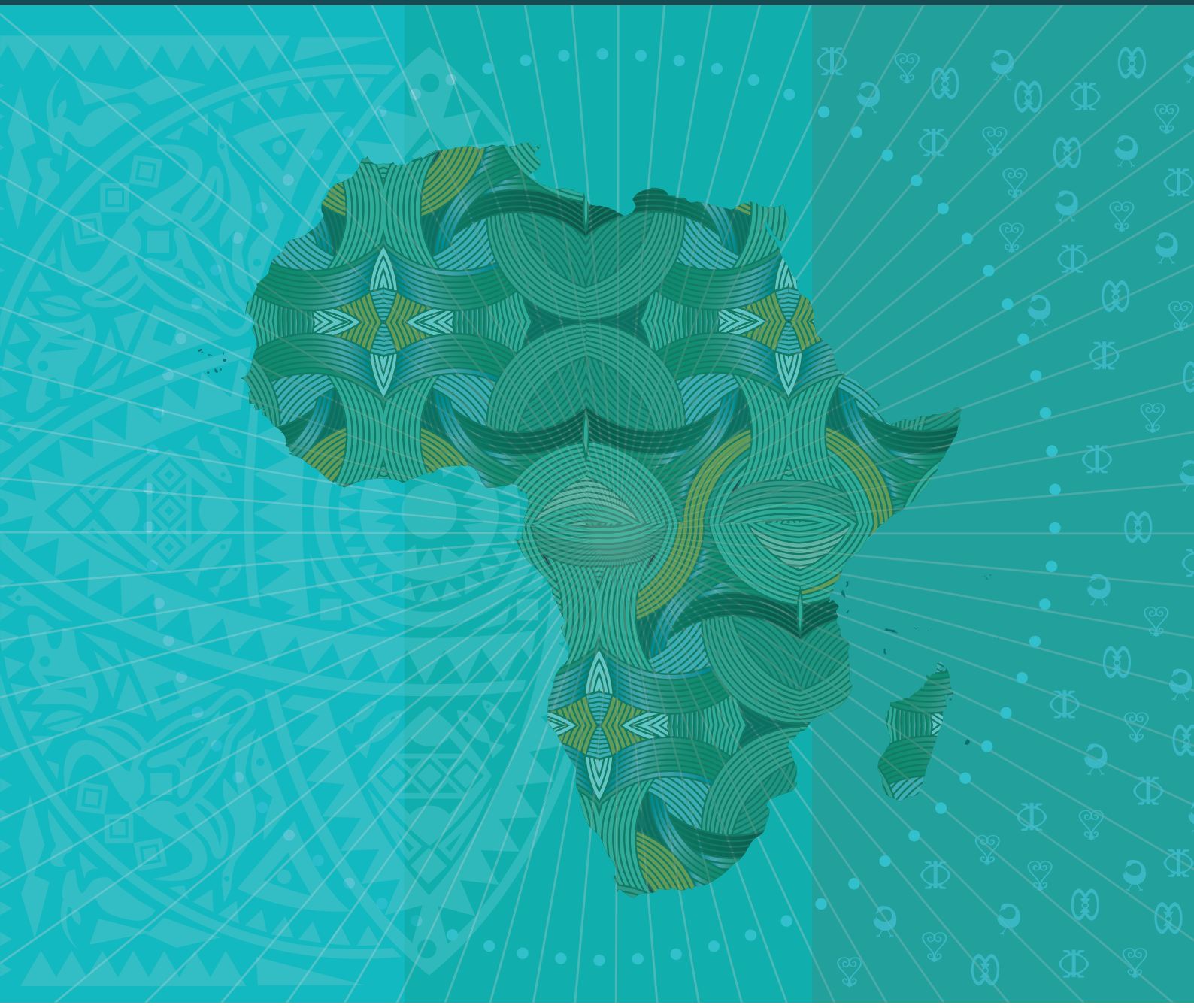
AFRICA'S DEVELOPMENT DYNAMICS

ACHIEVING PRODUCTIVE TRANSFORMATION



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Africa's Development Dynamics 2019

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Foreword

The annual report, *Africa's Development Dynamics*, analyses the continent's development policies. It presents a fresh narrative on Africa's development, assessing the economic, social and institutional performance in light of targets of the African Union's Agenda 2063. This second edition examines public policies that can help transform Africa's production systems.

