Chapter 4

Public policies for productive transformation in East Africa

The chapter sheds light on the state of productive transformation in 14 East African countries: Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania and Uganda. The first section presents stylised facts and dynamics of East Africa's productive structures, competitiveness, changes in sectoral contributions and export performance. The second section discusses comparative advantages and the economic complexity of the region's economies in view of the current state of productive transformation. The section also addresses on challenges to transforming the structure of the economies which might hinder the region's growth in the medium to long-term. The final section discusses strategies and mechanisms needed to enhance productive transformation.

IN BRIEF

East Africa has been the second fastest growing region in Africa for the past two decades – averaging 5.2% gross domestic product (GDP) growth between 2000 and 2018. Per capita income growth of 3% per annum is falling behind GDP growth, putting pressure on countries in the region to create new jobs. The services sector has solidified its position as the largest contributor to value added, but the region must do more to increase labour **productivity** across all sectors of the economy.

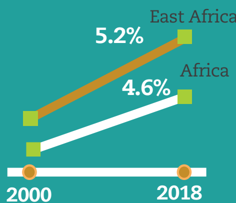
Most East African countries have high levels of export concentration and their levels of economic complexity lag behind comparator countries. **Competitiveness** indicators show progress but remain below global averages. While there are signs of growth in higher productivity sectors, countries in the region still need to address binding constraints to growth at national and regional levels.

The region is already preparing for the demands of future economic realities. It is doing so by: i) increasing investment in human capital formation, in continuous improvements to the business environment and in targeted support to firms in strategic value chains; ii) collaborating at a regional level to unlock opportunities for increased competitiveness; and iii) promoting the establishment and growth of the **"industries of the future"**, including high-productivity manufacturing complemented by a strong focus on high-productivity services and agri-business.

Public policies for productive transformation in East Africa

Growth

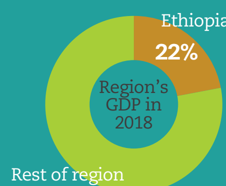
East Africa is the second-fastest growing region in Africa



The 14 economies of the region represent about 15.2% of Africa's GDP

Structure of the economy

The largest economy in purchasing power parity value is Ethiopia



Most jobs remain in agriculture

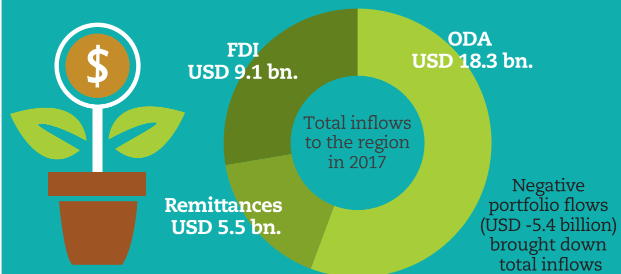
Trade

Tourism is a major sector in East Africa

Receipts account for **16%** of total exports, well above the global (5.7%) and continental (8%) averages

Financial inflows

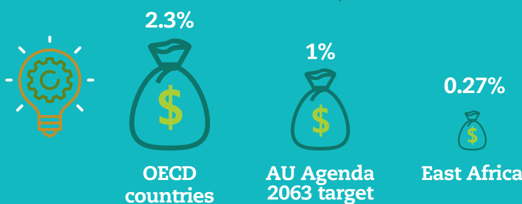
ODA is the largest financial inflow in East Africa



Regional strategies for productive transformation

The region should improve innovation in order to reach Agenda 2063 targets

Average annual spending on R&D as % of GDP, 2000-16



Potential value chains in the region

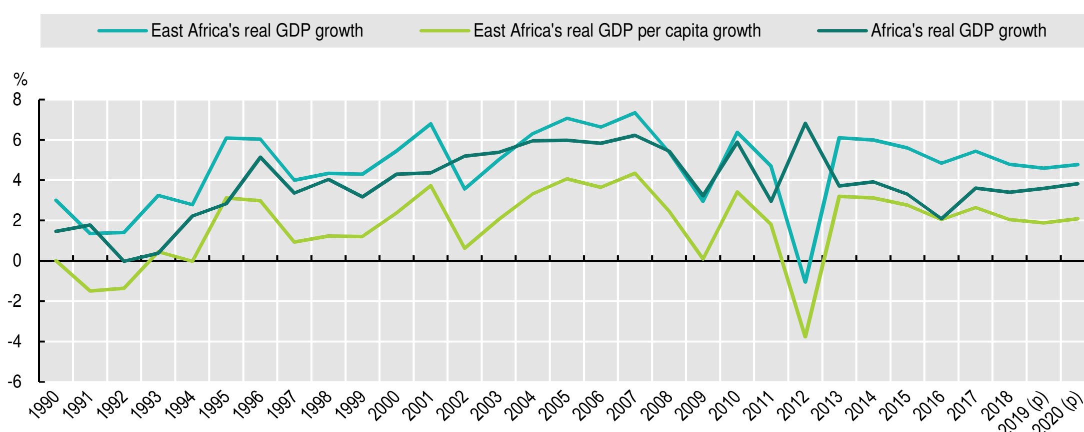
East Africa regional profile

Table 4.1. **Basic indicators of firm's capabilities for productive transformation in East Africa**

		Source	2000	2014	2015	2016	2017	2018
Production technology	Employers and paid employees as % of total employment	ILO	19.9	23.1	23.4	23.6	23.8	24.1
	Labour productivity as % of United States productivity	CB	6.1	6.6	6.5	6.6	6.6	6.4
	Private gross fixed capital formation as % of gross domestic product (GDP)	IMF	12.5	19.5	19.4	17.2	18.8	18.4
	Capacity for innovation, 0-100 (best)	WEF	-	-	-	-	32.2	32.7
Regional network	Intra-region as % of imports in intermediate goods	Comtrade	4.8	6.8	6.2	4.9	5.4	-
	Intra-Africa as % of greenfield foreign direct investment inflows	fDi markets	-	1.3	3.6	3.7	11.9	10.7
	Venture capital availability, 1-7 (best)	WEF	-	3.2	3.2	3.3	2.8	2.9
Capacity to meet demands	ISO9001 certification as % of Africa's total	ISO	7.2	12.1	11.4	11.1	11.3	-
	Fully- and semi-processed goods as % of region's total goods export	Comtrade	-	57.6	60.7	58.0	59.4	56.4
	Share of Africa's total consumption goods import (%)	Comtrade	11.8	13.0	15.8	17.7	14.8	-

Note: ILO – International Labour Organization, CB – The Conference Board, IMF – International Monetary Fund, WEF – World Economic Forum, ISO – International Standards Organization.
Sources: Authors' calculations based on data from The Conference Board (2019), *Total Economy* (database); fDi Markets (2019), *fDi Markets* (database); ILO (2019), *Key Indicators of the Labour Market* (database); IMF (2019), *World Economic Outlook* (database); ISO (2018), *The ISO Survey of Management System Standard Certifications* (database); United Nations Statistics Division (2018), *UN Comtrade* (database); and WEF (2018), *Global Competitiveness Report*.

Figure 4.1. **Growth dynamics in East Africa and Africa, 1990-2020**



Note: (p) = projections.
Source: Authors' calculations based on IMF (2019), *World Economic Outlook* (database).
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Table 4.2. **Financial flows and tax revenues to East Africa and private savings (current USD, billion), 2000-17**

			Average 2000-04	Average 2005-09	2010	2011	2012	2013	2014	2015	2016	2017
External financial inflows	Private	Foreign direct investment	2.1	5.6	7.8	7.7	9.3	8.4	8.3	8.9	9.3	9.1
		Portfolio investments	0.0	0.0	7.6	5.7	2.5	1.2	2.8	1.5	-6.5	-5.4
		Remittances	1.8	3.0	4.5	4.4	4.9	5.0	5.9	5.0	5.1	5.5
	Public	Official development assistance	6.1	12.6	14.3	15.5	15.8	18.4	16.5	15.9	16.0	18.3
Total foreign inflows			**9.9**	**21.2**	**34.2**	**33.3**	**32.5**	**32.9**	**33.5**	**31.3**	**23.9**	**27.6**
Tax revenues			**8.1**	**17.1**	**23.3**	**24.6**	**27.7**	**32.0**	**35.6**	**37.0**	**38.7**	**40.4**
Private savings			**11.0**	**21.0**	**31.2**	**41.8**	**36.1**	**38.8**	**49.6**	**51.4**	**54.1**	**55.5**

