CHAPTER 2.3

# Tapping the Potential of Global Value Chains for Africa

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Africa's economic performance over the last 15 years has improved considerably. After two decades of negative per capita growth, GDP growth has averaged 5 percent per year and GDP per capita has increased by 30 percent since 2000. Yet important competitiveness challenges remain—as explored in Chapter 1.1 of this *Report.* African countries would benefit from more intense trade and investment linkages, including higher intra-regional trade. The region's participation in global trade and investment flows remains low when compared with other regions.[1] While the numbers remain low in absolute terms—trade in sub-Saharan Africa stands at 2 percent of total world trade—developments are pointing in a positive direction. At US$60 billion, foreign direct investment (FDI) into the region is five times the level in 2000, and trade flows have expanded by 10 percent per year over that same period.

These positive developments are taking place within a context of expanding participation in global value chains (GVCs).[2] There is growing interest in assessing what determines engagement in GVCs, what the effects of such engagement may be, and what the implications are for policymaking. These questions are particularly relevant for many African countries where business environments are generally less competitive and where policy challenges need to be confronted with more limited public resources. They also highlight the importance of the ongoing debate about the extent and desirability of integrating into regional and GVCs and the benefits associated with wider participation for developing countries.[3]

Recent research shows that many developing countries are increasingly involved in GVCs, and that this participation generally brings economic benefits in terms of enhanced productivity as well as greater sophistication and diversification of exports.[4] Yet the gains from value chain participation vary significantly between countries, and African countries are no exception.

The objectives of this chapter are to assess Africa's progress in connecting to GVCs, to highlight the main challenges to further integration, and to outline ways in which African economies can deepen their integration into GVCs in order to enhance their economic performance and achieve prosperity for their citizens. GVCs offer opportunities to transform Africa's economies by developing and expanding new activities and building dynamic and competitive manufacturing, agriculture, and service sectors. Regional (African) value chains can also play a significant role in offering local producers, including small- and medium-sized enterprises (SMEs), opportunities to access fast-growing and more easily accessible markets across Africa. However, as previous

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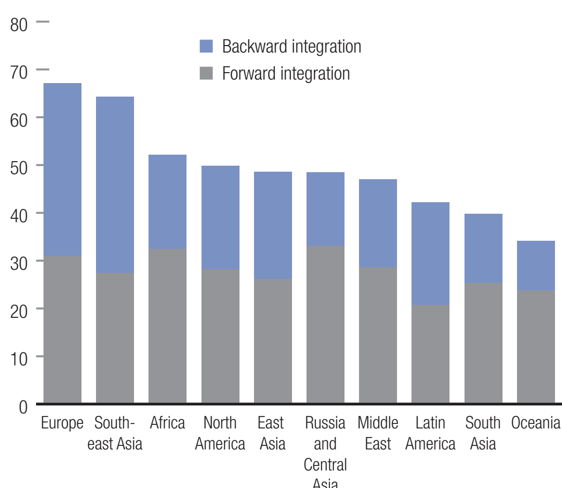
**Table 1: Share of global value-added trade by region, percent (1995–2011)**

| Region | 1995 | 2011 |
|---|---|---|
| Europe | 57.5 | 50.9 |
| East Asia | 14.4 | 16.2 |
| North America | 13.1 | 11.8 |
| Southeast Asia | 6.0 | 6.8 |
| Latin America | 3.2 | 4.2 |
| Middle East | 2.0 | 3.0 |
| **Africa** | **1.4** | **2.2** |
| Russia and Central Asia | 0.9 | 2.0 |
| South Asia | 0.7 | 1.7 |
| Oceania | 0.9 | 1.3 |

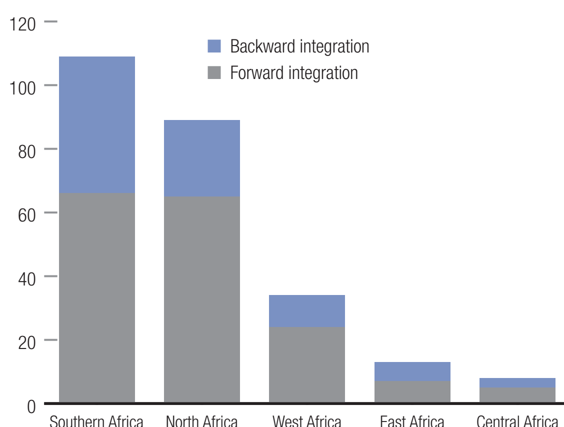
Source: AfDB et al., 2014.

**Figure 1: Integration of world regions into GVCs, 2011**
Share of total value-added exports (percent)




Source: AfDB et al., 2014.

**Figure 2: African integration into GVCs, 2011**
US$, billions




Source: AfDB et al., 2014.

chapters have shown, important competitiveness challenges remain and the productivity across all sectors of the region's economy—agriculture, manufacturing, and services—remains low. What is more, in the decades ahead, Africa's unique demographic dynamics will scale up the challenge of transforming the continent. Africa's workforce is expected to increase by 910 million between 2010 and 2050, of which 830 million will be in sub-Saharan Africa.[5] This unprecedented "demographic dividend" also translates into a need for more jobs. Africa's transformation therefore entails the double challenge of productivity growth *and* massive job creation.

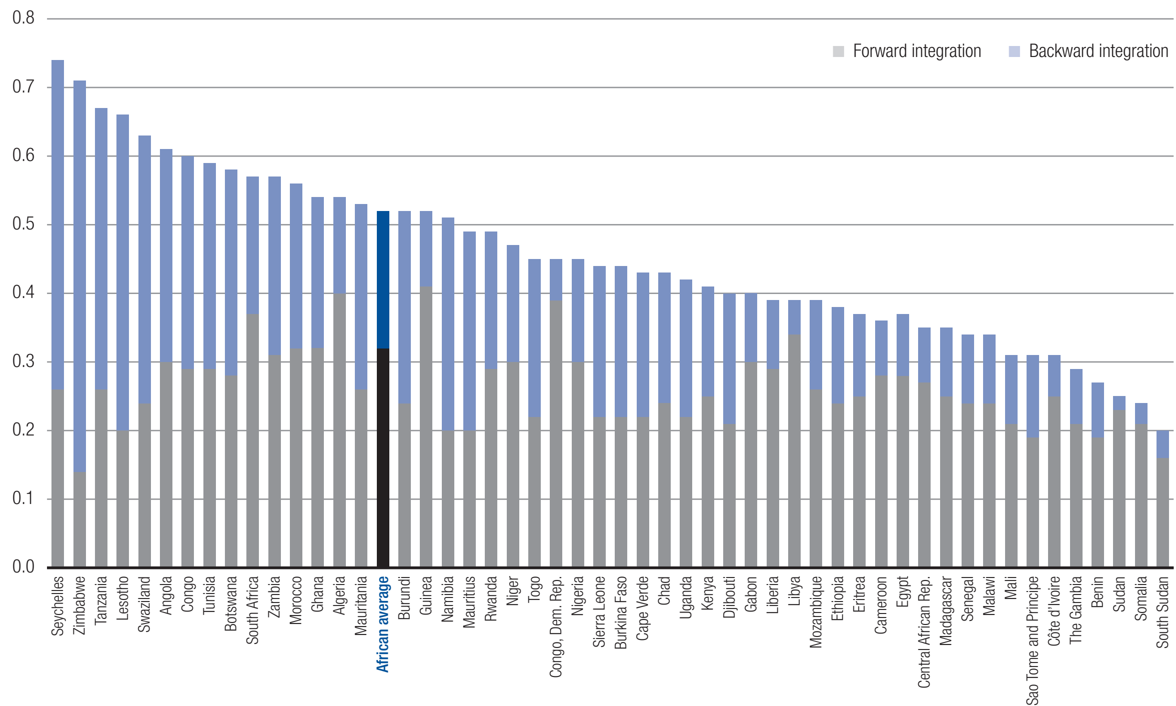
Recommendations on the most desirable form of GVC participation (whether backward or forward participation is preferable in a particular circumstance), how participation influences economic outcomes, and which segments of the value chain will be profitable depend on the characteristics of the production process as well as on countries' and firms' characteristics, such as relative skills and resource endowments. More data and empirical studies are needed to fully assess the extent and determinants of the integration of countries into GVCs, and the consequences these have on development outcomes such as labor gains and other social and environmental outcomes. Given these limitations, the following analysis offers a starting point for policymakers to assess their countries' participation and policy options on ways to increase engagement in GVCs with overall positive outcomes for society.

