Forward linkages show that exports are important for other countries to add value to their exports.

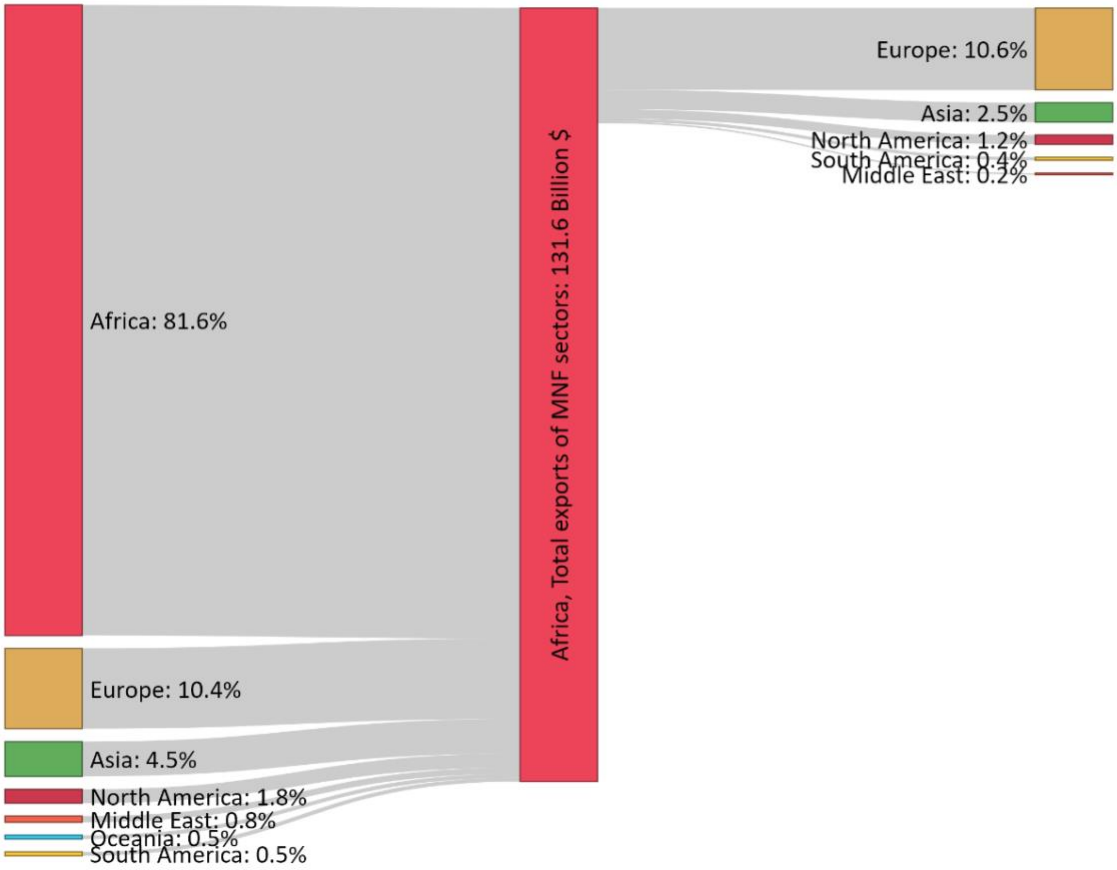
Integration in GVCs can, to a certain extent, be considered as a fast track to industrialization. Along with other scholars, Gereffi and Sturgeon (2013) or Baldwin (2012) argue that internationally fragmented production allows emerging economies to join existing supply chains instead of building them themselves. With the increased sophistication of goods, entering a supply chain removes the need to gain a comparative advantage domestically in a broad range of production stages. Done wrong, however, GVC trade could lead to firms getting stuck in low value-added stages of production or incapable of upgrading products or production processes.

Referring to Africa's manufactured exports in 2015 (most recent data available), Figure 9 shows that around 18 per cent of exported value-added did not originate in Africa and was imported (continental "backward linkages") while about 15 per cent of Africa's manufactured exports were further processed and exported by firms outside Africa (continental "forward linkages"). These numbers should be regarded as the lower bound of manufacturing GVC participation, as there are also intra-African trade flows that are part of larger GVCs and where value-added is traded across borders[4]. These numbers are relatively high and are comparable to other world regions (Foster-McGregor et al., 2015; World Bank, 2021). However, GVC participation is measured in per cent of total (manufacturing) trade hiding the fact that GVC

[4] Using the same data, the World Bank (2021) found around 30 per cent forward linkages and 20 per cent backward linkages in sub-Saharan Africa when also accounting for GVC trade across intra-African borders.

trade is relatively low in absolute numbers and that African manufacturing exports to a large extent consist of primary goods, raw materials and more generic low-tech goods.