Africa's Development Dynamics 2019 is the product of a collaborative approach. It results from a unique, broad partnership between the African Union's Commission for Economic Affairs and the OECD Development Centre. A team of academic researchers, economists, statisticians, and other experts from Africa and diverse world regions contributed to this edition.

The report contains six chapters that offer analyses of productive transformation in Africa and provide actionable policy recommendations. The first chapter examines the continent as a whole. Chapters 2 to 6 focus on the five regions as defined by the Abuja Treaty: Southern Africa, Central Africa, East Africa, North Africa and West Africa. The authors tailor the policy recommendations for each region.

The statistical annex contains the latest economic, social and institutional indicators across African countries for which data are comparable. The data are presented by country, African region, regional economic communities and other relevant groups of African countries and compares Africa with other world regions and groups of developing countries. A list of the indicators is provided in the report, and the data are available on line which allows for updates throughout the year. This compilation of policy-relevant data can inform decision makers, advisors, business analysts, private sector actors, journalists, non-governmental organisations and engaged citizens around the globe interested in measuring African countries' development trajectories.

The full report is published in English, French and Portuguese. An electronic version is also available online, together with accompanying figures and tables and the statistical annex. These appear on the websites of both the African Union Commission (https://au.int/afdd2019) and the OECD Development Centre (https://oe.cd/afdd2019).

Editorial

This second edition of the annual economic report of the African Union Commission (AUC), produced with the OECD Development Centre, is dedicated to the memory of Dr. René N'Guettia Kouassi, Director for Economic Affairs at the African Union Commission and instigator of this report in 2016. A committed pan-Africanist, Dr. Kouassi insisted that the continent could only achieve its ambition of integration by profoundly transforming its productive structures, and by developing activities that create value added and quality jobs. With this conviction, he mobilised all his intellectual resources for the production of this report, before his premature passing in January 2019.

This edition of *Africa's Development Dynamics* highlights a set of positive factors converging in favour of productive transformation: from the mobile phone revolution and digitalisation, with entrepreneurs adapting innovations to local traditions, to the changes in the quality of production and distribution of goods and services, and the progressive empowerment of women; from access for local firms to new financing methods and knowledge through foreign investments, to the adoption of regional quality standards, improved infrastructure, and progress in the business environment.

This conducive economic environment builds on favourable macroeconomic trends likely to contribute to this transformation. The continent's GDP growth is expected to reach 3.6% in 2019; final consumption demand, increasingly directed towards processed products, is expected to rise by 6.7%.

Finally, the launch of the African Continental Free Trade Area (AfCFTA), at the 12th extraordinary session of the African Union Summit held in Niamey, Niger, on 7 July 2019, should enable growth through the opening of new markets while promoting a better allocation of resources.

However, the transition to more productive activities is still the result of a few pockets of excellence. The vast majority of small enterprises, which play a key role in social inclusion, are not sufficiently involved in this transformation. The Africa-Asia productivity ratio decreased from 67% in 2000 to 50% in 2018. In some countries, almost 91% of the non-agricultural labour force remains informal.

To enable African companies to move up the value chain, the continent's economies need more proactive policies, co-ordinated at the continental, regional, national and local levels. Three priority areas stand out: ensuring the provision of appropriate services to business clusters; developing regional production networks; and improving the ability of exporters to grow in evolving markets.

To realise these ambitions, it is essential that African countries and their global partners share a platform for policy dialogue to accelerate productive transformation. This platform is intended to better articulate the strategies of the continental organisations, Regional Economic Communities, and national governments with those of Africa's partners, in a spirit of open and frank partnership dominated by the principle of mutual respect.

This is the main purpose of this report, thanks to an in-depth partnership between the African Union Commission and the OECD Development Centre.

We are convinced that such a partnership, based on the dynamics of mutual listening, is the key to achieving the goals embodied by our respective institutions. It is through a balanced partnership that our shared dreams of a world less fragmented and less disrupted by inequality can be achieved. It is in this direction that both the African Union's Agenda 2063 and the United Nations' 2030 Agenda for Sustainable Development Goals (SDGs) come into play. This is the political foundation of our co-operation. This is the ambition of *Africa's Development Dynamics*.