The first part of this chapter presents data on Africa's participation in GVCs. The second section examines factors driving and hampering African countries' participation in GVCs. The third part discusses policy options for governments to strengthen the integration of their economies into GVCs. The last section stresses the need for broad economic reform agendas to deepen African integration in value chain trade. Priority areas include trade facilitation, business climate, strengthening investment and financial services, regulatory reform, and stronger regional integration.

## AFRICA'S GVC PARTICIPATION

The two main types of a country's participation in GVC trade are *backward integration,* when a country sources foreign inputs for its export production, and *forward integration,* when a country provides inputs for another country's export production. Combining backward and forward integration gives a measure of a country's total GVC participation. Although the desirable outcome—boosting productivity and employment creation—is clear, a remaining question is whether participation in both backward and forward integration paves the way to these objectives or if one should be favored over the other. Recent research shows that increasing backward participation leads to higher per capita domestic value-added in exports.[6] In other words, imports of intermediates are a way to access competitive inputs

**Figure 3: Global value chain participation in Africa, 2011**
Share of total value-added exports (percent)




Source: AfDB et al., 2014.

and thus to enhance productivity and produce goods that are more competitive for export. A higher share of backward participation is also linked to the production of more-sophisticated export bundles and greater diversification of exports over time.[7] The benefits of forward participation are less clear and depend heavily on the type of the forward linkages (e.g., raw materials versus research and design).

**Africa captures a small but growing share of global value-added trade and constitutes one of the most integrated regions in GVCs.** Today over 70 percent of global trade is in intermediate goods and services and capital goods.[8] Global trade remains strongly clustered in and around the manufacturing hubs in Europe, North America, and East Asia. These three regional blocs accounted for approximately 80 percent of global value-added trade in 2011. Africa captured a small but growing share of this trade in 2011: the continent accounts for 2.2 percent of total GVC trade—an increase of almost 60 percent since 1995 (Table 1).[9]

Despite its low share of total GVC trade, the continent's value chains are among the most integrated in the world in terms of relative share of value-added trade to total trade. More than half of Africa's total exports involve either forward or backward integration. Only Europe and Southeast Asia are more integrated than Africa into GVCs (see Figure 1).[10]

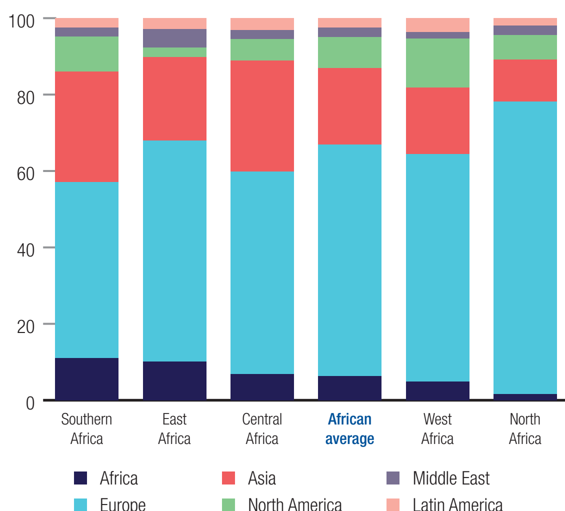
**Africa's participation in GVCs is still dominated by forward integration, although backward integration has been growing faster.** As seen in Figure 1, Africa's forward integration comprises just over 60 percent of its participation in GVCs. African exports (in North and West Africa in particular) are still concentrated around commodities such as fuel and mineral resources. Only East and Southern Africa record increasing shares of processed intermediate exports. Backward participation, however, has been growing faster than forward participation, increasing by 60 percent between 1995 and 2011.[11] Africa's imports reveal a high concentration in capital goods, suggesting a strong reliance on the foreign technology embedded in imported capital goods. Concerning the imports of processed intermediates, Africa's import intensity is similar to that of other developing regions.[12]

**Africa's regional participation in GVCs is driven by Southern and North Africa, which together account for the lion's share of the continent's total value chain trade**—78 percent, while West Africa accounts for only 14 percent, East Africa for 5 percent, and Central Africa for 3 percent. Southern Africa and North Africa both account for the continent's largest share of both forward and backward value chain integration (Figure 2). Both regions have important natural resource sectors and a strong export specialization in mining activities. Southern Africa also accounts for 50 percent of the continent's total backward integration, with intermediate inputs sourced mainly from the United States and China.

**Large differences both in total participation rates and shares of forward and backward participation rates across African countries prevail.** Total participation rates range from 73 percent in Seychelles to 20 percent in South Sudan (Figure 3).[13] The five African countries with the highest

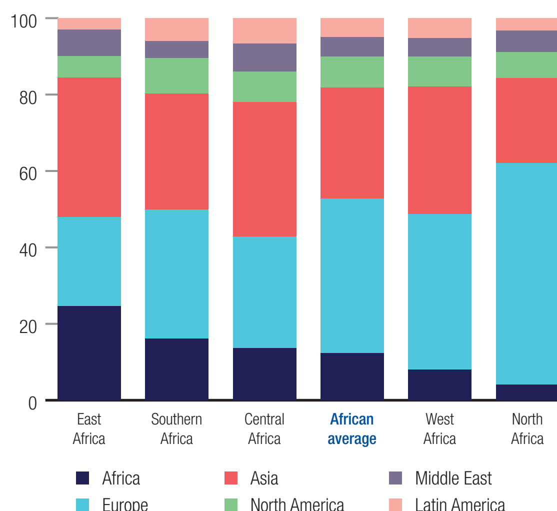
**Figure 4: Africa's participation in GVCs, 2011**

4a: Destinations of Africa's forward participation (% total forward participation)




Source: AfDB et al., 2014.

4b: Sources of Africa's backward participation (% total backward participation)




Source: AfDB et al., 2014.

level of GVC participation are Lesotho, Seychelles, Swaziland, Tanzania, and Zimbabwe. Guinea, Algeria, the Democratic Republic of Congo, South Africa, and Libya have the highest forward participation rates. Most African countries have seen their forward participation rate increase between 1995 and 2011. South Sudan, Djibouti, South Africa, Niger, Ethiopia, and Congo have witnessed the most important relative increase in forward participation rates (above 40 percent) of all African countries. Overall, forward participation rates have increased by 20 percent in Africa since 1995.[14] The continent's backward participation increased by 60 percent—three times faster—over the same period. The countries with the highest backward participation rate are Zimbabwe, Seychelles, Lesotho, and Tanzania.[15]

**The main destinations for African inputs into GVCs (forward integration) are Europe and Asia.** Europe absorbs 61 percent of Africa's total forward and 40 percent of its backward integration, followed by Asia, which accounts for 20 percent of forward integration and close to 30 percent of backward integration. Asia is the main source in backward participation in East Africa and Central Africa, accounting for 36 percent and 35 percent of backward integration, respectively (Figures 4a and 4b).