Figure 9: Africa's manufacturing GVC participation in 2015

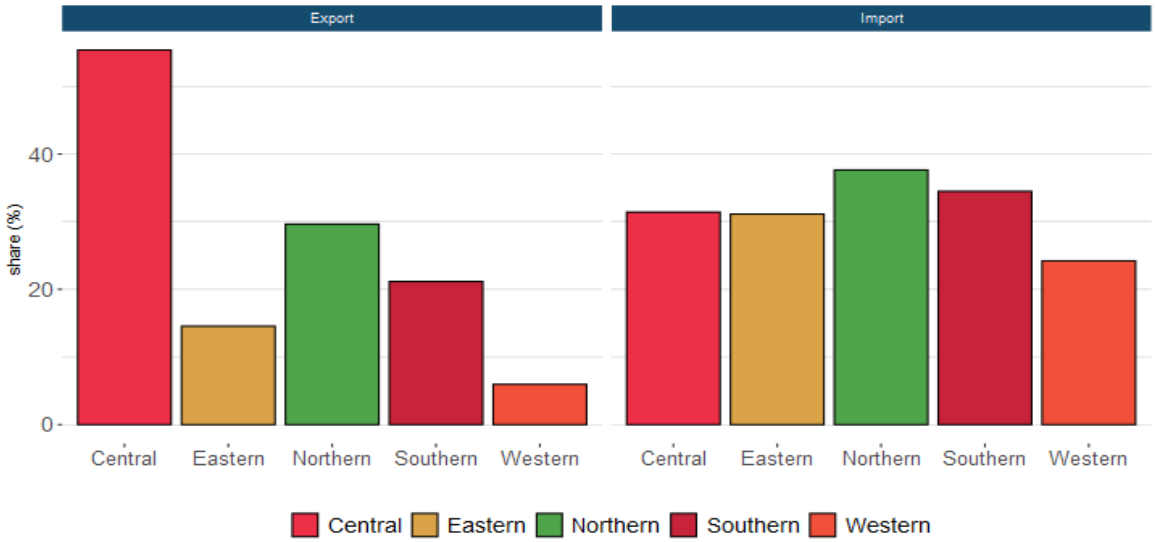


Data source: UNCTAD Eora GVC database. Africa-to-Africa trade is not shown separately.

We complement the analysis with trade data from UN COMTRADE (Box 2 gives an overview why it makes sense to combine two different data types). With data for 38 African countries, we find that of all African manufactured exports and imports worldwide 25 per cent were exports and 32.8 per cent were imports of so-called 'GVC goods'. These goods include mainly specific intermediate and capital goods. The remaining manufactured goods traded were either primary goods, generic intermediates or consumer goods.[5]

Figure 10: Share of traded manufactured GVC goods in total manufacturing trade African regions, 2018

[5] Manufacturing does not include mining goods. Only once they enter manufacturing with some degree of processing they are shown as manufacturing primary goods.



Data Source: UN COMTRADE BEC rev. 5. Figure shows the sum of 'specific' intermediates and capital goods. Excludes all primary or raw materials as well as most consumer goods.

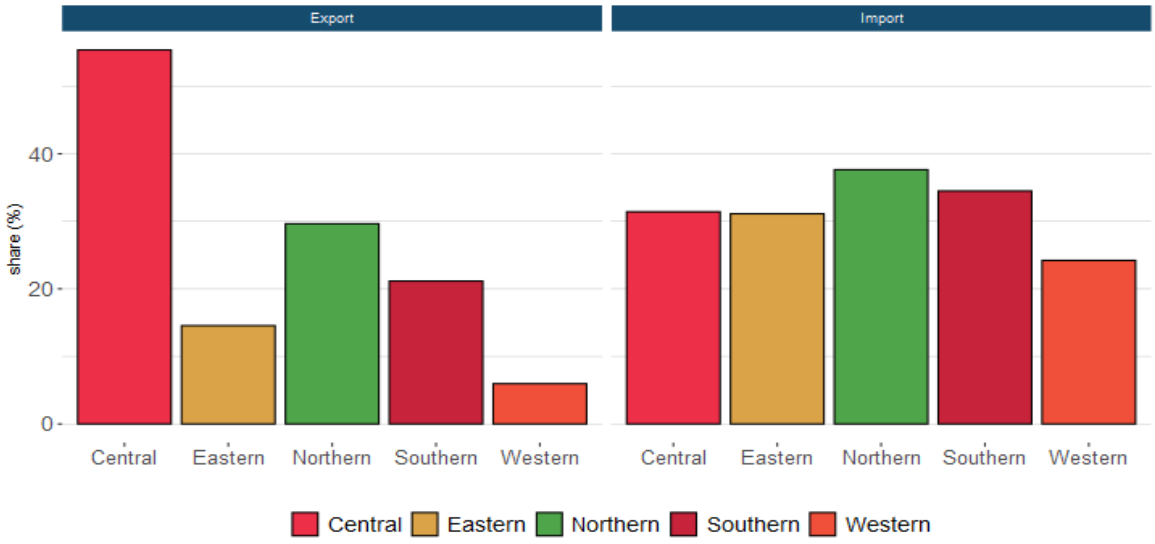
presents the values of traded GVC goods for the Africa Union regions. With the exception of the *Central* region, the regions seem to import a higher share of GVC-related manufactured goods than they export. Also, trade of GVC goods seems to be more equally distributed across regions, while on the export side there is more variation with higher rates, for example for Central Africa and lower rates in Easters and Western Africa.