Moussa Faki Mahamat
Chairperson
African Union Commission

Angel Gurría
Secretary-General
Organisation for Economic Co-operation and Development

Acknowledgements

This edition of *Africa's Development Dynamics* is dedicated to the memory of the late Dr. René N'Guettia Kouassi.

Africa's Development Dynamics, the flagship economic report of the African Union supported by the Development Centre of the Organisation for Economic Co-operation and Development (OECD), is one of Dr. Kouassi's strong legacies. Dr. Kouassi initiated the African Union's economic report in 2016, cemented the partnership with the OECD Development Centre in 2017 and provided strategic orientations for selecting themes of this annual report. He led the first edition of *Africa's Development Dynamics,* published in 2018 on *Growth, Jobs and Inequalities*. He supervised the writing of this second edition until he passed away unexpectedly on 13 January 2019. Dr. Kouassi viewed the report as a new platform for the African Union's leaders to share knowledge about Africa with global partners. The teams of the African Union and the OECD Development Centre are greatly indebted to Dr. Kouassi's far-sighted vision and intellectual leadership for bringing this report to life and, with it, an evidence-based policy dialogue.

The annual economic report, *Africa's Development Dynamics 2019: Achieving Productive Transformation*, was jointly prepared by the African Union Commission (AUC) and the OECD Development Centre. It is published under the aegis of H.E. Moussa Faki Mahamat, President of the AUC, and H.E. Angel Gurría, Secretary-General of the OECD. It was guided by H.E. Victor Harison, Commissioner for Economic Affairs of the African Union, and Mario Pezzini, Director of the Development Centre and Special Advisor to the OECD Secretary-General on Development. It was supervised by René N'Guettia Kouassi, Director of Economic Affairs of the AUC, and by Ligane Massamba Sène, Economist, Economic Policy and Research Division of the AUC, along with Federico Bonaglia, Deputy-Director of the OECD Development Centre and Arthur Minsat, Head of Unit for Africa of the OECD Development Centre.

The **drafting team** of the AUC was led by René N'Guettia Kouassi, Director of Economic Affairs, with Ligane Massamba Sène, Economist, Economic Policy and Research Division. The members of the team included Désiré Avom (University of Dschang), Aram Belhadj (University of Carthage), Alemu Kassahun Berhanu (University of Addis Ababa), Jude Eggoh (University of Angers), Kouadio Clément Kouakou (Université Félix Houphouët-Boigny), Winford H. Masanjala (University of Malawi) and Mohamed Ben Omar Ndiaye (Cheikh Anta Diop University of Dakar). The team at the OECD Development Centre, led by Arthur Minsat, Head of Unit for Africa, with Bakary Traoré, Economist, included Rodrigo Deiana, Sébastien Markley, Thắng Nguyễn-Quốc as well as Kesia Braga, Mathilde Cournut, Dieu-Donné Gameli, Heddie Moreno, Elisa Saint-Martin, helped by contributions by Armin Lalui (Vanguard Economics). Chapter 1 also benefited from valuable data and suggestions from Ana Margarida Fernandes (World Bank), Adnan Seric and Michael Windisch (UNIDO), Ali Alsamawi, Agnes Cimper, Joaquim José Martins-Guilhoto, Jose René Orozco, Colin Webb and Norihiko Yamano (OECD).

The AUC hosted a series of technical seminars to define the outline and the contents of the report, promote exchange of cutting-edge research findings among the members of the drafting team, and review and harmonise chapters (in Nairobi in September 2018 and in Addis Ababa in July 2018, November 2018 and February 2019).