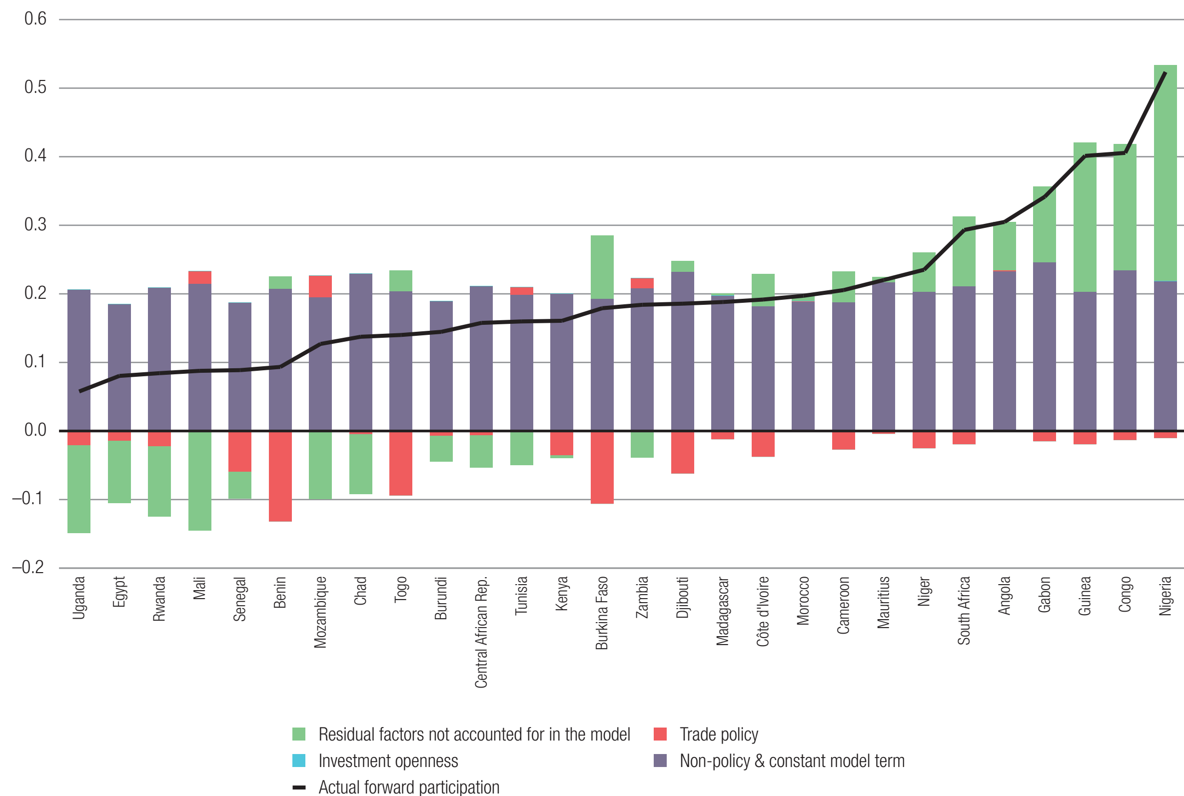
**Although the regional component of African value chain trade is low, backward integration is twice as important as forward integration within the continent.** Intra-continental trade flows account for only 6 percent of forward integration and 12 percent of backward integration. Inter-regional forward integration shares are highest in Southern Africa, with 11 percent, and backward integration shares are most significant in East Africa and Southern Africa, at 25 percent and 16 percent, respectively. The high intra-African share in value of imported intermediate inputs in Southern Africa can be attributed in part to South Africa's growing role as a "headquarter economy" for countries in the region. Indeed, South Africa's imports of intermediates from other economies in the region increased ninefold between 1995 and 2011, from US$78 million to US$686 million. Its forward participation in other African economies increased fivefold over the same period, from US$675 million to US$3,487 million.[16]

## FACTORS DRIVING AFRICA'S GVC PARTICIPATION

**Empirical analysis shows that structural factors are the main determinants of a country's participation in GVCs.[17]** Understanding what determines GVC participation is crucial to identifying the scope that governments have to influence value chain participation through policy. According to recent empirical analysis by the Organisation for Economic Co-operation and Development (OECD), the role of policy in influencing value chain participation remains limited when compared to structural factors such as the country's domestic market size, distance to manufacturing hubs, level of development, and level of industrialization.[18]

- **Domestic market size (proxied by GDP):** Controlling for other factors, the larger the size of the domestic market, the lower the backward integration of a country and the higher the forward integration. One explanation for this is that countries with larger economies are able to draw on a larger array of domestic intermediate inputs and therefore need to import less. The impact of market size on backward participation is more pronounced in low-income countries than in middle- and high-income countries. In terms of forward participation, the size

**Figure 5: Forward GVC participation ratio: Relative contribution of structural and policy factors, 2005**
Share of exports




Source: OECD, 2015a.

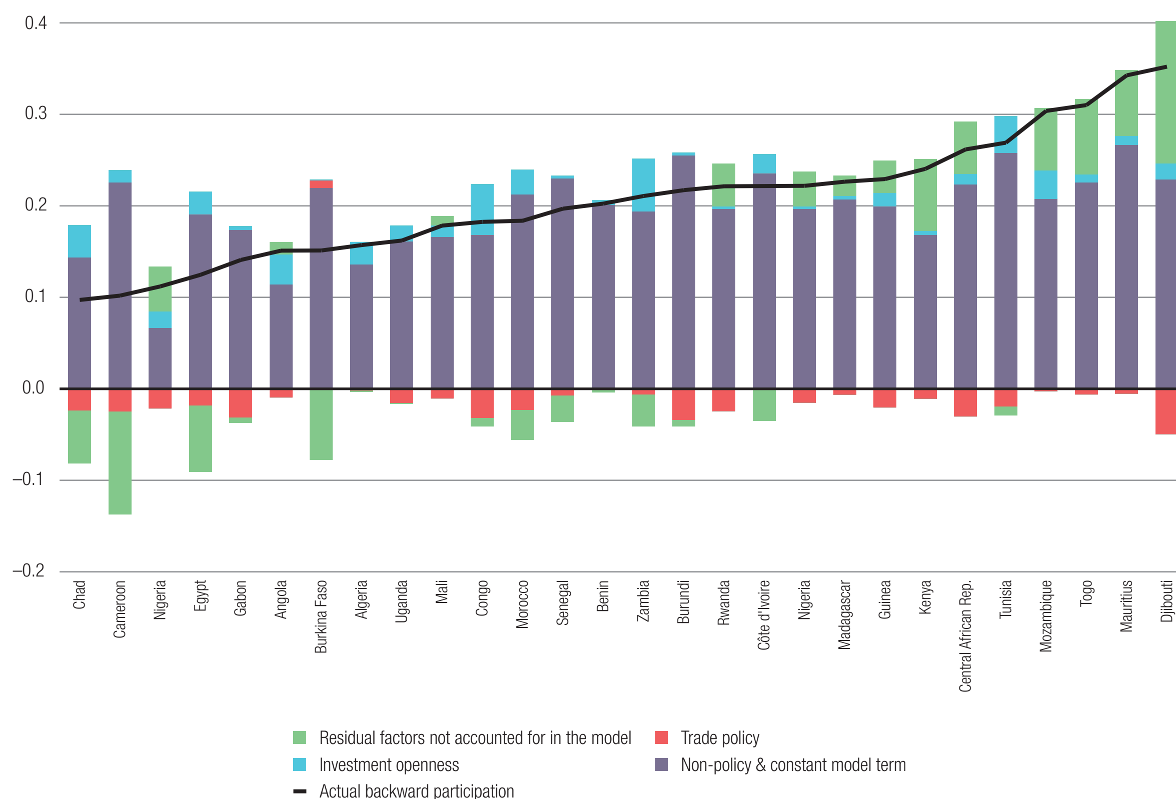
of the market plays a smaller role in low-income countries, probably because of their stronger export concentration in natural resources.