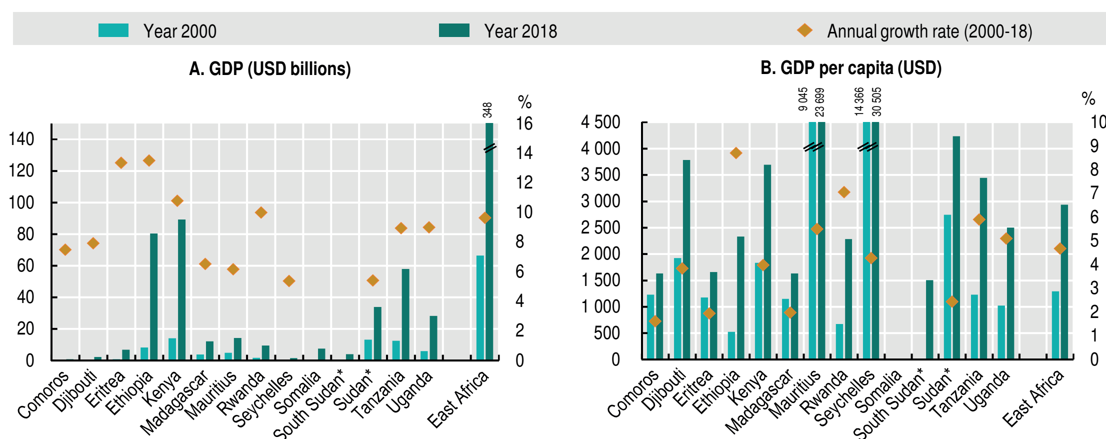
Sources: Authors' calculations based on IMF (2019), *World Economic Outlook* (database), OECD-DAC (2018a), *International Development Statistics* (database), OECD-DAC (2018b) *Country Programmable Aid*, and World Bank (2019a), *World Development Indicators* (database).

Dynamics of productive structures in East Africa

Following two decades of strong economic growth, the region now needs to address the challenge of raising incomes

East Africa[1] has sustained 6% gross domestic product (GDP) growth for close to two decades but has faced some recent headwinds. The 14 economies of East Africa represent approximately 15.2% of Africa's GDP and 29% of the population (World Bank, 2019a). Since 2000, the region's annual growth has outpaced the sub-Saharan African average by one percentage point. Growth has been sustained to a large degree by high levels of public investment in infrastructure, favourable commodity prices and strong growth in the services sector (WTO, 2019). Growth is uneven across the region, and a recent moderation (to approximately 5%) is attributable to a drought-induced decline in agricultural output in 2016 for Kenya, Rwanda and Uganda (ECA, 2018) and political instability in Somalia and South Sudan.

Figure 4.2. **Gross domestic product and GDP per capita in constant prices for East African countries, 2000 and 2018**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
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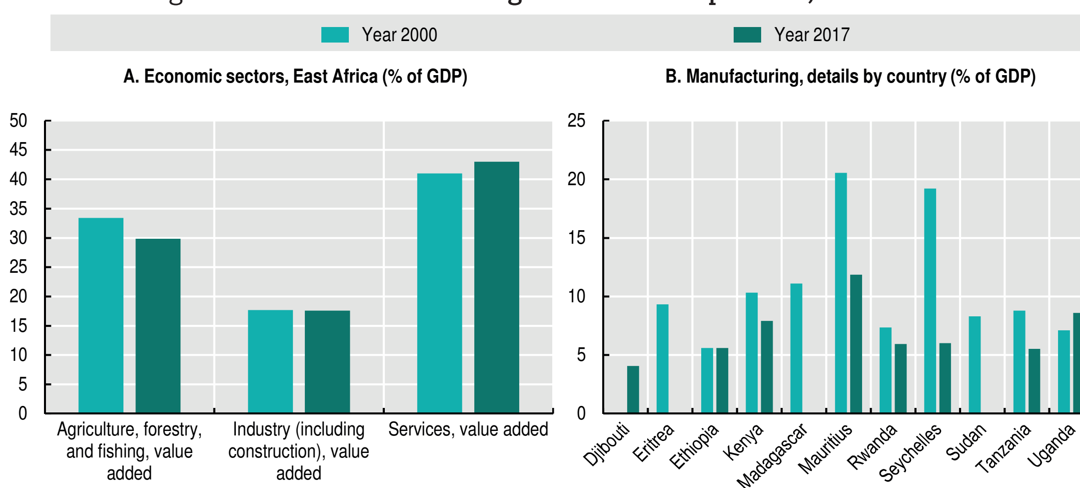
Income growth is falling behind GDP growth. Per capita income growth in the region has averaged 3% per year since 2000 (with a population growth of 2.9% over the same period). However, per capita income growth performance is mixed across countries, with low-income countries like Ethiopia and Rwanda performing strongly (albeit, well below their GDP growth), while Comoros and Kenya are falling behind the average and Madagascar is declining. The region bundles upper-middle and high-income countries like Mauritius and Seychelles with low-income countries such as Eritrea, Ethiopia, Madagascar, Rwanda, Tanzania and Uganda.

East Africa is changing, particularly the service industry

Agriculture, industry and services are all growing, with services taking up an increasing share of the regional economy and high-productivity sectors struggling to grow. As with much of the continent, the region is grappling with the effects of rapid urbanisation. Workers are moving from low productive agriculture jobs to only moderately more productive retail trade and distribution activities (De Vries, Timmer and De Vries, 2013). Higher productivity sectors are not generating enough jobs to absorb a growing labour force. The future of productivity growth in East Africa depends on countries' abilities to maximise productivity gains in existing sectors and develop new high-productivity sectors.

Agriculture remains a large sector in East Africa, but its share of GDP is declining in most countries. The development experience of the most successful Asian economies shows that agriculture can play an important role in launching high growth (Briones and Felipe, 2013). Agriculture accounts for a comparatively large share of the East African economy, maintaining a regional share of GDP at approximately 30% since the turn of the century. This aggregate share masks an underlying dynamic. All countries in the region with the exception of Kenya are registering declines in the share of agriculture in GDP. Countries in other African regions have demonstrated the importance of agriculture (Morocco, see North Africa chapter; Côte d'Ivoire, see West Africa chapter), and Kenya is one country in the region that is following this trend (see Box 4.1).

Figure 4.3. **Sectoral share of gross domestic product, 2000 and 2017**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
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Box 4.1. **The role of agriculture in Kenya's economy**

A focus on high-value agriculture exports has ensured that agriculture remains an important factor in Kenya's development story. Agriculture accounts for 35% of value added in the Kenyan economy and for 65% of goods exports in 2017. In the 1990s and early 2000s, policies and strategies for the sector's development expanded beyond poverty and food security to focus on the role the sector will play in the future of Kenya's development. Labour productivity in the sector is growing and, while it is still half that of Kenya's manufacturing sector, recent gains mean it is rapidly catching up (Naseem et al., 2017).

Much of this success comes from Kenya's focus on supporting investment and growth in high-productivity export sectors. Since the turn of the decade, the government of Kenya has focused intensely on supporting the emergence of a highly-productive, private sector-driven horticulture export sector. This was first articulated in the launch of the Economic Recovery Strategy for Wealth and Employment Creation in 2004. Since then, support has concentrated on: i) expanding production and increasing productivity with a focus on quality and standards; ii) creating and strengthening linkages between

Box 4.1. **The role of agriculture in Kenya's economy** *(cont.)*

producers and markets; and iii) investing in strategic infrastructure in the supply chain and the emergence of a competitive logistics sector. This was not a "quick win" approach, and growth of the sector has taken time. Efforts are now paying off with horticulture exports earnings amounting to over USD 1.5 billion in 2018.

Agriculture remains a major sector in the Kenyan economy and can contribute to a shift towards higher productivity for many countries in the region. Growth in high-productivity agriculture exports explains why the sector continues to provide a large share of the country's GDP. The sector still has a role to play in Kenya's future productive transformation. Other countries in the region such as Ethiopia and Rwanda have also recognised this opportunity and are following Kenya's example.

Important transformation and trade opportunities exist in agriculture; however, the region will need to move towards manufacturing and services in the medium term for jobs and growth. Agriculture accounts for over 60% of employment in the East Africa region (ILO, 2019). However, the sector is characterised by low average labour productivity with limited potential for longer-term labour productivity growth (World Bank, 2019b). Reliance on agriculture for future growth is risky since the sector is vulnerable to shocks, including droughts and price volatility in international markets. There is also evidence, on a global scale, of a link between per capita income growth and a declining share of agricultural products in total expenditure, with a shift towards higher consumption in manufactured products and services (Szirmai, 2012). As a result, most countries in the region are targeting productive transformation through a move towards higher productivity jobs in sectors outside of agriculture.[2]

In the midst of high growth and national programmes to support rapid transformation, the performance of the industrial sector, including manufacturing, is sub-par. Industry's share of total value added has dropped to 15% – three percentage points lower than at the turn of the century. The sector is increasingly driven by growth in extractives and construction, with averaging growth of 9% and 7% respectively between 2008 and 2017 (UNDATA, 2019). Over 30% of East African government budgets are now allocated towards large construction projects (The East African, 2018). Most private finance has gone to sectors with little to no trade, including construction and real estate (World Bank, 2019b). This is a warning sign for the future of private sector-led growth in the region.