The chapters benefited from **feedback and comments** of experts who took part in a peer review meeting held at the OECD Development Centre in December 2018: Richard Carey (ACET), Robert Nantchouang (African Capacity Building Foundation [ACBF]), Landry Signé (Brookings), Gyude Moore (Centre for Global Development), Cristina Mitaritonna (CEPII), Simeon Koffi (ECOWAS), Gaëlle Doleans (European Commission), Anna Waldmann (GIZ), Mariam El Joubari (Haut Commissariat au Plan, Maroc), Isabelle Ramdoo (IISD), Stephen Gelb and Dirk Willem te Velde (ODI), Gwamaka Kifukwe, Golvine de Rochambeau and Ines Zebdi (Sciences-Po), Lilia Hachem Naas (UNECA), Elizabeth Glass (UN Habitat), Michele Clara (UNIDO), Kako Nubukpo (Université de Lomé), Clémence Pougué-Biyong (Université Paris Panthéon-Sorbonne), David Kaplan (University of Cape Town), James McGregor (University of Surrey), Souleymane Coulibaly (World Bank), and Lucia Cusmano, Iza Lejarraga, Andrea Goldstein and Vasiliki Mavroeidi (OECD). The report also benefited from consultations held at the Overseas Development Institute in October 2018, at the Specialised Technical Committee (STC) of the African Union on Finance, Monetary Affairs, Economic Planning and Integration on the theme "Public Policies for Productive Transformation" in Yaoundé in March 2019, and at the Comunidade dos Países de Língua Portuguesa (CPLP) in Lisbon, the Policy Centre for the New South in Paris, ACBF's 6th African Think Tank Summit in Nairobi, and the European Investment Bank in Luxembourg throughout April 2019.

The revised chapters benefited from peer reviewing and comments by Robert Nantchouang (ACBF), Stefan Agne, Thomas Feige, Antonio Crespo Moreno, Nicoletta Kolovou, Juergen Kettner, Odoardo Como, Vincent Durruty, Gaëlle Doléans and others (European Commission), and Anna Waldmann, Niklas Malchow and Arumugam Pillay (GIZ). Chapters benefited from further comments by Ben Shepherd (Developing Trade Consultants), Kasper Søgaard (Global Maritime Forum), and Michelle Harding, Linda Smiroldo Herda, Sébastien Miroudot, Annalisa Primi, Jan Rielaender, Henri-Bernard Solignac-Lecomte and Martin Wermelinger (OECD). All chapters benefited from an additional review by José Pineda (University of British Columbia). The report received additional comments or support from Dossina Yeo, Head of Economic Policy and Research, Djeinaba Kane, Editorial Officer, Charumbira Ndinaye Sekwi, Fiscal Economist, and Rumbidzai Treddah Manhando, Youth Volunteer (Economic Affairs Department of the AUC).

Yamrot Kifle (AUC), Kokobe Georges (AUC) and Julia Peppino (OECD) gave valuable support co-ordinating the administrative work.

The involvement of the editing, translation and proofreading team was crucial to producing the report on time. It was edited by Sabine Cessou and Jill Gaston and translated by Catherine Nallet-Lugaz, Eleanor O'Keeffe and Marika Boiron. Elizabeth Nash and Delphine Grandrieux supervised production with Aida Buendía, Irit Perry and PYKHA, who were responsible for page layout. Aida Buendía created the graphic design and the cover, and Irit Perry created the infographics.

The African Union and the OECD Development Centre are grateful to the ACBF for its engagement in this report. The OECD Development Centre is grateful to the European Commission (DG DEVCO), Germany (BMZ/GIZ), Italy (Ministry of Foreign Affairs and International Co-operation) and Portugal (Camões – Instituto da Cooperação e da Língua, I.P.) for their additional support to this second edition.

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Abbreviations and acronyms

AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AMU	Arab Maghreb Union
ASEAN	Association of Southeast Asian Nations
AU	African Union
AUC	African Union Commission
CEMAC	Economic and Monetary Community of Central Africa
CEN-SAD	Community of Sahel-Saharan States
CET	Common External Tariff
COMESA	Common Market for Eastern and Southern Africa
DAC	Development Assistance Committee
EAC	East African Community
ECCAS	Economic Community of Central African States
ECI	Economic Complexity Index
ECOWAS	Economic Community of West African States
EU	European Union
FDI	Foreign direct investment
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GI	Geographical Indication
GII	Global Innovation Index
GVC	Global value chain
ICT	Information and Communications Technology
IFF	Illicit financial flows
ILO	International Labour Organization
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification
ISO	International Standards Organization
ITC	International Trade Center
LAC	Latin America and the Caribbean
LCA	Latent Comparative Advantage
MNEs	Multinational enterprises
MVA	Manufacturing Value Added
NEPAD	New Economic Partnership for Africa's Development
NTB	Non-tariff barrier
OECD	Organisation for Economic Co-operation and Development
OSBP	One Stop Border Post
PIDA	Programme for Infrastructure Development in Africa
PPP	Public-Private Partnership
R&D	Research and development
RCA	Revealed Comparative Advantage
REC	Regional Economic Community
RVC	Regional value chain
SADC	Southern African Development Community
SAPP	Southern Africa Power Pool
SCT	Single Customs Territory
SEZ	Special Economic Zone
SGB	Small Growing Business