- **Distance to manufacturing hubs:** As mentioned earlier, GVC trade exhibits strong regional concentration around the three main manufacturing hubs of Europe, Asia, and North America. Distance to one of these hubs has a strong impact on backward engagement, signaling that there is a strong benefit of proximity to headquarter economies. This is reinforced by the data, which show North Africa's high share of intermediate imports sourced from Europe (and relative small share from Asia), and Asia's high share in East Africa's backward participation (see Figure 4b). The impact of distance on forward participation is insignificant.

- **Level of industrialization (proxied by share of manufacturing value-added in GDP):** Larger manufacturing sectors are positively related with backward participation and negatively with forward participation. However, the impact of the level of industrialization of the economy is significant only in low-income countries. Backward linkages are strongest in countries that engage in factory-type activities, such as assembly, which dominate in early stages of industrialization. In many African countries, a relatively small manufacturing sector reduces the potential for participation and provides additional incentives for specialization in primary sectors.

Overall, backward participation is better understood than forward participation.[19] Backward participation captures the demand side of value chains and is more closely linked to countries' structural characteristics, such as the size of the country and its level of industrialization (see Figure 6). By contrast, forward participation captures the supply side of value chains and is strongly correlated to a country's natural endowments. For African countries, where forward participation is strongly related to export of natural resources, the ability to predict forward participation based on structural and policy characteristics is more difficult. The residual term in Figures 5 and 6 captures the difference between actual forward participation and predicted participation, based on considered policy and non-policy characteristics.[20] It identifies whether countries are participating above or below what would be predicted by these characteristics as well as the role of unobserved factors. For instance, countries such as Nigeria, Congo, and Guinea participate significantly above the model predicted values, whereas Uganda, Egypt, Rwanda, and Mali participate significantly below (see Figure 5). In contrast, backward participation captures the demand side of value chains and is more closely linked to countries' structural characteristics, such as its size and level of industrialization.

**Figure 6: Backward GVC participation ratio: Relative contribution of structural and policy factors, 2005**
Share of exports




Source: OECD. 2015a.

**Notwithstanding the important role played by structural factors, a range of different policies contribute to GVC participation.** In developing countries, institutional and legal frameworks as well as infrastructure are important determinants of the level of GVC participation.[21] These are areas in which the African continent is lagging behind, as shown in Chapter 1.1.

**Services play an increasingly central role in the actual operation of GVCs (see Chapter 2.2).** The fragmentation of production processes has increased the demand for services to coordinate the production and distribution of goods and services. Services such as transport and infrastructure; logistics and warehousing; trade facilitation; and business services, including telecommunications, banking, insurance, and other professional services are required at every stage of the production process. The share of such services in manufacturing value-added trade is approximately 30 percent, with variations across sectors.[22] Traditional trade policies—consisting mainly of tariffs and border measures—still matter, but tariffs are now much lower, more transparent, and predictable. By contrast, inefficient customs and port procedures, unpredictable delays, and weak infrastructure can be far more costly than tariffs for trade. In sum, the attractiveness of production locations for value chain trade depends strongly on the availability of services and infrastructures that can ensure reliable and efficient movement of goods and services across borders.[23]

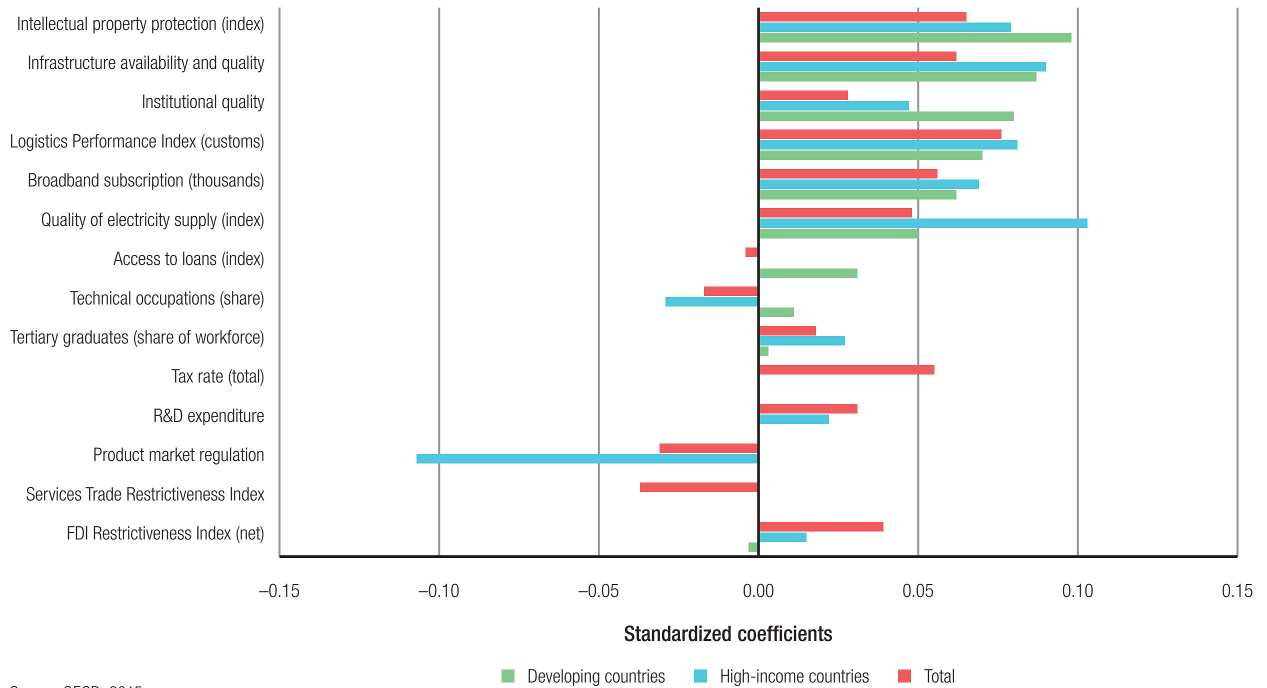
The following section reviews some of the most important policy areas for determining a country's participation in GVCs, including trade and investment policy (including intellectual property rights), logistics and customs procedures, infrastructure, and access to finance (Figure 7).

### Trade policy

**Although the overall impact of traditional trade policy on GVC participation in many African countries remains low, some countries can reap important benefits by removing tariff barriers to trade.** Fragmented production processes inherent in GVC trade imply multiple border crossings, which can amplify the effects of tariffs.[24] In long and complex value chains—such as motor vehicles, basic metals, and textiles, leather, and footwear—these amplification effects can be important.

Free trade agreements and regional trade agreements covering a large share of imports are important to keep tariffs low and promote greater GVC participation. Developing regions such as Southeast Asia, which have comprehensive free trade agreements, also enjoy high levels of intra-regional GVC integration (Figures 8a and 8b).[25] In Africa, although the East African Community and the Southern African Development Community have achieved strong reductions in barriers to trade, tariffs remain relatively high for intra-regional trade, sometimes higher than they are between Africa

**Figure 7: The impact of broad policies on GVC integration**



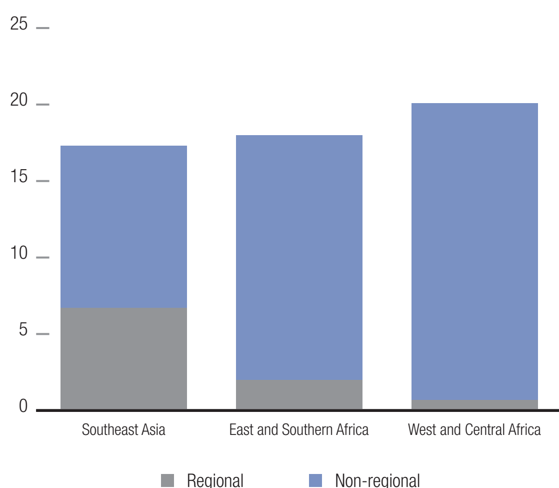

Source: OECD, 2015a.