The manufacturing sector is growing in absolute terms but has seen its share of total value added decline by four percentage points since 2000. Manufacturing growth in East Africa is falling behind the sub-Saharan African average, despite ambitious industrial policies being implemented by governments in the region (ECA, 2018). This presents a challenge, as export-oriented manufacturing has been shown to play a critical role in boosting productivity growth in most countries which have recently experienced high growth (Newman et al., 2016). The declining share of manufacturing in East Africa is similar to the global trend. The decline is relative but not absolute, as services have grown faster (Hallward-Driemeier and Nayyar, 2018). One country deviating from the trend is Ethiopia, where manufacturing valued added declined in the early 2000s but then increased from just 3% in 2012 to 6% in 2017.

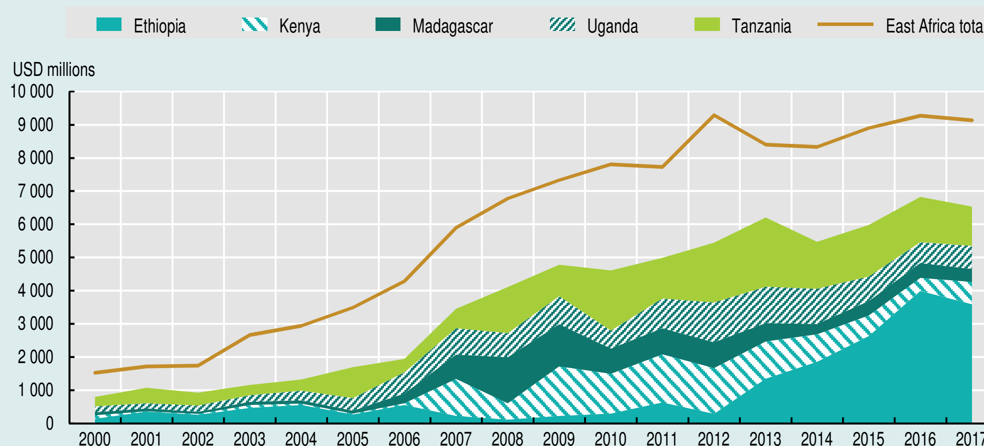
Box 4.2. **Ethiopia's pursuit of export-oriented industrial growth**

Ethiopia has the second-largest population and the fifth-largest economy in sub-Saharan Africa. Since the early 2000s, Ethiopia has been undergoing a process of structural and economic reforms and has sustained growth at close to 10% per year (2000-17), compared to an African average of less than 5%.

The prospect of manufacturing as an engine for productive transformation is alluring for countries looking to replicate East Asia's success. Export-oriented manufacturing was an important engine for growth productivity gains for countries in East Asia (Szirmai, 2012; Newman et al., 2016). Ethiopia recognised this in the mid-1990s and formulated its development vision: Agricultural Development Led Industrialisation (ADLI). ADLI was met with limited success in terms of export diversification (Gebreeyesus, 2017). In 2003, a comprehensive Industrial Development Strategy was launched with an emphasis on preferential treatment for export-oriented and labour-intensive sectors, government investment in infrastructure to support rapid economic growth and support for the development of small enterprises to encourage job creation (Oqubay, 2019).

In 2010, the country adopted the Growth and Transformation Plan (GTP) and it has recently finalised the second phase, GTP II. The GTPs continued to focus on the development of physical infrastructure through public investment in industrial zones. Ethiopia sought to replicate the experience of East Asian economies such as China and Chinese Tapei, which saw rapid industrialisation through, among other things, extensive investments in industrial parks to attract FDI (UNIDO, 2018). The strategy is viewed as largely successful in attracting FDI in light manufacturing such as garments, textiles, leather and agro-processing. In 2016, Ethiopia received inflows of close to USD 4 billion, accounting for over 50% of all FDI in the East Africa region.

Figure 4.4. **Foreign direct investment inward flows for selected East African countries and the region as a whole (current USD million)**



Source: Authors' calculations based on UNCTAD (2019), *FDI statistics* (database).
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Challenges remain – Ethiopia's manufacturing share of GDP is still at 6%, at the same level as at the turn of the century. Furthermore, and of far more concern, recent experimental evidence from Ethiopia shows no sign of an industrial wage premium (Hallward-Driemeier and Nayyar, 2018), meaning workers may be just as well off in agriculture or in self-employed services.

The services sector has solidified its position as the largest contributor to value added in the region, but it must increase its labour productivity to be truly transformational. The services sector has seen its share of the regional economy increase by ten percentage points since 2000, representing 43% of value added in 2017. The sector's share of formal employment in the region now stands at 26% (ILO, 2019). The sector is characterised by low value-added trade services and a high degree of informality (ECA, 2018). Recent evidence from Tanzania shows that productivity in trade services is still 3.5 times that of the agriculture sector (Ellis, McMillan and Silver, 2017). In Rwanda, service industries make up 21 of the top 30 industries in terms of labour productivity and in Uganda they make up 17 of the top 30 (Newfarmer, Page and Tarp, 2018).

Services are also found to be vital to knitting the economy together. Productivity growth in services is strongly associated with the performance of the economy as a whole (Newfarmer, Page and Tarp, 2018). Moving to high-skill services is important for future growth in all sectors of the economy. The value added of embedded services accounts for more than 30% of the gross value of global manufactured exports (World Bank, 2019b). In the East African Community (EAC), it is estimated that a 10% improvement in services productivity will lead to an approximately 0.5% increase in goods exports (Hoekman and Shepherd, 2015).

Tourism can provide a partial response to the challenge of creating higher productivity jobs for the region. Tourism is a major sector in East Africa. Its receipts account for over 16% of total exports (goods and services) for Kenya, Rwanda, Tanzania and Uganda. This is well above both the global (5.7%) and continental (8%) average (Gereffi, 2015). The success of the sector in East Africa is a result of considerable national investment and certain levels of regional collaboration (see Box 4.3). However, additional efforts are needed to expand exports of non-tourism services (e.g. financial, information and communications technology [ICT], and professional).

Box 4.3. **Tourism and the emergence of a regional value chain**

Tourism is one sector where regional competitiveness and co-operation are combining to support the emergence of a major economic sector. There are a number of important trends underway in East Africa, including increased regional linkages through the expansion of air transport, the reduction of administrative barriers to entry for tourists and regional co-operation to jointly promote the destination.

The complementarity of tourist products across East Africa has resulted in efforts by countries to promote both themselves and their position within a diverse region. The members of the EAC have trained travel agents and tour companies on tourism products in neighbouring countries in order to better sell regional packages. Tourism promotion authorities in Kenya, Rwanda and Uganda have launched various joint training and promotion initiatives – aligned with the East Africa Tourist Visa – to promote the region as a single tourist destination and increase global awareness of this visa. Increased investment in and competition on regional flight routes, a collaborative approach to visa reform, and joint promotion could result in the emergence of a regional value chain for the tourism sector.