BOX 2: Two types of trade data – gross trade (COMTRADE) versus value-added trade (EORA)

Why do we use different trade data types to analyse value chains? Value-added trade data such as UNCTAD Eora captures the origin and destination of trade in terms of value-added. More than capturing the trade of specific goods and their total price at which they are sold, value-added trade measures the origin of value-added of manufactured goods. In this sense it captures interlinkages across industries and countries by mapping where value comes from that ends up in the exports of industries. However, this data also has drawbacks. The newest data (2015) is already a few years old and does not allow to study the detailed goods that are traded. It further takes into account every trade flow irrespective of the fact that some goods are in fact very generic and not necessarily produced as part of a coordinated production process. Even though raw materials are at the start of every value chain, they might be easily tradable on the international market and are not necessarily produced according to detailed specification from a buyer which is another way of looking at value chains. The value chain concept is thus very broad with value-added trade data.

Gross trade data (such as provided by the UN COMTRADE database BEC revision 5) is not measured in value-added terms but in total gross values. It allows to distinguish goods that have most likely been produced in a value chain from goods that are more generic and might be easily traded on the world market. 'GVC goods', with this definition, include, in particular, many types of intermediate goods and machinery. Focusing on these goods allows to see the importance of these potentially more complex goods compared to trade in generic raw materials or consumer goods. Contrary to value-added trade data, it does not allow to understand who imports and uses the respective goods but the advantages include a much higher level of detail about the traded goods as well as more recent data. A similar argument to excluding generic primary goods is made for consumer goods. They might represent the last step in a value chain but many exported consumer goods are not produced as part of an integrated value chain. Similar to primary raw materials, they are therefore excluded from the macro analysis when using gross trade data.

Figure 10: Share of traded manufactured GVC goods in total manufacturing trade African regions, 2018

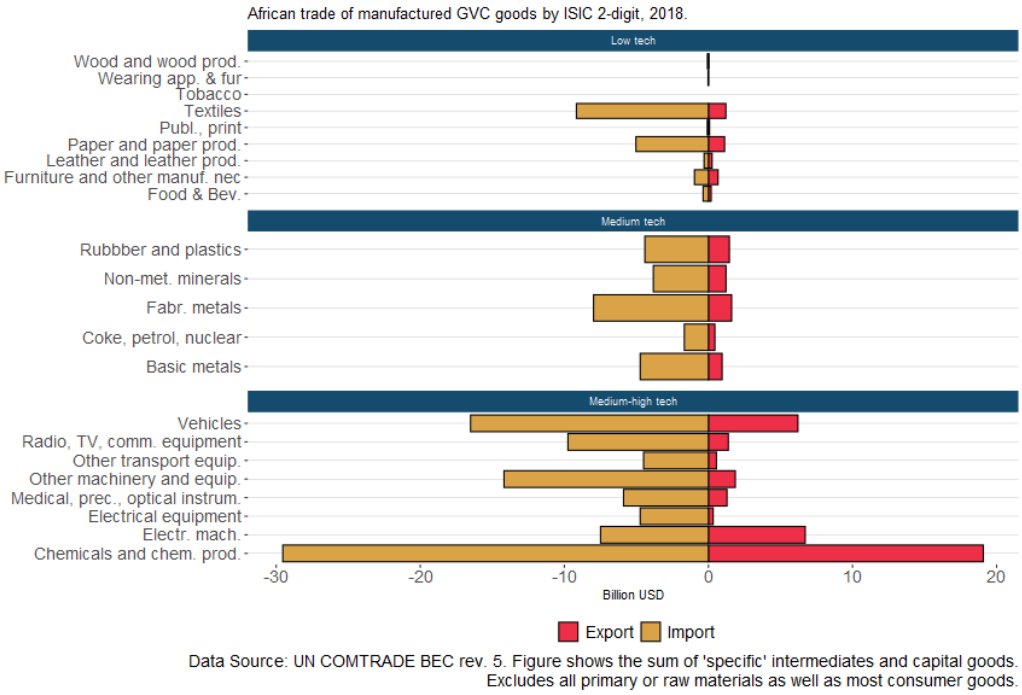


Data Source: UN COMTRADE BEC rev. 5. Figure shows the sum of 'specific' intermediates and capital goods. Excludes all primary or raw materials as well as most consumer goods.

Does this mean that African regions import more GVC-related manufactured goods than they export in absolute values? Figure 11 shows the breakdown of the trade of GVC-related

manufactured goods by 2-digit ISIC activity.[6] We find that without exception, all industries show higher values of GVC-related imports than GVC-related exports. In any case, since the goods represented in Figure 11 are relatively specific by definition, the higher imports can, to some extent, be interpreted as successful use and adoption of the technology embodied in these goods.

Figure 11: Total African trade of manufactured GVC goods by ISIC 2-digit, 2018



Data Source: UN COMTRADE BEC rev. 5. Figure shows the sum of 'specific' intermediates and capital goods. Excludes all primary or raw materials as well as most consumer goods.

Two more observations can be made regarding Figure 11. First, the numbers are highest for medium high-tech goods. Here we need to consider that many medium high-tech goods are actually produced as part of GVCs, often manufactured in accordance with very specific requirements from firms in high-income countries that use GVCs to outsource activities. As such, it is not surprising that the numbers for these industries are relatively higher compared to low-tech or medium-tech industries. Showing imports as well as exports indicates some level of participation of African firms in the manufacturing of some medium high-tech products, possibly as part of integrated regional or global value chains.

Second, given that the continent exported in total about 600 billion USD worth of goods and services to the world, including to African countries, the absolute values of trade of GVC goods is relatively low. This indicates that there is still much room to improve export capacity, especially in terms of GVC participation.