and the rest of the world. For example, the United Nations Conference on Trade and Development (UNCTAD) estimated that an African firm exporting to markets outside the continent faces an average protection rate of 2.5 percent, while exporting the same good to an African market would face an average applied protection rate of 8.7 percent.[26]

According to OECD estimates, African countries that would benefit most from trade policy reform are the Democratic Republic of Congo, Cameroon, Djibouti, Rwanda, and Nigeria.[27] In North African countries, trade performance is mostly attributed to the relatively high coverage of imports and exports of intermediates by regional trade agreements. Still, Morocco and Tunisia, for example, could boost their GVC participation by 15 percent or more if they further liberalized their trade policies. However, in order to achieve the most impact, the reduction of tariff barriers would need to be

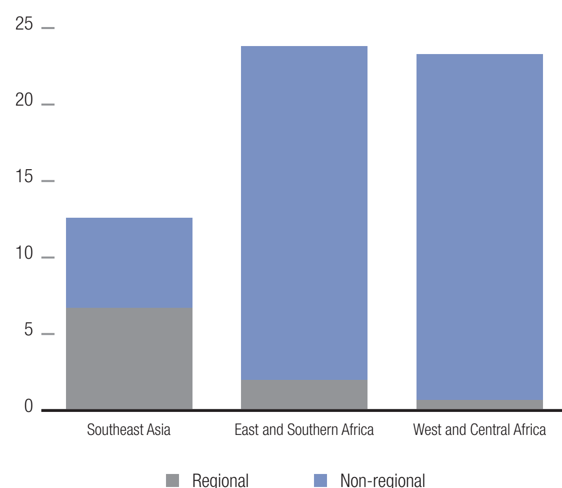
**Figure 8: Share of intra-regional participation in GVCs, percent of gross exports, 2011**

8a: Backward participation



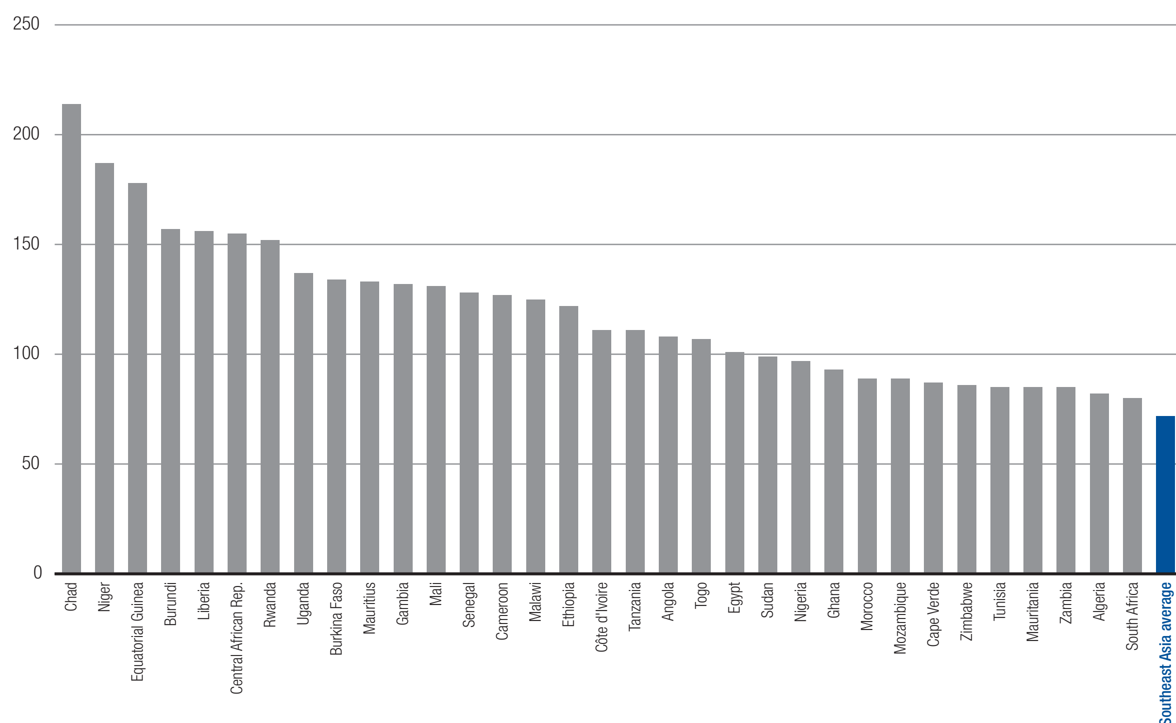

Source: OECD, 2015a.

8b: Forward participation




Source: OECD, 2015a.

**Figure 9: Trade costs in Africa, 2010**




Source: OECD, 2015a.
Notes: Bars show ad-valorem equivalents of trade costs. Values are trade-weighted values per country. For comparison, the Southeast Asia average is shown at the end of the graph.

accompanied by other policy measures such as trade and investment facilitation, competition policy, and intellectual property protection.

## Trade facilitation, logistics, and infrastructure

**Trade facilitation—including commercial, transport, regulatory, and financial procedures—complements trade policy as a priority policy direction that can enhance Africa's integration into GVCs.** Although tariffs are estimated to account for only 0–10 percent of total trade costs, and physical trade costs another 10–30 percent, the remaining 60–90 percent is comprised of non-tariff–related costs such as trade procedures, maritime connectivity and services, regulatory environment, currency fluctuations, and availability of communication services.[28] The impact of trade facilitation on trade costs is even stronger on products with relatively low value and low value-to-weight ratios, in which some African countries show strong comparative advantage.

The geographic isolation of many African countries is further aggravated by the poor quality and absence of critical infrastructure (see Chapter 1.1). As a result, firms in Africa face some of the highest trade costs in the world. For instance, the cost of exporting a standard 20-foot container is more than twelve times higher in Chad (US$6,600), six times higher in Rwanda (US$3,200), and three times higher in South Africa (US$1,531) than it is in China (US$500).[29] Landlocked countries, such as Chad, Niger, and the Central African Republic, tend to face the highest trade costs (Figure 9).

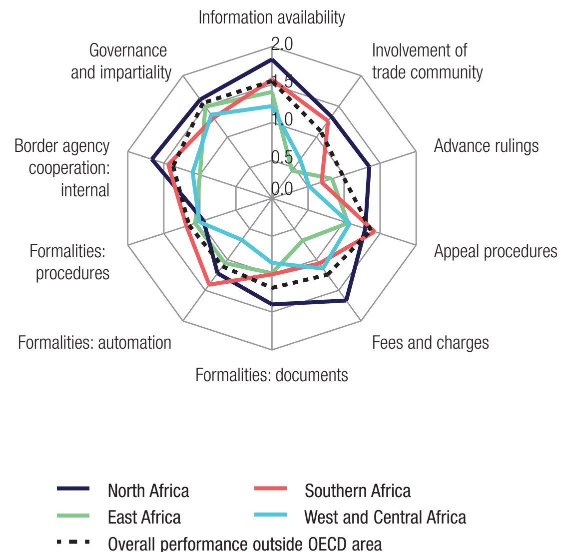
**Factors such as road quality, quality of rolling stock, customs and port duties, delays, coordination issues, and bribes all contribute to high transport costs.** In addition to the poor quality of transport infrastructure and services, high transport costs in Africa can be explained by the absence of competition and inefficient regulation of the freight logistics sector. This lack of competition contributes to the high profit margins of transporters, which exceed 150 percent along certain corridors. The strong influence of transport cartels on the quality and costs of logistics has been analyzed in West and Central Africa.[30] In addition, delays and unpredictability in GVCs can be just as strong an impediment to participation as costs. Global production networks in many industries rely on just-in-time production and depend on the reliability of supply of intermediate inputs.[31]