Box 4.3. **Tourism and the emergence of a regional value chain** *(cont.)*

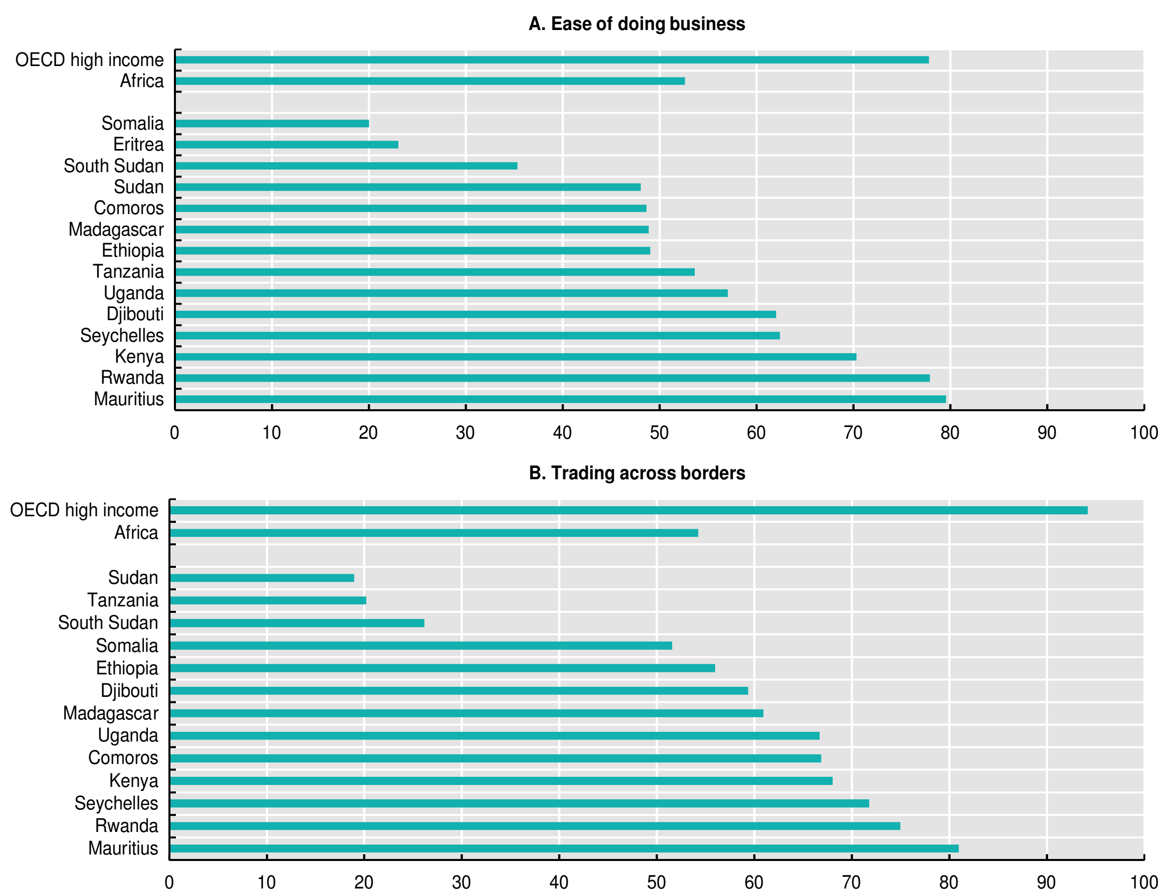
Governments are committed to expand air transport to improve regional connectivity. East Africa has emerged as a major travel hub for Africa following unprecedented investments by airlines. The region now boasts three airlines with networks across the continent: Ethiopian Airlines, Kenya Airways and RwandAir. These airlines are opening up new routes for business and tourist travellers. Governments in the region are also co-operating to grant fifth freedom rights (the right to carry passengers from one country to a second country, and from there on to a third country) on a route-by-route basis. Data from the region provides evidence that full liberalisation "would lead to 9% lower average fares and a 41% increase in frequencies. … [L]iberalisation between the five EAC countries could result in an additional 46 320 jobs and USD 202 million per annum in GDP" (InterVistas, 2016).

Administrative barriers to entry are being reduced. More countries are introducing visa on arrival rather than more cumbersome pre-arrival registrations. Seychelles adopted a no-visa policy for international visitors, which led to a 7% annual increase in international tourist arrivals between 2009 and 2014 (AfDB, 2016). Other East-African countries are following suit. Additionally, Kenya, Rwanda and Uganda launched a single East Africa Tourist Visa. The three countries introduced the visa in January 2014 and promoted it on the basis that lower visa costs and reduced application time would increase: i) visitors to the region; ii) the number of countries visited in the region during a single trip; and iii) the overall length of stay and visitor spending due to more variety in the tourism offer. An analysis carried out immediately after the launch of the visa found that every dollar spent on implementing the single regional visa would generate USD 6 in direct benefits through reduced administrative requirements for regional travel (Vanguard Economics, 2017).

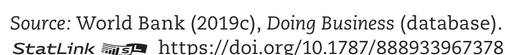
Targeted national policy reform to promote regional integration can increase the competitiveness of East Africa's economies

East African countries are progressively improving their policy frameworks governing trade, but governments need to do more to improve the business environment as a whole. Governments in the region are adopting a series of pro-trade reforms to reduce barriers to trade and improve the overall trade environment. In 2019, at the time of writing, most countries in the region had outperformed the sub-Saharan Africa average for trading across borders (see Figure 4.5). However, while some countries (Mauritius, Rwanda and Kenya more recently) outperform others in the Ease of Doing Business rankings overall, more countries in the region require additional work to improve the overall business climate (World Bank, 2019c). Complex and burdensome business procedures in many countries undermine efforts to promote business linkages, cross-border firm networks and regional value chains.

Figure 4.5. **Doing Business scores for countries in East Africa**



Source: World Bank (2019c), *Doing Business* (database).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Regional integration is a contentious political process to manage and should be deployed tactfully to promote an environment conducive to transforming the economy's productive structure. Regional integration exposes businesses to outside influences, opportunities and competition. This can trigger resistance or hesitation among certain stakeholders that fear economic disruption. Yet, as demonstrated through the example of the Single Customs Territory (see Box 4.4), regional integration initiatives also carry enormous potential for economic and social benefits to ordinary citizens and domestic private sector operators alike. A tactful approach with carefully selected initiatives should be deployed as opposed to a wholesale push for larger and more competitive markets.

Box 4.4. **The Single Customs Territory in East Africa: Increasing the transport sector's competitiveness**

Despite years of negotiations and the introduction of various road transport reforms and initiatives, the cost and time for moving a container from the port of Mombasa to Kigali remained stubbornly high. In January 2013, it cost USD 4 650 on average and took 21 days. The high costs and long transit times were due to various inefficiencies along the corridor, including poor port management at Mombasa leading to long dwelling times for containers; a lack of co-ordination among customs agencies in the region; cumbersome procedures; and a proliferation of weighbridges and police checkpoints along the route.

Box 4.4. **The Single Customs Territory in East Africa: Increasing the transport sector's competitiveness** *(cont.)*

To address inefficiencies along the corridor and other non-tariff barriers hindering the transit of goods, the heads of state of Kenya, Rwanda and Uganda, under the auspices of the Northern Corridor Integration Project, introduced the Single Customs Territory (SCT) project at a Summit in June 2013. The SCT project was designed to fast-track reform of the Northern Corridor and facilitate the rapid movement of goods. The SCT project had four immediate objectives:

- reduce the cost of doing business by eliminating the duplication of processes;
- reduce the risk associated with non-compliance on the transit of goods;
- enhance regional synergies through shared resources and the utilisation of economies of scale;
- enhance the application of information technology and data collection at a regional level.

Reforms implemented under the SCT since 2013 include: i) the introduction of a single customs declaration; ii) the Regional Customs Transit Guarantee to reduce cost of bonds and guarantees; iii) deployment of Rwandan and Ugandan customs officials in Kenya; iv) a reduction in the number of weighbridges and the time they require; v) upgrading and interfacing of customs' information technology systems; vi) the Electronic Cargo Tracking System; vii) the exemption of value-added tax on transit services in Kenya; and viii) insurance guarantees for containers.

Through strong political commitment from the highest level in all three countries, the reforms were pushed through by the end of 2015. Given that many of the reforms were regulatory, the cost of reform came to no more than USD 20 million for the region, mostly as a result of investment in electronic cargo tracking systems. A cost-benefit analysis of the project undertaken for Rwanda in 2017 found a time savings with an economic value of USD 13.38 per hour along the corridor and a total direct benefit of USD 302 million for Rwanda over a ten-year period (Vanguard Economics, 2017).

Regional integration can create larger markets, increase economies of scale and reduce transaction costs for the region, although this does not seem to take place yet. There is little evidence to suggest that integration in the major East African regional economic communities (RECs; i.e. the Common Market for Eastern and Southern Africa [COMESA] and the EAC) have led to increases in intra-regional trade. Ten years after its launch, intra-regional imports in the EAC as a share of GDP were lower than prior to its launch. COMESA has fared only slightly better (Shepherd, De Melo and Sen, 2017). Lack of trade complementarity among member states, overlapping membership and a general decrease in exports' share of GDP go some way to explain this situation. Consequently, efforts by RECs to promote East Africa's productive transformation have been largely ineffective, partly due to a poor implementation of regional programmes (ECA, 2015).