To summarize, at a first glance African countries seem to be well integrated in global value chains (WB, 2021) with 20 to 30 per cent of traded manufactured value-added either coming from abroad (backward linkages) or being used abroad (forward linkages). However, when looking more closely we find a more nuanced picture. While the relative numbers are

[6] The figure does not show trade related to primary manufactured goods (3/4 of exports) and most final consumption goods (2/3 of imports) and thus again focuses on more complex manufacturing intermediates and machines.

comparable to other world regions, they hide the fact most of this participation comes from raw materials, primary goods or more low-tech manufactured goods and the larger forward participation. This means that African countries are mostly upstream exporting these goods (World Bank, 2021). Moreover, in absolute numbers, trade of manufactured goods is still very low. Only a small share of manufactured goods are specific intermediates or capital goods.

4. While African firms participate in some GVCs, there is much room for improvement

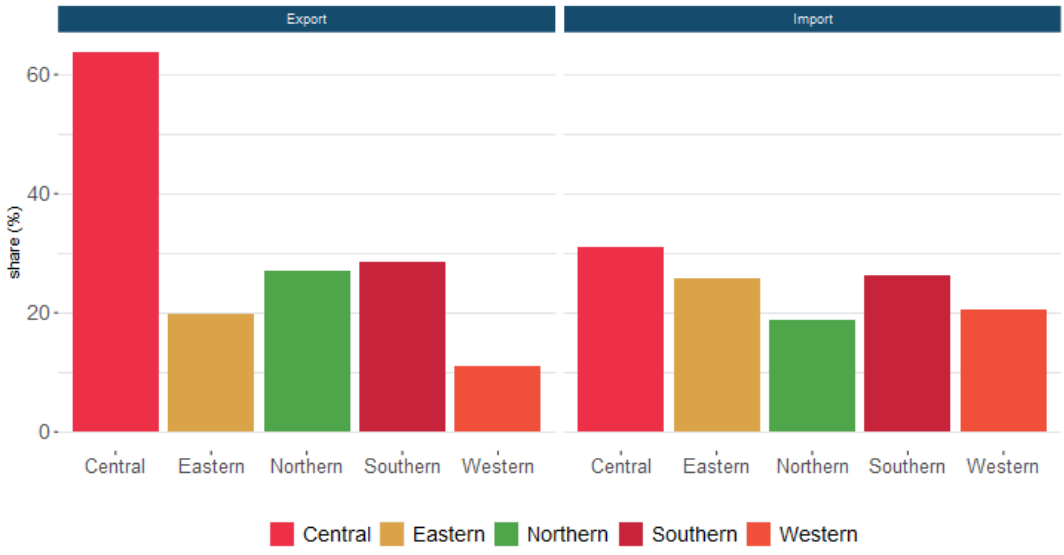
The following repeats the analysis of the previous section but only includes manufacturing trade flows within the continent. We call value chains that span within a region (here continent) regional value chain (RVCs). These can, of course, also be part of GVCs. RVC integration refers to manufacturing goods exported by one African country and used as inputs by other African countries for their exports.

Analysis of UNCTAD Eora data by the World Bank (2021) indicates that the cumulative backward linkages accounted only for 1 per cent of total output of the manufacturing sector in 2015. This means that, on average, only 1 per cent of manufacturing value-added by African countries originated in other African countries. A testament to underdeveloped RVCs.

Turning to gross values using total intra-African manufacturing trade from UN COMTRADE, RVC exports accounted for 34.5 per cent and imports for 25.2 per cent in 2018. This means that of all intra-African manufacturing trade, one-third of imports and a quarter of exports are likely goods that are part of coordinated value chains, roughly the opposite of total African GVC trade in manufacturing.

The regional breakdown of these numbers is presented in Figure 12,**Error! Reference source not found.** with some regions showing higher export values than import values in RVC goods trade.

Figure 12: Share of trade of manufactured RVC goods in Intra-African manufacturing trade African regions, 2018

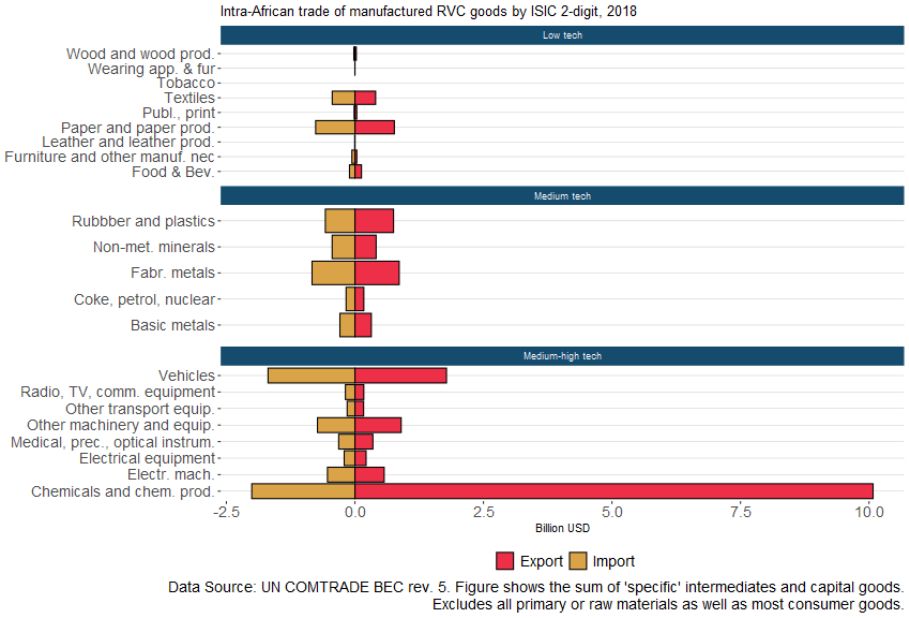


Data Source: UN COMTRADE BEC rev. 5. Figure includes the sum of 'specific' intermediates and capital goods. All primary or raw materials as well as most consumer goods are excluded.