**OECD analysis shows that sub-Saharan Africa fares worse in trade facilitation performance than the average performance of 107 non-OECD countries surveyed.** The continent is weaker in areas such as harmonizing and streamlining documents and advance rulings, as well as appeal procedures and fees and charges.[32] However, Southern Africa stands out from the rest on automation and is on par with the average of countries covered outside the OECD in areas such as information availability, appeal procedures, and internal border agency cooperation (Figure 10). West and Central Africa and East Africa perform uniformly below the overall average, and could draw considerable

benefits in terms of trade volumes and trade costs from improvements in areas covering advance rulings, appeal procedures, fees and charges, harmonization and streamlining of documents, automation, and internal border agency cooperation (Figure 10). African firms are also hampered by inefficiencies of customs and port procedures and by corruption. In many African countries, trading across borders is burdensome and costly, although there is wide variation between countries. According to the World Bank Doing Business indicators, it takes 51 days and requires seven documents to export a container from Zambia, 40 days and ten documents from Angola, and 26 days and six documents from Mali, but only 10 days and four documents from Morocco.[33]

The combined effects of the elements described above (inefficiencies, red tape, and corruption) on trade costs translate into the highest intra-regional trade costs in the world, constraining the scope and depth of regional value chains (Figure 11).[34] Intra-regional connections are still mostly absent. Infrastructure investments, in particular in intra-regional connections, will be of particular importance in increasing participation in GVCs beyond the export of raw material and primary products.

**Figure 10: Trade facilitation performance, 2013**
Scores (0.0–2.0)




Source: OECD's Trade Facilitation Indicators, available at http://www.oecd.org/tad/facilitation/indicators.htm.
Note: The figure shows the latest available data. The Trade Facilitation Indicators have scores ranging from 0.0 to 2.0 (best).

## Investment policy

**In addition to trade policy and facilitation, investment policy is another vital factor that determines a country's capacity to participate in—and benefit from—global production networks.** FDI is a key building block of GVCs and is driven by multinational enterprises, which are sensitive to FDI restrictions and the protection of intellectual property rights. The exact contribution of investment policy depends on structural country factors, the type of investment, and the nature of links created with the host economy.[35]

West and Central African countries tend to have the lowest FDI to GDP ratios in Africa, apart from a few outliers such as the Republic of the Congo, which is on par with average performers in Southeast Asia. Countries in East and Southern Africa have the highest level of investment openness on the continent, but with important differences between the most open (e.g., Zambia, South Africa) and the most closed (e.g., Rwanda).[36] Overall, the contribution of investment openness to GVC participation in Africa is close to the average contribution of investment openness in Southeast Asia.

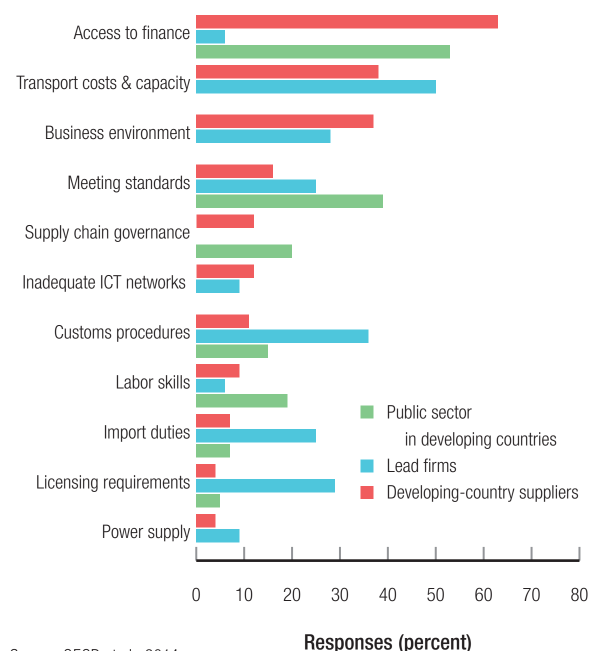
More detailed regional comparisons, as well as comparisons of specific restrictions, can indicate the extent to which participation could be facilitated through appropriate FDI policies.[37] The OECD FDI Regulatory Restrictiveness Index evaluates FDI rules, which are a critical determinant of a country's attractiveness to foreign investors. The index covers four types of measures: (1) foreign equity restrictions, (2) screening and prior approval requirements, (3) rules for key

**Figure 11: Region-by-region trade-weighted costs, 2010**

| Regions | North America | Europe 27 | Middle East and North Africa | Southeast Asia | South Asia | East and Southern Africa | West and Central Africa |
|---|---|---|---|---|---|---|---|
| North America | **15** | | | | | | |
| Europe 27 | 66 | **34** | | | | | |
| Middle East and North Africa | 72 | 76 | **48** | | | | |
| Southeast Asia | 72 | 88 | 69 | **69** | | | |
| South Asia | 89 | 95 | 61 | 104 | **92** | | |
| East and Southern Africa | 125 | 112 | 91 | 155 | 162 | **104** | |
| West and Central Africa | 105 | 107 | 112 | 162 | 100 | 94 | **104** |

Source: OECD, 2015a.
Notes: Figures show ad-valorem equivalents of trade costs. Data are the trade-weighted average cost of trade by region for the year 2010. Boxes with bolded values are intra-regional.

**Figure 12: Barriers to entering value chains: Private- and public-sector views**




Source: OECD et al., 2014.

personnel, and (4) other restrictions on the operation of foreign enterprises. Eight African countries are included in the index, with the four best-performing African countries—South Africa, Egypt, Mauritius, and Morocco—showing more open regulatory FDI environments than the OECD average.[38]

### Access to finance

**Access to finance is one of the main obstacles to doing business in developing countries and is thus an important factor in entering, establishing, or moving up value chains (Figure 12).[39]** Although financial systems in Africa have evolved considerably over the past decades, particularly in countries such as South Africa, they are still very limited and costly in a number of countries.[40] African SMEs across all size groups—small, medium, and large[41]—are generally less likely to have access to loans than firms outside Africa, although there are a few exceptions. These include South Africa, Burundi, and Mauritius, where over one-third of firms have formal loans.[42] Further diversification in Africa where firms advance from primary commodity-based value chain participation toward higher value-added manufacturing and service-based participation will require significant investments that will, in many countries, also depend on better-performing financial sectors.

## POLICY OPTIONS FOR ENTERING AND EXPANDING PARTICIPATION IN GVCS

GVCs have profoundly transformed global production and are becoming increasingly influential in determining future trade and FDI patterns. Policies need to respond to this new reality and promote business environments that make countries and firms more attractive and competitive for GVCs and facilitate upgrading opportunities.[43] The preceding analysis shows that no single field of policy can offer the entire solution that allows a country's firms to further integrate into global and regional value chains, and that policies are interdependent. Promoting better integration into GVCs will require a broad set of policy reforms, such as trade facilitation including streamlining customs and border procedures; investments in public goods, notably transport infrastructure; improving the business climate, including boosting access to finance and improving investment climate and competition; and deeper regional trade agreements. Many of these areas are part of a broader reform agenda that may lead to economy-wide benefits beyond GVC integration. The OECD can assist governments in some of these areas through policy reviews that inform and guide reforms at national and subregional levels, through promoting adherence to selected instruments and building statistical capacity and by compiling better data.

### Trade facilitation focusing on connectivity

**Policies should include measures that facilitate access to the most competitive inputs by addressing non-tariff barriers to trade and the quality of logistics and transport services.[44]** As we have seen, engagement in value chains depends on the ease, cost, and reliability of international flows of goods and services. African countries that are able to remove the main non-tariff barriers and make trade facilitation processes faster and more reliable, and cost less, will be more successful in entering GVCs.[45] Governments can leverage policy indicators, such as the OECD's trade facilitation indicators, to identify priority areas for action and evaluate the implementation of reforms.