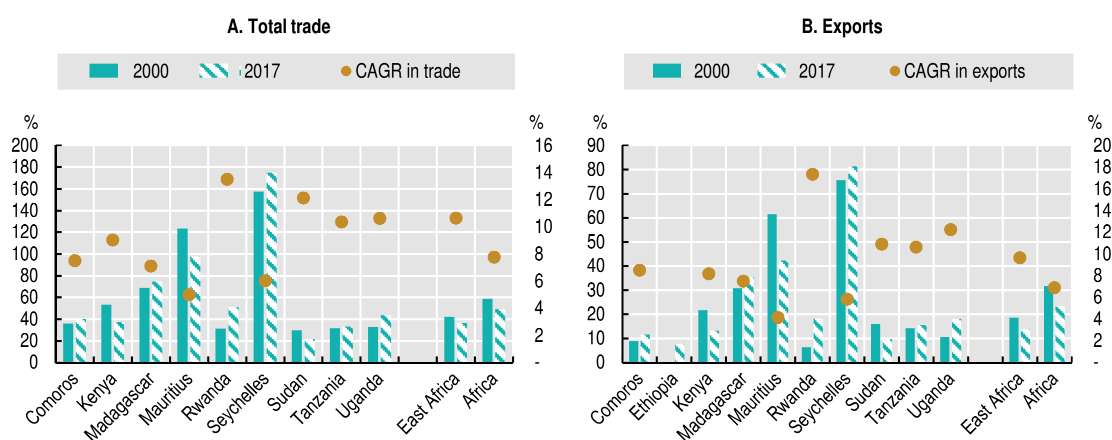
Individual countries' overlapping membership in RECs further complicates national trade regimes and prevents deeper integration into one group (WTO, 2019). A tripartite free trade agreement in goods, negotiated between COMESA, the EAC and the Southern African Development Community in June 2015, provided an opportunity to partially rectify this. However, the experience overall has been a disconnect between regional and national objectives for growth (ECA, 2015) and, by extension, a prioritisation by member states of their own interests over those of the region. These factors combined prevent countries from fully benefiting from the regional integration process.

Promoting greater levels of trade facilitation over integration could increase the number of regional value chains (RVCs). Literature on RVCs in Africa suggests that reducing regional transaction and trade costs is critical to supporting RVC integration since goods cross regional borders multiple times (Morris, Plank and Staritz, 2014). It is estimated that reducing time to trade by 1% increases the level of foreign value added by 0.18% after two years (Slany, 2017). Regional projects, such as the Single Customs Territory, which focus on reducing the cost and time for trading across borders, could allow RVCs to play a greater role in East Africa's productive transformation. Through implementation of the SCT project, transportation costs on the Northern Corridor between Kigali and Mombasa were reduced from USD 5 000 per 20-foot container at the beginning of 2013 to almost USD 3 000 in 2019 (NCTTC, 2019).

Investments in transformation capabilities are needed to unlock trade's growth potential

Exports' share of GDP is decreasing for East Africa, as much of the region's growth is concentrated in non-tradeable sectors. While exports' shares of GDP vary across countries, they tend to be above 40% for upper-middle-income countries globally (World Bank, 2019d). The East African average was just 14% in 2017, down from 19% in 2000. This low and declining share can partly be attributed to the fact that much of the region's growth comes from the non-tradable construction, real estate and retail sectors. The island countries of Madagascar, Mauritius and Seychelles all have relatively higher trade shares. Rwanda stands out for its exceptional rate of sustained export growth since 2000, averaging 17% per year, while its share of exports as a percentage of GDP increased from 6% to 18%. However, even with this level of growth, Rwanda's share of exports in the national income remains below the average for countries with comparable income levels (around 25%) (World Bank, 2019d).

Figure 4.6. **East Africa's trade in goods and services with the world (share of GDP at current prices)**



Source: Authors' calculations based on DESA/UNSD (2019), *United Nations COMTRADE* (database).
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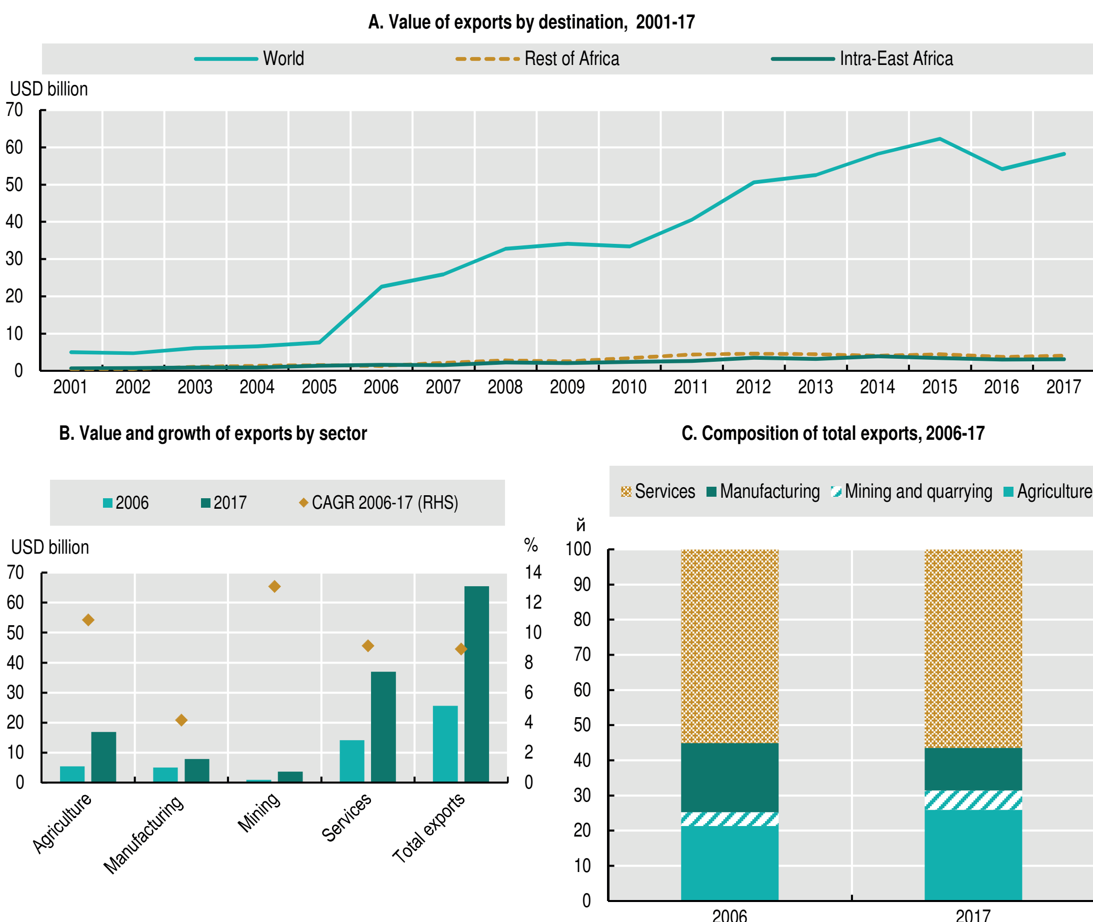
The region constitutes of services-exporting economies. Services accounted for 57% of exports from East Africa in 2017 and have remained above 50% for the past decade (Figure 4.7). Major export sectors for services in the region include tourism, transport, ICT and finance. Services exports have grown 6% on average for the past year, largely in line with the average growth for total exports. While services have greatly contributed

to growth in East Africa's exports, relying solely on service-driven export growth has its downsides. Firstly, some services tend to require high-skilled labour, which calls for a long-term investment in human capital. Secondly, though services are often traded, they tend to be less tradeable than goods and raw materials. Ultimately, there is no obvious or easy way to rapidly improve productivity in services.