On average, a higher share of imports than exports are RVC-related (as was the case for integration of Africa in GVCs). Figure 13 presents the absolute values for intra-continental

manufacturing trade in 2018 for different manufacturing sectors. In absolute numbers, and with the exception of goods from the chemicals industry, intra-African imports and exports of value chain-related manufactured goods are much more balanced compared to Africa's global manufacturing trade, which is skewed towards imports. This might imply that the intra-African trade of manufactured goods labelled as value chain goods more likely involve firms that are actually part of the respective value chain. At the continental level, RVC-related trade is balanced, but at the international level, Africa imports more because it might not have developed the capacity to produce goods of an adequate quality to be further processed in exporting countries.

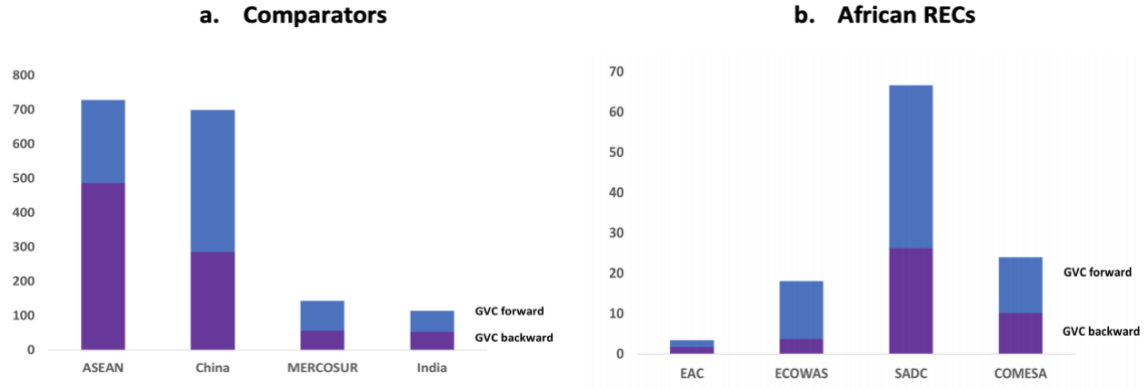
Figure 13: Intra-African trade of manufactured RVC goods by ISIC 2-digit, 2018



Data Source: UN COMTRADE BEC rev. 5. Figure shows the sum of 'specific' intermediates and capital goods. Excludes all primary or raw materials as well as most consumer goods.

Further on regional integration, De Melo and Twum (2021) show that backward and forward integration of African trade blocks in GVCs is low compared to other trade blocks and larger economies, with only SADC reaching a slightly higher level but not matching the MERCOSUR or India (see Figure 14). They also find that the development of production networks with extra-regional partners is much higher in all RECs than those with regional partners. They furthermore point out the striking absence of RVC growth in all African RECs.

Figure 14: GVC-related trade volumes for African RECs and comparators, 2015, billions USD