**Equally important to non-tariff barriers is the quality of logistics and transport services.** Improving the poor performance of the logistics and transport sector in Africa will depend on more efficient regulation in the areas of licensing and standards as well as on increasing competition in the transport sector. Governments should continue to reduce obstacles to the movement of goods and people within countries and across the region. Many regional economic communities in Africa provide for the free movement of people, goods, and capital, but the application of existing legislation has to be better enforced.

### Infrastructure provision and financing

**The quality and availability of infrastructure is an important factor in determining the attractiveness of a location for GVC investment decisions.[46]** Improving transport performance in Africa, especially for intra-regional and coast-hinterland transport, will require large investments in new connections as well as

up-grading existing infrastructure. Most infrastructure projects in Africa today are financed by public sources and development partners; private investment in such projects is limited. Part of the necessary financing could come from more effective tax collection (see Box 1). In addition, the massive upgrading of infrastructure in Africa will require strengthening the regulatory framework for procurement and public-private partnerships in infrastructure as well as building relevant government capacity to manage these infrastructure contracts. Enhancing the economic regulation of transport infrastructure should also include entrusting infrastructure price-setting to independent regulatory agencies, involving competition authorities in any necessary unbundling of infrastructure services, and ensuring a level playing field between public and private operators active in infrastructure markets. When planning and designing infrastructure, particular attention should also be placed on intra-regional connections and spatial planning. Increasing links between countries and between growth poles and growing secondary cities as well as between urban and rural areas will unlock local growth opportunities.[47]

The OECD's *Principles for Public Governance of Public-Private Partnerships* and *Principles for Private Sector Participation in Infrastructure* can be useful tools to support African policymakers in attracting further private investment in infrastructure.[48] The OECD guidelines noted above cover aspects ranging from institutional design, regulation, and competition to budgetary transparency and integrity at all levels of government. They provide concrete guidance on how to enhance countries' enabling environment for infrastructure investment while ensuring that new infrastructure projects will provide value for money and benefits for infrastructure end-users, including businesses aiming to position themselves within GVCs.[49]

### Investment and access to finance

**Firms in developing countries rank access to finance, in particular trade finance, as the main obstacle preventing them from entering and moving up value chains (see Figure 12).** A firm's ability to export and import depends on financial costs. By broadening access and lowering costs, well-functioning financial systems can increase the number of potential trading partners and the volume of trade.[50] Improving access to finance, including export credits and trade finance as well as affordability for African SMEs and entrepreneurs, should be priority components of government reform agendas to boost GVC integration. Financial system development strategies need to encourage further competition in the banking sector and introduce policies that help limit collateral requirements and reduce credit information gaps.[51]

The OECD's work on SMEs and entrepreneurship financing provides some concrete tools that help policymakers design appropriate strategies. For instance, the OECD's *Financing SMEs and Entrepreneurs 2013: An OECD Scoreboard* and the SME Policy Index provide a comparative overview of where countries stand on access to finance outcomes and policies.[52]

Upgrading productive capacities also depends on attracting more and better investment, in particular FDI. For example, OECD Investment Policy Reviews and

### Box 1: Public goods provision: Improving taxation, GVCs, BEPS, and developing countries

Global value chains (GVCs) present a particular challenge when it comes to taxation. National tax laws have not always kept pace with the increasing interconnection of global production and the movement of capital, driven by global corporations with aggressive tax planning strategies that exploit gaps in tax rules to shift profits to locations with lower taxes. This phenomenon, known as *base erosion and profit shifting* (BEPS), has been an important area of work for the OECD. Given the central role of multinational enterprises in structuring GVC trade and Africa's strong reliance on corporate income tax, particularly from multinational enterprises, BEPS is of major significance for countries in the region. Forums such as the OECD/G20 BEPS Project brings OECD and non-OECD/G-20 countries and organizations, such as the African Tax Administration Forum, to discuss and develop domestic and international instruments needed to address this challenge.[1]

The result has been the OECD's BEPS Action Plan, published in 2013, which incorporates the specific concerns and context of developing countries in the development of solutions to counter BEPS. These have been taken into account through regional consultations with more than 80 developing countries. These inputs feed directly into the action steps of the BEPS Action Plan with the following priority areas:

- limit base erosion via interest deductions and other financial payments (addressed by Action 4 of the BEPS Action Plan),
- prevent tax treaty abuse and the artificial avoidance of Permanent Establishment status (Actions 6 and 7),
- transfer pricing, in particular base-eroding payments (Actions 8, 9, and 10), and
- transfer pricing documentation and country-by-country reporting (Action 13).

The identified measures will give countries the tools they need to ensure that profits are taxed where economic activities generating the profits are performed and where value is created, while at the same time providing businesses with greater certainty by reducing disputes over the application of international tax rules and standardizing requirements. The OECD, working with other international organizations and regional tax organizations, will also translate the BEPS Action Plan into practical support.

**Note**

1 OECD 2013e.

**Source:** OECD, 2013e.

### Box 2: Improving trade data: OECD-WTO *TiVA:* A new approach to measuring GVC trade

Global value chains (GVCs) and the sharp increase of trade flows in intermediate inputs are leading to an increasingly distorted view of world trade based on conventional trade statistics. By measuring international trade in gross terms, conventional trade statistics often record intermediate inputs rather than inputs throughout the value chain. Measuring trade in value-added avoids this problem. However, data in trade in value-added have only recently started to be compiled. This work is being done by the joint Organisation for Economic Co-operation and Development-World Trade Organization (OECD-WTO) *Trade in Value-Added (TiVA)* database and the United Nations Conference on Trade and Development (UNCTAD) *EORA* database.

The OECD-WTO *TiVA* database is a statistical approach used to estimate the source(s) of value-added (by country and industry) in producing goods and services for export (and import). Expanding GVCs imply that a country's exports increasingly rely on intermediate imports. For example, a motor vehicle exported by country A may require significant parts, such as engines, seats, and so on produced in other countries. These countries in turn will use intermediate inputs imported from other countries, such as steel, rubber, and so on, to produce the parts exported to country A. The trade in value-added approach traces the value added by each industry and country in the production chain and allocates the value-added to these source industries and countries.

Work is currently underway to increase the geographic coverage of the OECD-WTO *TiVA* database, to improve its timeliness, and to deepen its level of industry detail. Increasingly integrating more African economies would help in better understanding GVCs and development related outcomes.

the OECD Policy Framework for Investment can help identify priority policy reforms to improve the investment climate.[53] These Policy Reviews of African countries have highlighted intellectual property protection, competition, public governance, anti-corruption, and foreign exchange transactions as particularly important in attracting further investment.

### Regional trade agreements and regional integration

**Different regional economic communities in Africa have contributed to progress toward reducing barriers to trade and boosting intra-regional trade flows.[54]** Yet intra-regional trade still suffers from relatively high tariffs, an incompatibility of rules of origin across the different trading blocks, and implementation issues.[55] Comprehensive regional trade agreements with deep integration measures (WTO+), providing for non-tariff barriers to trade—including investment, competition policy, intellectual property protection, and dispute settlement—can support value chain integration, in particular regional value chain integration.[56] Some promising African initiatives in this area, such as the technical working group established by the African Union to assess the compatibility of rules of origin across the three trading blocs (the Common Market for Eastern and Southern Africa, the East African Community, and the Southern African Development Community), should be supported further.[57]

The potential benefits from stronger intra-regional integration appear particularly vital in Africa because of the significance of structural factors in determining GVC participation. Given the strong impact of market size, industrial structure, and level of development on GVC participation, many of the smaller economies with low levels of industrial development are likely to benefit from stronger links with the larger countries in the region.[58]

Regional integration can also be a way of "learning by doing" for many African countries and a preparation for greater competition in global markets.[59] In particular, domestic SMEs are more likely to succeed first in regional markets, where they tend to have better market knowledge, be more familiar with standard requirements, and have better access to lead firms. Competitive pressures on some segments also tend to be lower on regional markets than global markets.