SME	Small and medium-sized enterprise
SSA	Sub-Saharan Africa
STEM	Science, Technology, Engineering and Mathematics
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
VAT	Value added tax
WAEMU	West African Economic and Monetary Union
WAMZ	West African Monetary Zone
WEF	World Economic Forum
WTO	World Trade Organization
XOF	West African franc
ZAR	South African rand

Executive summary

Africa's growing markets show great potential for transforming their production systems. Africa's gross domestic product (GDP) has grown by 4.6% annually since 2000, the second fastest rate in the world. Its domestic demand accounts for 69% of this growth performance and has shifted towards more processed goods. The African Continental Free Trade Area raises new hopes of creating a pan-African market for the continent's industrialisation.

Many local firms are seizing these opportunities to grow in size and productivity. Africa's private sector is diverse: it includes dynamic "champions", stable corporations, small growing businesses, and livelihood-sustaining and informal firms. Many pan-African "champions" such as the *Office chérifien des phosphates* from Morocco or MTN from South Africa are diversifying their product and market bases to operate across the continent. Start-ups such as Jumia (based in Nigeria) and M-KOPA (based in Kenya) are using new technologies and business models to tap the rising local demand and attract large investments. African tech start-ups raised a record USD 1.2 billion in equity in 2018 compared to USD 560 million in 2017.

But productive transformation is not spreading, especially where needed in employment-intensive sectors. The Africa-to-Asia labour productivity ratio has decreased from 67% in 2000 to 50% today. Africa's production is not yet meeting the domestic demand: African exports of consumption goods to African markets decreased from USD 12.9 billion in 2009 to USD 11.8 billion in 2016, or from 0.8% of Africa's GDP in 2009 to 0.5% in 2016. Without a strong and co-ordinated policy push, African firms risk losing out to new global competitors.

Africa needs to accelerate its productive transformation to create quality jobs for the 29 million Africans reaching working age each year from now until 2030. Quality jobs remain an exception for Africa's youth and women: about 42% of Africa's working youth live on less than USD 1.90 a day (at purchasing power parity), and only 12% of Africa's working-age women were in waged employment in 2016. While African people are the most entrepreneurial globally, many entrepreneurs lack basic capabilities. Most youth entrepreneurs in Côte d'Ivoire and Madagascar lack the capabilities necessary to do basic bookkeeping, lay out a plant, use tools to plan over a multiyear horizon, identify a relevant technological advance and cultivate human resources.

A systemic approach to productive transformation in Africa entails focusing on three sets of policies:

1. **Developing strategic clusters of firms.** Governments can use clusters strategically to develop an economy's comparative advantages. The success of such policy depends on choosing the right location, attracting the right capabilities and providing business services to ensure linkages inside clusters. While African governments have made considerable progress in the first two areas, targeted support for local firms can help develop a stronger supplier base.
2. **Facilitating regional production networks.** Policies must strengthen regional production networks. Regional sourcing remains under 15%. Regional norms help smallholders integrate into regional value chains, particularly in agriculture, which accounts for 50% of all employment. Co-ordinating strategies for foreign direct investment will attract investors, develop regional capabilities and avoid undercutting taxes.
3. **Enhancing firms' abilities to thrive in new markets.** Policies must help African exporters thrive by tailoring to the destination markets. Removing non-tariff barriers reduces uncertainties for exporters and may increase fivefold the gains from tariff removal. Exporters need simpler administrative procedures and better connectivity and infrastructure, especially flights, roads and ports. Exporters must meet quality standards: African firms file three times more ISO certifications today compared to 2000. Still, Malaysian firms alone filed as many certifications as all African firms in 2015.