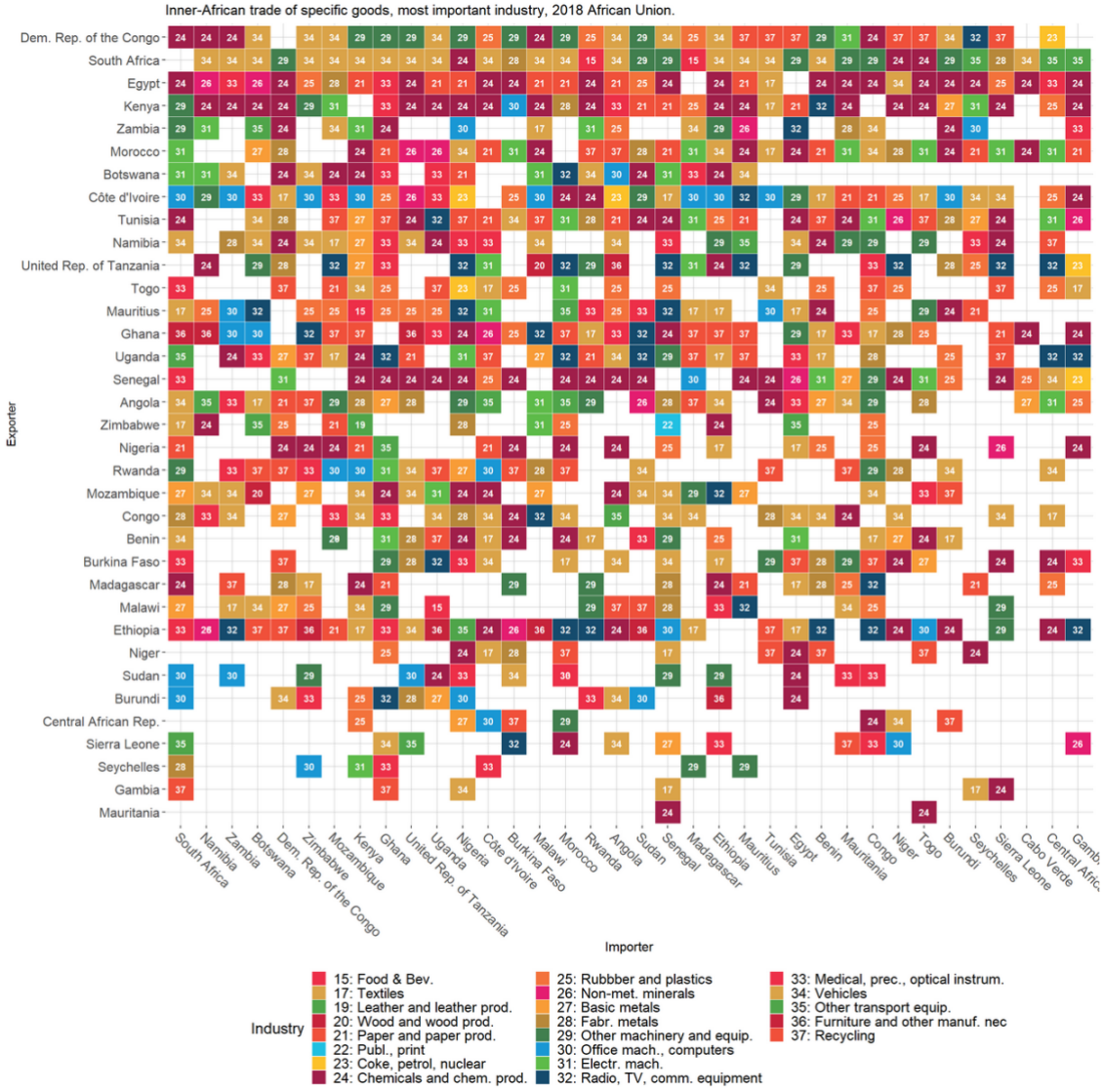


Source: de Melo and Twum (2021)

Given the number of manufacturing RVCs of African countries, Figure 15 indicates the most important (largest value) 2-digit activity in 2018 for every bilateral RVC trade relationship.

Industries that show up most often, of course, correspond to industries in Figure 13. These are [24] Chemicals, [21] Paper and [34] Vehicles. There already seem to be African RVCs or value chains that are part of larger GVCs for these industries. For example, most vehicles belong to the SSA (sub-Saharan Africa) Automotive Pact. WEF (2021) discusses this value chain in more detail.

Figure 15: Most important RVC manufacturing trade, 2018



Overall, we find that Africa's integration in manufacturing GVCs might seem relatively high. 20 per cent of manufacturing value added originated outside the respective African country, 18 percent outside the continent. However, as this is a relative concept, it only tells us that a rather large share of manufacturing trade is GVC trade obscuring the fact that such trade is relatively small in absolute terms, that only few countries drive it and that GVC-relevant goods are either primary goods or services (both not shown here as 'GVC goods').

When considering only intra-African integration into value chains, participation is even smaller.

Finally, we need to mention that regional manufacturing value chains in Africa are less developed than Africa's international engagement. An analysis of value-added trade data shows that imported manufacturing value-added by African countries from other African countries is only about 1 per cent. This calls for action to foster RVC development.

5. The urgent need for RVC development in Africa

There are several reasons why the continent and African RECs should pursue further economic integration and RVC development. Reflecting on the failure to integrate into higher stages of GVCs, RECs' trade with advanced economies in the global north and Asia consists of over 80 per cent raw materials and unprocessed goods. By contrast, around half of all of the regional blocks' intra-regional exports are manufactured goods. With the establishment of AfCFTA, the African market offers considerable unexploited potential, particularly for the development of intra-regional value chains (see also World Bank, 2019 and 2021, UNIDO, 2015, AUC, 2021 and forthcoming, and Noman and Stieglitz, 2015). Some (overlapping) arguments commonly made in favour of RVC development in Africa are summarized below:

- **Adding value to African products where it makes sense.** Africa's economies must move beyond the production of raw materials to build dynamic and competitive manufacturing sectors with higher value-added. Here, Africa must draw on the opportunities presented by participation in global and regional value chains.
- **Accelerating diversification.** Africa is home to eight of the world's 15 least diversified countries according to the International Monetary Fund's Export Diversification Index (2020). Diversification, through both the expansion of existing economic sectors and the creation of new ones, is important for reducing dependency. This argument is underscored by the periodic boom and bust cycles of international commodity prices and, recently, by the oil price shock and other global supply and demand shocks triggered by the coronavirus pandemic.
- **Greater economic resilience**. The COVID-19 crisis has again demonstrated the degree of dependence of key African export sectors on international markets. For example, the Kenyan flower industry has succumbed to COVID-19 due to contractions in demand from European markets. By contrast, regional markets have a resilience that global markets often lack, primarily due to geographic proximity. Economic resilience can be achieved through diversification, import substitution and sourcing from and marketing to less distant places while building up local productive capacity in key priority sectors.
- **Local products benefit consumers.** RVCs are particularly well suited to serve regional tastes and cultural preferences. The food industry offers the clearest example of this. Several food crops, such as yam, cassava, potatoes and aquaculture products, face little international competition, in part due to their perishability and the methods of local preparation. Such products can be marketed via regional chains, protected in part by local tastes and habits.
- **Regional GVC integration.** Many efforts have been made to increase the participation of African countries in GVCs and to export to high-income country markets. This has included benefits of value capture, income and firm learning, but only for some. In turn, the region may have also become more exposed and prone to GVC-related shocks, as observed with the onset of the current COVID-19 crisis. A more rapid expansion of regional production capacity, by contrast, allows for diversification, increases the availability of goods that can be consumed in the region and reduces vulnerability.
- **Import substitution where it makes sense.** Developing RVCs can further help reduce the import of some goods or parts thereof from outside Africa, which could alternatively be produced on the continent. While importing goods can have many benefits, such as learning from imported technology, a range of goods could be produced directly on the continent, thus increasing both local value addition and self-sufficiency by reducing vulnerability.