Figure 4.7. **Trends in export growth in East Africa**



Source: Authors' calculations based on DESA/UNSD (2019), *United Nations COMTRADE* (database).
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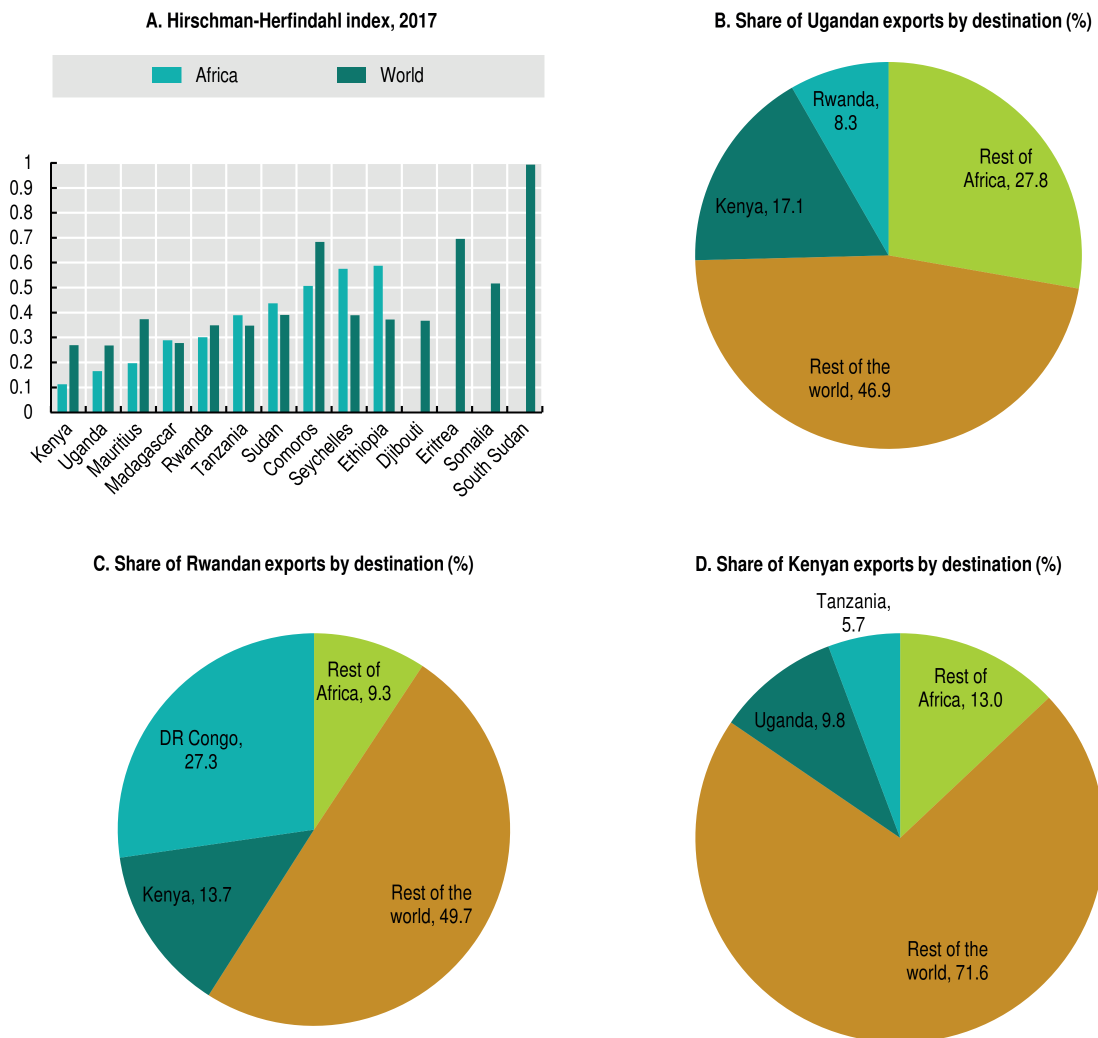
Exports from agriculture and mineral sectors are growing strongly. The shares of exports from agriculture and minerals have increased over time, accounting for 26% and 6%, respectively, in 2017. The positive growth in agriculture is a result of investments to improve productivity in key agricultural export commodities by countries such as Ethiopia, Kenya and Rwanda. As countries push for growth in agriculture exports, markets outside East Africa are becoming increasingly important. Mineral exports also are largely destined for markets outside the region.

The share of the region's manufacturing export products has fallen, from 20% a decade ago to 12% in 2017. Manufacturing export performance has been particularly disappointing given the efforts that East African countries have put into growing their industrial base. Increasing the size of manufacturing exports is a critical component for the region's productive transformation, due to a higher productivity and large employment potential. However, at the current pace, the region will not be able to rely on manufacturing-led export growth to absorb new entrants into the labour force.

The Herfindahl-Hirschman Index shows lower levels of trade concentration for exports between countries which are more integrated in the regional community. Kenya, Rwanda and Uganda have lower export concentration levels than East Africa's average, despite being at the forefront of initiatives for regional integration. These three countries belong to the East African Community and are major trade partners, as seen in Figure 4.8. Although the evidence is not universal, an increased level of export diversification is correlated with productive transformation which sustains per capita income growth (Brenton, Newfarmer and Walkenhorst, 2007).

Figure 4.8. **Concentration of exports from East African countries to other countries in Africa and the rest of the world**



Source: Authors' calculations based on DESA/UNSD (2019), *United Nations COMTRADE* (database) and Harvard University Center for International Development (2019), *The Atlas of Economic Complexity* (database).

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Countries mainly trade in similar goods, limiting the role intra-regional trade can play in diversifying exports

East African countries have similar revealed comparative advantage (RCA) profiles, limiting the opportunity for growth in regional trade. Across the region, raw materials and vegetables have a high RCA while more complex capital goods have little to no comparative

advantage.[3] Similar RCAs limit the potential for direct intra-regional trade. Mauritius has a high RCA for food products as well as for the stone and glass manufacturing sector. Tanzania is the only country that has been gaining an advantage in the production of intermediate goods (stone and glass manufacturing), despite a high RCA for raw materials.

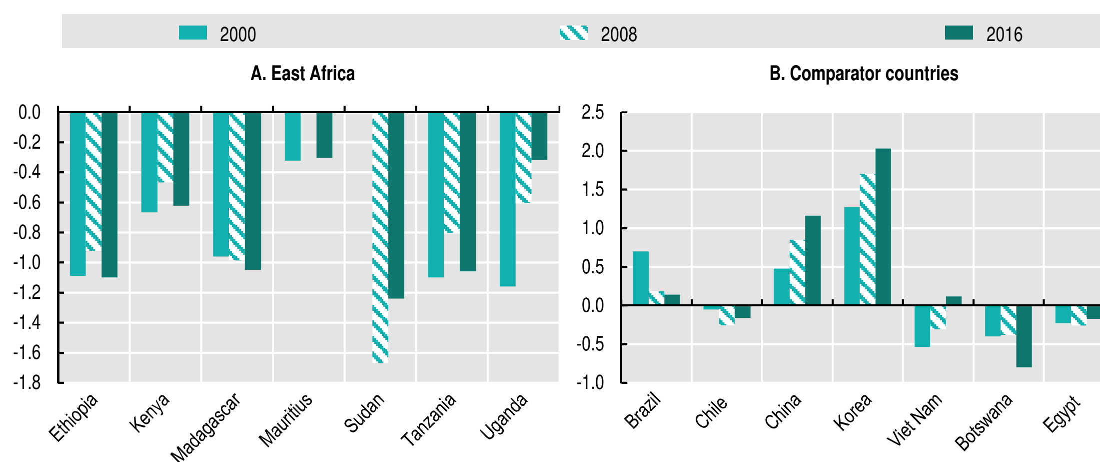
While Madagascar, Mauritius, Tanzania and Uganda have emerged as relatively competitive countries, they have strong similarities in the sectors in which they are gaining advantages. These countries have an increasing RCA for intermediate goods (stones, glass, minerals and metal), while the RCAs of raw materials and the production of fruits and vegetables have been declining. The four countries have gained complexity in similar sectors and in the production of similar products, which is not conducive to productive transformation (Brenton, Newfarmer and Walkenhorst, 2007). East African countries need to upgrade their productive inputs and capabilities in different sectors and increase production sophistication for different products. This will require a certain level of co-ordination, something that the region has largely failed to achieve so far.

A strong, competitive and enabling business environment and structural changes are needed to increase economic complexity

East African countries rank low on the Economic Complexity Index

East African countries are not gaining in complexity, a strong indicator that they are not accumulating capabilities. As a general rule, as GDP per capita increases, countries acquire and accumulate capabilities[4] to produce more diversified products, thus becoming more complex (Hausmann and Hidalgo, 2009). The Economic Complexity Index (ECI) measures productive capabilities on the basis of the number and complexity of products that a country exports. Countries in the region generally do not produce complex goods and, with the exception of Uganda, are not moving towards higher levels of complexity (see Figure 4.9). Benchmarking selected countries in East Africa against other emerging economies – Botswana, Brazil, Chile, China, Egypt, Korea and Viet Nam – demonstrates a mixed performance. Overall, East African countries are behind in complexity compared to most other countries, including Asian countries. This indicates that they are not catching up.