The pace of productive transformation and governments' policies to transform their production systems vary across African regions. Southern African economies face concerns over pre-mature de-industrialisation. The shares of manufacturing value added in total GDP has declined since 2000. The Southern African Development Community's Industrialization Strategy aims to shift the region's economies from the current commodity-dependent growth path to value-adding, knowledge-intensive and industrialised economies. Its action plan prioritises six key clusters for regional value chain development: agro-processing, minerals and beneficiation, pharmaceuticals, consumer goods, automobiles, and modern services. Such a strategy can piggy-back on South Africa's participation in global value chains (GVCs) and leverage the presence of multinational enterprises to bring small and medium-sized enterprises into GVCs. Developing regional public goods, especially in energy and transport infrastructure, and harmonising customs procedures and payments systems will be key.

Central Africa is experiencing a slow productive transformation. The region is highly dependent on raw materials, which represented 85% of its total exports in 2017, compared with an average of 51% for Africa. Oil alone accounts for almost half of all foreign receipts. In order to diversify its economic base and increase resilience, Central Africa's governments aim to add more value from commodities such as wood, stone and glass that have a revealed comparative advantage. Three main actions are recommended: strengthening regional integration and synergies, promoting sectoral business groupings in special economic zones and making diversification strategies work.

East African economies have steadily moved away from subsistence agriculture into services, higher value-added agribusinesses and labour-intensive manufacturing. The services sector is the largest contributor to value added in the region. Competitiveness indicators show progress but remain below global standards. Countries need to address binding constraints to growth at national and regional levels 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 "industries of the future" such as financial services, the digital economy and tourism.

Several economies in North Africa are diversifying towards more technology-intensive activities, while others rely on exporting natural resources, in particular oil and gas. Exports with latent comparative advantage are more diversified in Egypt, Morocco and Tunisia than in Algeria, Libya and Mauritania. Policymakers can promote quality upgrading in parallel with product diversification inside existing clusters. Public policies can support research and development and boost innovation through financing and technology transfer. Removing barriers to the free movement of goods and services (particularly non-tariff barriers) and harmonising technical standards is essential to raise the currently insufficient levels of intra-regional trade. Finally, better regulating labour market and anti-trust policies, protecting intellectual property and simplifying administrative procedures can improve the business environment.

West Africa depends on the export of unprocessed goods in extractive and agricultural sectors. The region's 15 countries – large exporters of unprocessed raw materials – lag behind in terms of industrialisation, competitiveness and moving up the value chain. Despite having made progress in financial and economic integration, results in terms of innovation and overall competitiveness remain muted or even negative in many countries. Five strategic policies could accelerate the productive transformation of raw materials ***in situ***: i) strengthening regional complementarities, ii) improving entrepreneurial innovation, iii) facilitating access to markets, iv) rationalising tax policy (national and regional) and v) increasing access to energy and land.

Overview: Policies for achieving productive transformation in Africa

Africa's Development Dynamics 2019 examines policies for productive transformation to help African leaders reach the targets of the African Union's Agenda 2063. The first chapter analyses Africa's potential for productive transformation and current policy approaches to tap these opportunities. It proposes three main policy areas for transforming firms in Africa within a changing world. The five regional chapters of the report demonstrate important differences in productive transformation between Southern, Central, East, North and West Africa, and propose specific policies for each region. The report provides African decision makers with an up-to-date tool for policy dialogue and reform at national, regional economic community and pan-African levels.

Africa's growing markets show great potential for productive transformation

The African continent recorded 4.6% annual gross domestic product (GDP) growth between 2000 and 2018. This growth performance was better than that of Latin America and the Caribbean (LAC) at 2.6% but lower than Asia's average of 7.4% for the same period. Growth is projected at 3.6% in 2019 and 3.9% in 2020-23. Since 2000, an additional 11 African countries have attained middle- or higher-income status. Seventeen African countries have emerging or frontier economy status (MSCI, 2019).

Africa's domestic demand is the most important driver of this growth performance. It accounted for 69% of annual growth between 2000 and 2018. This demand is shifting towards more processed goods. The continent's demand for processed food is growing 1.5 times faster than the global average; demand for many other products such as road vehicles, manufactures of metals and industry machinery is expanding faster than the global average as well.