### Policy dialogue and better data

Given the complexity and large range of issues policymakers must tackle to promote better integration into the global economy, the success of reform agendas will also depend on active dialogue among key stakeholders through forums such as OECD Committees, OECD Regional Programme Policy Networks, and the OECD Initiative for Policy Dialogue on GVCs, Production Transformation and Development.[60] Such policy dialogue promotes knowledge-sharing and peer learning between countries to share good practices and increase policy impact. Countries advance in their capacity to design and implement policies through trial and error, and learning from the experience of others is an important enhancer of policy learning processes within countries.[61] National and international public-private dialogue mechanisms can also encourage greater transparency and relevance in policy choices.[62]

In addition to effective policy dialogue, better data are needed on African countries if they are to design the right policies for enhanced participation in GVCs. For instance, African countries could participate further in initiatives such as the OECD-WTO *TiVA* database (see Box 2). Including more African countries in other databases relevant to GVCs—such as the *FDI Restrictiveness* database, the *SME and Entrepreneurship Financing Scoreboard* database, and the *Services Trade Restrictiveness Index* database—would certainly help inform better policymaking.

## CONCLUSIONS

Participating in GVCs can accelerate African economic transformation, particularly through the gains associated

with enhanced productivity, skills development, and diversification of exports. However, the gains from GVC participation are not automatic. They require a broad set of policies with a particular focus on trade facilitation, investment, transport infrastructure, and access to finance. Many of these policy areas should have economy-wide benefits beyond GVC integration.

Accelerating the harmonization and implementation of regional trade agreements is another priority that should help African firms—in particular SMEs, which face the greatest hurdles to GVC integration—develop a greater capacity to compete on a global scale.

Because the level of GVC integration varies significantly with the level of economic development, market size, factor endowments, and type of sector, policies will need to be specifically tailored for each country. Moreover, to fully capture the implications of GVCs for African countries it will be important to deepen the analysis and understanding of GVCs and their impact on economic development. Further work is needed, in particular on GVC upgrading, on the link of GVCs with jobs and skills, and on the connection between GVCs, investment, and technology transfer.

The OECD's growing partnership with Africa spans many research and policy areas that can help inform policymaking to support Africa tapping the full potential of GVCs. The OECD stands ready to support African countries to further integrate into global and regional value chains through its guidelines and instruments, policy reviews, and comparative datasets. Through OECD Committees, Regional Policy Networks, and other relevant forums, countries can learn from each other to design and implement better policies, which should ultimately translate into higher living standards for the African people.

## NOTES

1 See, for instance, *The Africa Competitiveness Report 2013* (World Economic Forum et al. 2013).

2 The interconnected production process that goods and services undergo from conception and design through production, marketing, and distribution is often referred to as a global value chain or an international production network (Gereffi and Fernandez-Stark 2011; OECD 2013b).

3 OECD 2015a.

4 OECD 2015a; AfDB et al. 2014.

5 UN World Population Prospects, the 2012 Revision, available at http://esa.un.org/wpp/.

6 OECD 2015a; AfDB et al. 2014.

7 OECD 2015a.

8 OECD et al. 2014.

9 AfDB et al. 2014.

10 AfDB et al. 2014.

11 AEO 2014.

12 OECD 2015a.

13 Participation rate is calculated as a percentage of gross exports and accounts both for the import content of exports and for exports of domestically produced intermediates used in third countries' exports.

14 AfDB et al. 2014.

15 AfDB et al. 2014.

16 AfDB et al. 2014.

17 This section is based on results of recent work at the OECD, in particular the Trade Policy Paper "Participation of Developing Countries in Global Value Chains: Implications for Trade and Trade-Related Policies" (OECD 2015a).

18 OECD 2015a.

19 OECD 2015a. Country-specific characteristics account for 59 percent of the variation in a country's backward participation compared to 22 percent of a country's forward participation. For the detailed econometric specification and results, refer to OECD 2015a.

20 The explanatory variables considered in the benchmark econometric specification are grouped into three broad categories: (1) non-policy factors: market size; the share of manufacturing in GDP; distance to economic activity and distance to key manufacturing hubs; (2) core trade and investment policy-related factors: import tariffs charged on intermediate imports; import tariffs on intermediates faced in export markets; regional trade agreement coverage of intermediate's imports and exports; revealed openness to inward FDI; (3) other policy-related factors: because of uneven data coverage, the impact of policies such as logistics and border procedures, quality of transport infrastructure, and intellectual property protection is investigated in a separate econometric specification. For a detailed description of the model specification, see OECD 2015a.

21 OECD 2015a; World Bank 2014.

22 OECD 2015a.

23 OECD et al. 2014.

24 The amplification effect can occur via two channels: first, multiple border crossings with intermediate inputs incur tariffs at each border crossing; and second, tariffs are levied on the gross value of imported goods, rather than on the value-added (OECD 2013b).

25 OECD 2015a.

26 UNCTAD 2013. The low tariffs for exporting outside the continent are largely the result of preferential agreements, such as the Everything but Arms initiative between the European Union and least-developed countries and the African Growth and Opportunity Act.

27 OECD 2015a.

28 OECD 2014.

29 World Bank 2015. Asian countries, especially China, are also benefiting from economies of scale in shipping, which lowers trade costs; Asian governments have also invested heavily in infrastructure.

30 Teravaninthorn and Raballand 2008; AfDB 2012; OECD 2013.

31 Djankov et al. 2010.

32 Moïsé et al. 2013.

33 World Bank 2015.

34 OECD 2015a.

35 OECD 2015a.

36 OECD 2015a.

37 OECD 2015a.

38 More information about the OECD FDI Regulatory Restrictiveness Index is available at http://www.oecd.org/investment/fdiindex.htm.

39 Access to finance is also cited as the most problematic factor in doing business more broadly; see Chapter 1.1, Figures 14a and 14b. See also OECD et al. 2014.

40 Beck and Cull 2014.

41 Firms are considered small if they have fewer than 20 employees, medium if they have 20 to 99 employees, and large if they have 100 employees or more.

42 Beck and Cull 2014.

43 OECD et al. 2014.

44 OECD 2015a.

45 OECD/WTO 2014.

46 OECD et al, 2014; World Economic Forum et al. 2013.

47 AfDB et al. 2015.

48 OECD 2007; OECD 2012.

49 OECD 2007; OECD 2012.

50 OECD et.al 2014.

51 OECD et al. 2014.

52 OECD 2013f.

53 The OECD's *Policy Framework on Investment* (PFI) is a comprehensive and systematic approach for improving investment conditions. The PFI provides recommendations in 10 policy areas including investment, competition, tax, corporate governance, anti-corruption, infrastructure, public governance, and other policy domains that affect the business climate. The PFI and Investment Policy Reviews in the context of the OECD-NEPAD Investment Initiative assists African governments and institutions in designing and implementing investment policy reforms.

54 African intra-regional exports are highest in processed intermediate goods, agricultural/food processing, manufacturing, plastics, and rubber.

55 OECD 2015a.

56 OECD et al. 2014; OECD 2015a.

57 OECD 2015a.

58 AfDB 2014.

59 OECD 2015a.

60 OECD et al. 2014.

61 OECD 2013c.

62 For instance, the Business and Industry Advisory Council is an independent international business association devoted to advising government policymakers at the OECD and related forums on the many diversified issues of globalization and the world economy.

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