- **Environmental costs.** Global production arrangements involve the long-distance transport of intermediate goods by ship or air which entails a heavy environmental footprint. Organizing production along RVCs as opposed to GVCs means benefitting from geographical proximity and, in turn, a reduction of transport-related carbon emissions.

6. Current challenges in RVC development

Why, beyond the provision of raw materials and a limited number of low value-added exports, have African countries struggled to integrate regionally and develop industries along RVCs? It is probably a mix of persistent challenges around structural economic transformation—including slow productivity growth and limited advancements in technology and industrialization—that explain why continental Africa's share of global merchandise exports remains marginal and why the level of intra-regional trade falls behind that of other countries' regions. Below we list the most common explanations for the failure to develop RVCs on the continent:

- **High tariffs and non-tariff barriers** in trade between African countries and regions. The establishment of the AfCFTA at the beginning of 2021 will remove some of these barriers, but there is still some way to go to remove barriers to the extent known, for example, in the European Union.
- **Inconsistencies in trade policies.** The African Union and its regions are currently adjusting their trade policy frameworks which have been inconsistent in the past.
- **Limited exploitation of the potential of emerging, regional and domestic markets**. Firms in Africa and value chain upgrading programmes and other policies do not invest enough in product development and access to existing and new markets with improved products.
- **Lack of involvement of lead firms and first-tier suppliers.** Africa still lacks attraction of investors that seek business partnerships beyond windfall profit expectations. Careful promotion of foreign and local investments based on solid business rationale still needs to be further explored.
- **Weak linkages of primary producers with industries and markets.** Industrial firms often still have weak linkages with producers of primary products. This includes the majority of the millions of farmers that face difficulties targeting outlets for their products. The rationalization of suppliers' contractual relationships with buyers, processors and exporters needs to be improved.
- **Lack of quality culture**. The quality compliance infrastructure and firms' capacity to improve quality compliance are still in an incipient stage. Local products, therefore, remain low value and face competition from extra-continental competitors. More efforts need to be made to assure and improve quality control along the value chains.
- **Use of inappropriate technologies**. Technologies used in manufacturing are often outdated and inefficient. Investment in new technologies lags behind due to a lack of both funds and technological progress. Only a marginal share of companies uses more advanced technologies such as Industry 4.0.
- **Expensive and unreliable digital connectivity**. Firms in RVCs need to communicate with their suppliers and customers through internet-based technologies. Their development still lags behind in many parts of the African business environment.
- **SME development.** SMEs and informal companies still constitute a large part of Africa's industrial sector. Waiting for them to be replaced by larger companies that are more integrated in value chains with higher value and higher quality products will only intensify foreign dominance. Instead, innovative SMEs need to be supported so they can upgrade

and grow into more sophisticated business operations. This requires business planning, production technology and the development of know-how, finance preparation and links to investments and markets.

- **Incipient cluster development.** Collective action to facilitate joint sourcing of inputs, firm learning, upgrading and joint marketing among firms producing similar goods at one location is still uncommon. The potential to develop such firms through cluster development programmes exists in some areas in Africa, especially among the large number of SMEs and informal entrepreneurs.
- **Untargeted skills development.** Entrepreneurs and workers in industrial firms need concrete and specific skills to engage in production processes. Often, firms cannot afford the labour lost when workers attend training, and when they do attend such training, workers acquire skills that are not specific enough and tailored to the tasks they perform in the firms.
- **Industrial Park development.** New industrial businesses usually need to be allocated in specially designated industrial parks. Even established businesses are often required by regulation to relocate to such zones. However, such parks often lack infrastructure development, are characterized by poor management and do not benefit local companies. For foreign companies, on the other hand, tax havens and subsidies are more readily available, and governments guarantee infrastructure development in the zones international companies choose to locate to.
- **Weak infrastructure development.** The infrastructure required for industrial upgrading, including roads, transport systems and ports, as well as the provision of water, electricity and telecommunication, is often deficient. Many infrastructure development projects at the national, regional and continental level have been created with international support. But not all of these have been connected to industries and do not facilitate regional trade. Many of these projects face last-mile and last-meter issues. Others lack complementarity with economic development (e.g. a road has been built but there are no businesses to connect).
- **Underdeveloped innovation systems and local learning networks.** The creation of an innovation ecosystem within which entrepreneurs can develop ideas, gain access to knowledge and technology and, together with tech centres and knowledge brokers, build new business solutions is not widely featured in African governments' programmes for private sector development.
- **Limited entrepreneurship and youth development.** Entrepreneurship builds the necessary administrative and financial skills and creativity for business opportunities. Ultimately, business ideas need to be transformed into concrete business operations. While Africa's youth and increasingly skilled population offers enormous potential, a good share of whom want to become entrepreneurs, entrepreneurial skills are neglected in formal and vocational education programmes.
- **Limited communication between public stakeholders with business leaders and entrepreneurs in the private sector.** Where public chain upgrading programmes have been introduced, they often involve public sector actors who are not business savvy enough to the detriment of the private sector. More emphasis needs to be placed on building public capabilities for strategic policy formulation and implementation and on developing avenues for private-public cooperation.
- **Lack of shared understanding of core value chain concepts and approaches**. Business planners in the private and public sectors still lack an understanding of value chains' integrated and systemic nature. An actor's benefit in one segment of the value chain