Many local firms are seizing these opportunities to grow in size and productivity. Firms expanding pan-African businesses include the *Office chérifien des phosphates* (OCP) and Attijariwafa Bank from Morocco; Dangote and United Bank of Africa from Nigeria; Ecobank from Togo; MeTL Group from Tanzania; Ethiopian Airlines; Safaricom hosting M-PESA from Kenya; and MTN and Shoprite from South Africa. These "champions" exemplify how African companies are harnessing the continent's potential. These African conglomerates have even diversified their services or products to operate in various markets and countries.

Younger start-ups in Africa are also engaging in many sectors. The top three activities of Africa's start-ups relate to information technology and Internet services; apps and software; and the creation of audio-visual content and broadcasting (Figure 1). E-commerce comes sixth (12%). Start-ups such as Jumia (based in Nigeria) and M-KOPA (based in Kenya) are using new technologies and business models to tap the rising local and regional demand and attract large investments. In 2018, African tech start-ups raised almost USD 1.2 billion in equity compared to USD 560 million in 2017.

Figure 1. **What do African start-ups do? The top 10 sectors**

Source: Authors' calculations based on Crunchbase (2019), *Crunchbase Pro* (database).
StatLink https://doi.org/10.1787/888933966599

Productive transformation is the process of firms accumulating higher organisational, productive and technological capabilities and diffusing them to the rest of the economy. These gains first occur at the level of firms. An enterprise successfully innovates or adapts new technologies to develop new production mechanisms or introduce new products to the market. Innovation enables this enterprise to specialise, upgrade to higher added-value activities, scale up its production or increase its productivity. Taken collectively, these changes can lead to industry- and economy-wide transformation through competition effects, learning across firms, and improved production factors such as better skills and infrastructure. As a result, the economy increases its productivity to catch up with higher-performing economies.

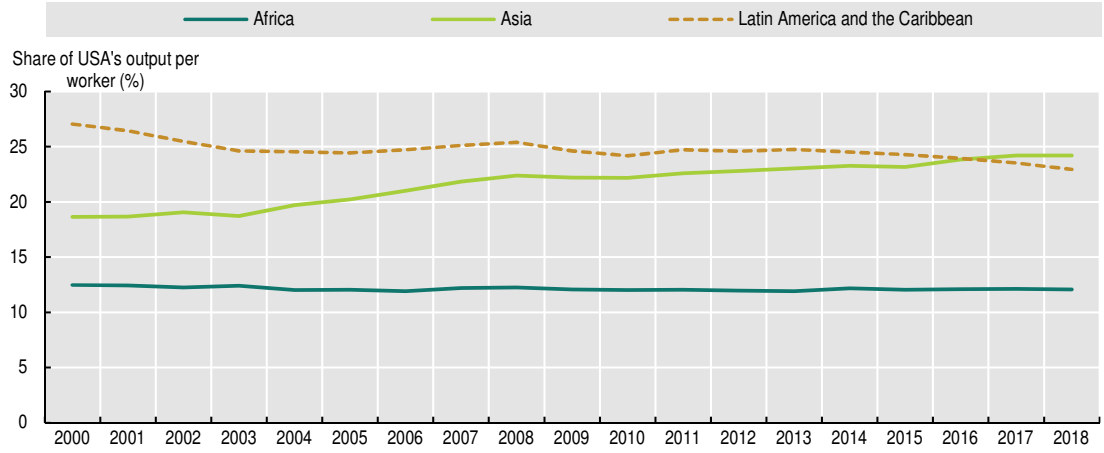
Productive transformation is limited, especially in the sectors employing the most labour

Growth has not created enough quality jobs or well-being for the population. The share of vulnerable employment in Africa decreased only from 71.0% in 2000 to 68.2% in 2018. In some countries, almost 91% of the non-agricultural labour force remain in informal employment. The number of people living on USD 1.90 a day or less increased by 31 million between 1999 and 2015, from 376 million to 407 million. Well-being indicators correlate less with higher income levels in Africa than in other world regions.