Figure 4.9. **Economic Complexity Index values for East African countries versus comparator countries**

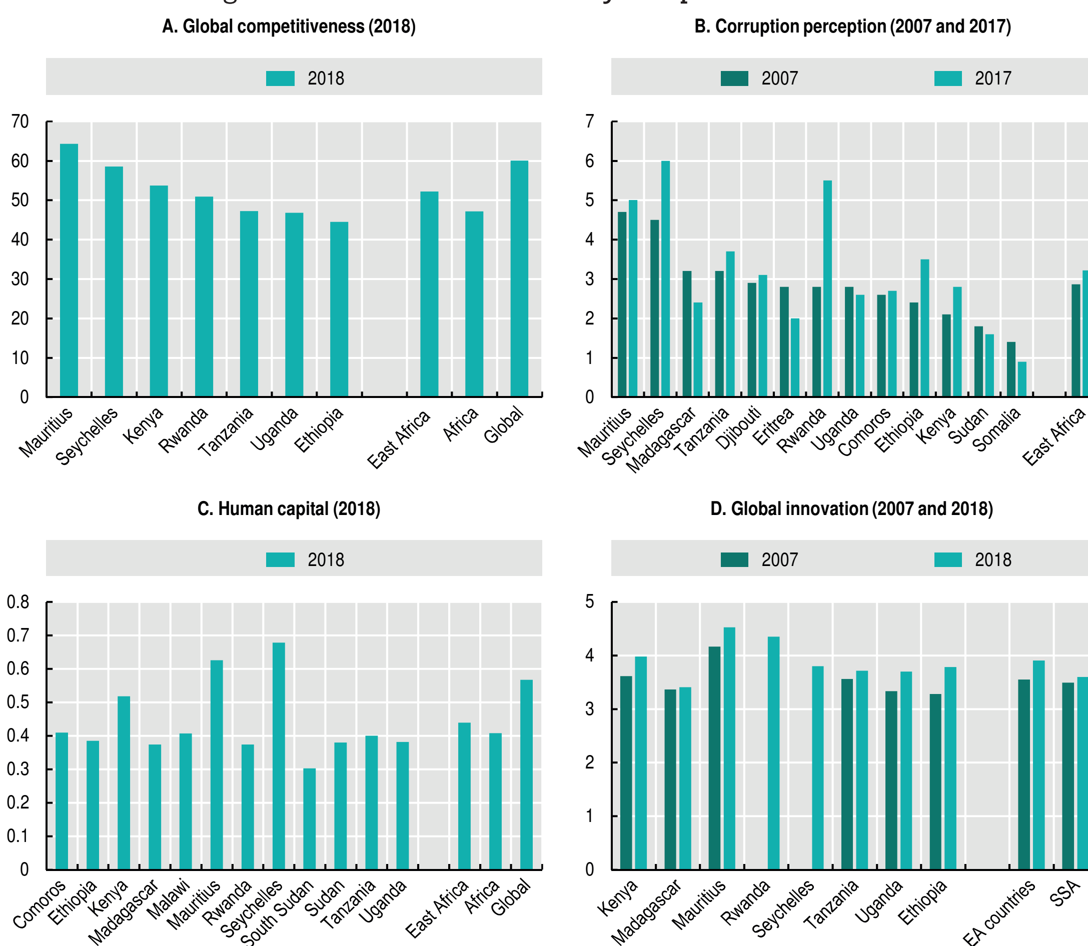


Source: Authors' calculations based on Harvard University Center for International Development (2019), *The Atlas of Economic Complexity* (database).
StatLink https://doi.org/10.1787/888933967454

Few countries in the region are advancing on competitiveness, innovation and human capital accumulation

Competitiveness is cental to productive transformation, and countries cannot ignore constraints to growth. The literature on productive transformation emphasises the relationship between development and a shift into new activities across sectors on the one hand and diversification into a broader set of activities within sectors on the other hand (Imbs and Wacziarg, 2003). The literature on competitiveness defines economic development as a process of successive upgrading in which the business environment continually adapts to encourage and support greater levels of competition through greater levels of sophistication and productivity (Porter, Ketels and Delgado-Garcia, 2006). Transformation is essentially driven by competitiveness, which in turn relies on the quality of the business environment, access to human and physical capital, and at later stages factors that encourage innovation and entrepreneurship.

Figure 4.10. **Global scores for key competitiveness indicators**



Note: Panel A (Global Competitiveness Index) ranks countries from 0 to 100 for competitiveness, with 100 being the best. Panel B (Corruption Perception Index) scores countries from 0 (highly corrupt) to 100 (clean). Panel C (Human Capital Index) measures the human capital that a child born today can expect to attain by age 18, with 1 being full attainment of his or her human capital and 0 being no attainment. Panel D (Global Innovation Index) is a composite measure, scoring countries between 0 and 100, with 100 being the best.

Source: WEF (2018), *The Global Competitiveness Index Report 2018*; Transparency International (2018), *Corruption Perception Index* (database); World Bank (2019e), *Human Capital Index* (database); Global Innovation Index (2018), *Global Innovation Index* (database).

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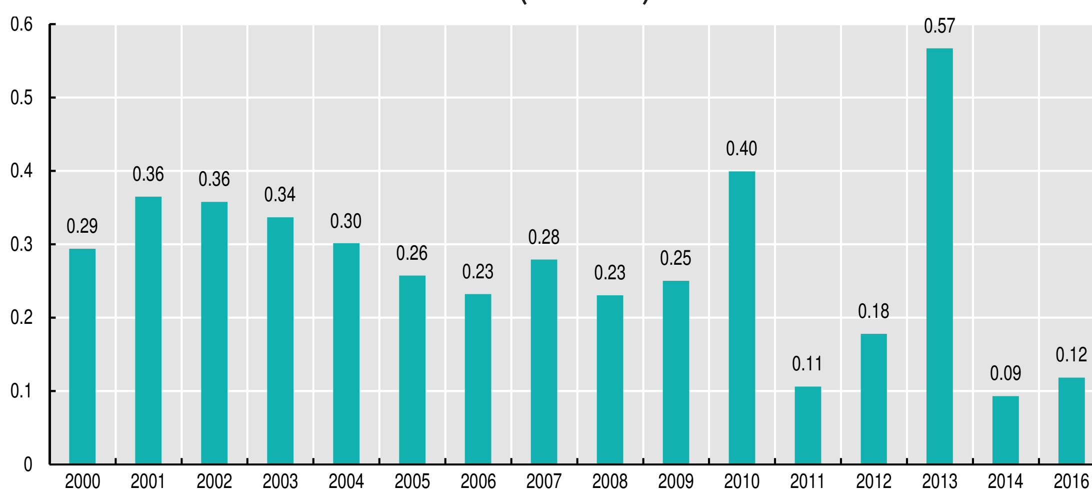
Countries in the region rank low in global competitiveness but are above the sub-Saharan Africa average. The Global Competitiveness Index (GCI) benchmarks countries across a range of factors affecting competitiveness, including infrastructure, institutions, product markets, financial systems and innovation. East African countries score low on the GCI as a whole, although their individual factor scores vary greatly. Mauritius is the only country in the region ranking above the global average, with a score of 63.7% in 2018 (WEF, 2018). The advancement of Mauritius is driven by increasing openness, a non-distortive fiscal policy, and improvements in governance and institutions' service delivery. On indicators for corruption, most East African countries score poorly and in several cases they are even regressing (e.g. Eritrea, Madagascar, Somalia, Sudan and Uganda).

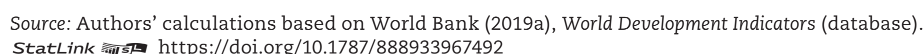
Human capital accumulation rates are low and risk undermining future increases in productivity. The recently launched World Bank Human Capital Index measures the level of education and well-being that each child can expect to obtain by the age of 18; its objective is to highlight how improvements in human capital outcomes can shape the next generation of workers (World Bank, 2019e). In the East Africa region, a child born in 2018 will only be 43% as productive as he or she would have been under the benchmark of complete education and full health. This is above the sub-Saharan African average of 39% but below the global average of 57%. Mauritius and Seychelles are leading the way in human capital development in the region with scores between 60% and 70% respectively. However, most other East African countries fall below the sub-Saharan African average, a potential warning sign for the future of productivity gains for these countries.

The region is not spending enough on research and development (R&D), and existing investment is undermined by low human capital rates. The Global Innovation Index (GII) captures overall innovation capacity in a country, including the quality of infrastructure and business framework conditions. Recent literature points to a high correlation between a country's score in the GII and the quality of overall management practices at the firm level as well as the efficiency of R&D investments (Cirera and Maloney, 2017). Sub-Saharan Africa scores at the bottom of global rankings on the GII, with East African countries performing only slightly better than the continental average. Investment in innovation and increased use of ICT are required to prevent the region from falling further behind the rest of the world. On average, East Africa's spending on R&D is less than 1% of GDP annually, below the African Union Agenda 2063 investment target of 1% and the average for OECD countries of 2.5% in 2016.