depends on many actors in other parts thereof. The governance structures and power relationships that influence competitive pressures, entry barriers and upgrading prospects need to be more carefully assessed to design measures to upgrade value chains.

- **Insufficient coherence of policies and strategies for regional industrial upgrading.** The policies for trade acceleration and industrial development are not coordinated at the intra-regional and interregional levels. As a result, there is a mismatch between continental and regional commitments and regional and national actions.
- **Lack of capacity for developing context-specific regional V.C. upgrading strategies.** Developing V.C. upgrading strategies requires diverse technical expertise in business administration, markets and industrial engineering as well as intensive data collection and analysis. Furthermore, V.C. upgrading strategies need to be grounded in business reality, which requires an understanding of business practices, technologies, quality criteria, cost factors and risks. Such a level of detail is often not factored into the assessment and the resulting upgrading programmes.

7. The road ahead: Strategies for RVC development in Africa

Africa will remain the subject of external market forces that include both globalization and deglobalization trends. However, with the establishment of the AfCFTA, Africa can embrace a self-supporting regional development agenda fostering intra-African trade containing more value added generated in Africa and build up manufacturing industries that sustain and grow in an international competitive environment.

Overall integration of Africa in global trade is low (less than 3% of world trade). Trade within Africa is also low (15% of total African trade) in comparison to America, Asia and Europe (where the rates range between 40 to 70%). And the trade within African regions (South, North, East, West, Central) is often even lower. With regard to integration into GVC trade we further find that 20 to 30 per cent of traded manufactured value-added either comes from outside Africa (backward linkages) or is used outside Africa (forward linkages). However, these seemingly high numbers in GVC trade hide the fact that in absolute numbers, trade of manufactured goods is still very low. When we look at intra-African manufacturing value chains, we find that forward and backward linkages between African countries amount to only 1 per cent of traded manufacturing value added.

The low integration of Africa in trade (and seemingly high rates of integration of GVC trade of manufacturing goods) should be considered as an opportunity for exploiting the potential to raise Africa's performance in trade and the development of its industries. No other sector creates jobs, generates income, encourages the growth of other sectors and embeds innovation like manufacturing. Through proactive and concerted action, there is a new window of opportunity for Africa to ramp up its manufacturing sector and prepare it for the AfCFTA era. In this context, RVC development in Africa constitutes a pragmatic response to existing opportunities to exchange products and add value across African borders and to counterbalance any tendencies of reductions in global trade in the post-COVID era.

RVC development is able to foster industry development under the current constraints such as market fragmentation; the small size of national economies; over-reliance on the export of primary commodities; low levels of regional sourcing, a narrow export base and the lack of export specialization. RVC development in Africa calls for greater specialization among nations and the exploitation of economies of scale.

For RVCs in Africa to develop a new generation of industrialization strategies beyond the traditional focus on value addition and factories with smokestacks needs to be developed. It needs to be based on complementarity across the region's countries, e.g. production capacity, resource endowment, infrastructure and markets for sales. In this context, RVC development strategies can be both outward-looking to supply global markets or inward-looking with development intended for regional consumer markets.

To be explicit, building an industrial-driven economy across countries and regions is not achieved through a simple policy switch. It requires going through a complex process of defining and implementing a nuanced package of policy measures that lay the infrastructural foundations, foster the development of interfirm linkages, upgrade knowledge and technology, promote investment and ensure the marketing of new and better products. In this, the upliftment of informal and small and medium enterprises to a level where they are business-ready and able to compete needs public support. Such policies need to foster structural change and increase of productivity in African firms and render them profitable and competitive, first on the regional level and then globally.

Placed into the hands of skilled development planners and trade negotiators, the regional development of industrial value chains can become a potent vehicle for economic growth and industrial development on the continent. It requires both state-led support and private sector-led business development and investment. Policy action is required to draw up the necessary regulations, finance and investment, technical assistance and business support so African firms can exploit the opportunities this new context is opening up.

To start with, a careful mapping of opportunities for RVC development needs to be conducted prioritizing those chains with the highest potential and benefits for the society. More substantial analysis of existing conditions and opportunities would lead to meaningful business planning along the RVCs. Then context-specific RVC upgrading programmes must be put in motion to support small to large firms reshaping their businesses.

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