Figure 4.11. **Average spending on research and development in East Africa (% of GDP)**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).


StatLink https://doi.org/10.1787/888933967492

Strategies for productive transformation must be implemented at national and regional levels, with an eye on the industries of the future

The East Africa region has seen strong growth over the past two decades, surpassing the average growth rate for the rest of sub-Saharan Africa. Much of this growth has been driven by investment in non-tradeable sectors. To reap benefits from different drivers of growth over the coming decades, countries are already making necessary investments and reforms. However, more still can be done. At a national level, continued reforms and support to businesses are required. At a regional level, targeted projects should be undertaken to allow for greater economies of scale as well as to improve the overall competitiveness of the region. Finally, moving forward, the focus on growth should include manufacturing and be complemented by modern industries, including services, agri-business and horticulture.

Governments should continue to implement reforms to increase private sector competitiveness and support private sector growth

At the national level, countries in East Africa need to focus their efforts on improving the overall business environment. They should upgrade the quality of human capital and innovative capabilities, improve the regulatory environment and ensure access to regional and global markets. Governments in East Africa need to:

- **Urgently expand their investment in human capital as their economies benefit the most out of workers in the services sector, manufacturing and agri-business.** The growing role of technology in business means that an increasing number of jobs (even low-skilled ones) require more advanced cognitive skills. Therefore, governments and the private sector need to work in partnership and individually to provide the health and education facilities required to build a healthy, skilled and diverse pool of workers. Furthermore, investment in innovation will not yield maximum return while there is an underinvestment in human capital.
- **Promote the adoption of new technologies and increased expenditure in R&D.** Productive transformation requires that countries make efforts to mainstream, facilitate and enforce the use of technologies to productively transform human capital and governance and to enhance the productivity of industries. This is necessary following global trends towards artificial intelligence and the increasingly complex demands of countries to be technologically savvy and catch up to more sophisticated economies.
- **Constantly adapt and improve the business environment.** A number of countries in the region are far behind on the global index for Doing Business; these countries need to do more to improve their business climate. East Africa is also home to some of the strongest performers in the global Doing Business Index. These countries need to realise that improving the business environment is an adaptive path, and they should continually look for innovative approaches to staying at the frontier of business reform.
- **Strengthen local firm development by introducing supplier development programmes (SDPs)**. A powerful engine of capability building is the promotion of firm-to-firm interactions in supply chains (Steenbergen and Sutton, 2017). SDPs link local producers with larger international investors (anchor firms). Anchor firms usually apply stringent international standards in their sourcing and thus expose local producers to export grade standards without the additional challenges of exporting. Local and anchor firms can jointly identify the required training needed for suppliers to meet technical specifications and private quality standards. Over time, this upgrades firm capabilities.

Governments should take a practical approach to regional co-operation with a focus on competitiveness

Most countries in East Africa have promoted regional integration as a means to expand their markets for exports. Increased integration has been important for export diversification, with evidence showing greater diversity in the range of products exported to more integrated countries in the region than to the rest of the world. Regional trade is also an important learning ground for firms looking to enter the export market (MINICOM, 2015). Consequently, the success of regional integration has largely been judged on levels of intra-regional trade. In this regard, the impact of regional integration has been limited, with the share of intra-regional trade in the East African RECs remaining below 10% (Shepherd, De Melo and Sen, 2017).

While countries have supported the design of regional sectoral development strategies, they have also largely ignored them when designing and implementing programmes at a national level. RECs have designed regional sectoral strategies, recognising the lack of policy complementarity and coherence between national and regional policies. On the whole, these strategies fail to gain traction due to overlapping membership of countries in RECs and a lack of consensus at the national level (De Melo and Tsikata, 2014).

There are rational explanations for why REC members do not prioritise alignment between national and regional programmes. Experience in the East Africa region shows that i) REC secretariats lack the enforcement mechanisms and co-ordination capability to ensure alignment between national and regional programmes and policies; and ii) perhaps more importantly, national governments are reluctant to implement policies and regulations which may be beneficial or "strategic" from a regional perspective but are not of immediate priority or benefit at a national level.

Co-operation at a regional level should expand beyond integration to focus more on regional competitiveness. Regional co-operation in East Africa holds potential for generating efficiency gains at a national level as well as significant improvements to competitiveness at both the national and regional levels. A focus on enhancing regional competitiveness through targeted projects allows countries to co-operate on practical and implementable interventions without the need to agree on more contentious areas of integration. There are ample practical examples from the region including:

- the East African Single Customs Territory;
- the introduction of price caps on cross-border mobile calling rates for certain countries;
- the liberalisation of some flight routes within the region;
- the introduction of a single East Africa Tourist Visa;
- the COMESA and EAC simplified trade regimes for small-scale traders;
- the introduction of regulations to allow for cross-border mobile payments for a number of countries.

These initiatives, while sometimes relatively small in themselves, combine to create a regional trade and business environment that is far more competitive and can allow for the emergence of unforeseen regional trade opportunities and value chains.

Governments should support transformation in high-productivity manufacturing, complemented by growth in tradeable services, horticulture and agri-business

Discussions and programmes on productive transformation need to include "modern sectors" of the economy. To date, policy dialogues and discussions at both national and regional levels have largely focused on industrialisation's role in transforming the economy's productive structure. This is primarily because East Asian economies rapidly moved a large share of the labour force into high-productivity sectors. However, the

region's manufacturing sector is not growing nearly fast enough to absorb a growing labour force, and the sectors' share of the economy is likely to continue to decline. It is only recently that the literature on productive transformation in Africa has begun to acknowledge and recognise the complementary role played by sectors such as agri-business, horticulture and tradeable services, so-called "industries without smokestacks". Potential opportunities for East Africa include:

- **Focus on tourism to create a high number of jobs for unskilled workers.** Export earnings from tourism are growing rapidly in East Africa. In Uganda, tourism receipts accounted for almost 50% of total services export revenue in 2016, and tourism is now Rwanda's largest single export sector. National and regional initiatives to further promote the sector could lead to significant gains for the region. There is still considerable room for expansion, particularly in the area of green tourism while preserving ecological sites.
- **Embrace e-commerce and the digital economy to support trade.** Technology holds potential for transforming the trade of both services and goods in the region. E-commerce platforms, such as Jumia, open up new and larger markets. New logistics and payment services, such as M-Pesa can pave the way for the growth of e-commerce. Growth in the digital economy will require governments to: i) invest in connectivity; ii) invest in human capital; and iii) design new legislation and regulations around cyber security, online payments, data protection, servers, privacy, etc.
- **Support growth of agro-industry and horticulture, as agriculture shifts to higher value products and processing in countries with strong agricultural sectors.** A common trend in productive transformation is that agriculture's share of GDP generally declines as an economy grows; conversely, the share of agro-processed goods and horticulture in GDP tends to increase (Newfarmer, Page and Tarp, 2018). Processed and semi-processed agricultural produce accounts for close to 75% of global agriculture trade (ibid.), presenting opportunities for export growth. The growth of these sectors will lead to increased demand for logistics services. Countries in the region should reduce trade barriers to allow for regional sourcing of inputs at the production and processing levels, harmonise standards for processed goods to increase levels of intra-regional trade and reduce barriers to the movement of skilled labour for high quality horticulture.

Notes

1. The Abuja Treaty lists 14 countries in East Africa: Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania and Uganda.
2. Most countries in the East Africa region have medium-term development plans with a focus on reducing reliance on agriculture and supporting growth in more productive sectors. These programmes include, among others: Rwanda's National Strategy for Transformation (2018); Kenya's Big Four economic plan (2017); Tanzania's Five-Year Development Plan (2016); South Sudan's first National Development Strategy (2018); Ethiopia's Second Growth and Transformation Plan (2016); Somalia's National Development Plan (2017); and the Comoros' Strategy of Accelerated Growth and Promotion of Employment (2015).
3. A comparative advantage is "revealed", if the revealed comparative advantage is greater than 1. A value of less than one unit implies that the country has a revealed comparative disadvantage in the productivity of the good or sector. Similarly, if the index exceeds one unit, the country is said to have a revealed comparative advantage in the productivity of a good or sector.
4. These productive capabilities include land, human capital, collective knowledge, laws and regulations, infrastructure, machines, etc.

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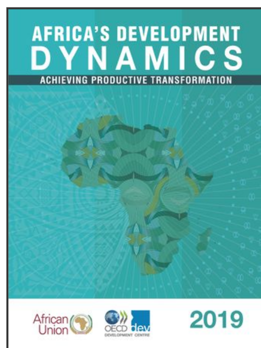

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