This disconnect between growth and development outcomes stems from the structure of Africa's productive system. What countries produce and trade determines overall development outcomes and shapes the capacity of economic systems to generate and redistribute wealth. Most African economies depend on unprocessed agricultural commodity and mining activities with low knowledge content. The mining and utilities sector accounts for 11% of Africa's output despite employing 1.4% of the workforce. Unprocessed goods still account for almost half (48.7%) of Africa's exports in 2017, compared to 10.1% in developing Asia and 27.6% in LAC.

Overall, productivity is not catching up. Africa's labour productivity has remained at 12% of the United States' level since 2000 (Figure 2). The Africa-to-Asia labour productivity ratio has decreased from 67% in 2000 to 50% today. This widening productivity gap suggests that capabilities are not being diffused broadly: they remain confined to the most productive firms.

Figure 2. **Labour productivity in Africa, Asia and Latin America and the Caribbean compared to the United States' level, 2000-18**



Source: Authors' calculations based on Conference Board (2019), *Total Economy* (database).
StatLink https://doi.org/10.1787/888933966618

The majority of firms, especially smaller ones, lack basic capabilities and have low productivity. In a panel of 9 African countries, the value added per worker in firms with 100 employees is over 3 times higher than that of firms with 5 employees and 3.5 times higher for firms with 200 employees (Page and Söderbom, 2015). Among entrepreneurs in Côte d'Ivoire and Madagascar, most firms lack basic capabilities: doing basic bookkeeping, laying out a plant, using tools to plan over a multiyear horizon, identifying a relevant technological advance and cultivating human resources.

Upgrading the capabilities of smaller firms is essential to create more quality jobs. Among the formal enterprises in 38 African countries, those with less than 20 employees make up 41% of the net job creation, compared to 23% for enterprises with 20-99 employees and 20% for those with over 100 employees. The youngest small and medium-sized enterprises (SMEs) – less than five years old – make up 22% of the net job creation.

Unleashing Africa's entrepreneurial potential can boost the innovation capacity of the economy. About 22% of Africa's working-age population are starting new businesses, the highest rate in the world, compared to 19% for Latin American countries and 13% for developing countries in Asia. Among the new African entrepreneurs, 20% introduce a new product or service to the market, a percentage which is similar to other developing regions. The dynamism of entrepreneurship can foster what Joseph Schumpeter called the "creative destruction" process to make the whole economy more innovative and productive.

Strengthening linkages across African firms is key to spreading new capabilities

African firms are too often cut off from each other, which prevents new technologies and know-how from extending across firms. Backward and forward linkages are relatively weak, for example in Kenya:

- Backward linkages to domestic suppliers: 66% of intermediate goods and services for firms in Kenya that receive foreign direct investment (FDI) are imported, compared to 25% in Viet Nam.
- Forward linkages: only 3% of FDI firms in Kenya produce inputs for other Kenyan firms, compared to 61% in Viet Nam.

Large capability gaps hinder the formation of linkages between the most productive firms and the others. Large gaps in capital intensity, management practices and product

standards prevent a small group of highly productive firms – mostly large domestic firms and multinational enterprises (MNEs) –, from generating linkages with the rest of the economy. This process generates a vicious cycle of capability traps for the lagging firms, resulting in a highly segmented productive structure across firms in terms of productivity and innovation capacities. For example, Ghana's top 1% most productive firms produce on average 169 times more value-added per firm than the other 99%.

Regional linkages between firms are also insufficient. The average level of regional sourcing in Africa remains under 15%. By comparison, intra-regional sourcing in Southeast Asia accounts for more than 80% of exports in industries such as motor vehicles, textiles and apparels, and computer, electronic and optical products. In certain cases, policies have not been able to strengthen regional value chains. For example, the mining chain in Southern Africa traditionally relied on South Africa as a supply hub for capital goods. However, more competitive imports of capital goods from China into Southern Africa have challenged South Africa's position in recent years.

Improving the business environment through the usual Doing Business reforms is not enough to strengthen industrial linkages. Diffusing new technologies and capabilities requires supply-side policies for local suppliers and SMEs. Firms face different constraints related to finance, infrastructure and skills that prevent them from innovating and scaling up. Other factors not related to the business environment also prevent Africa's firms from growing in size: about 60% of the size gap between African firms and those in other developing countries remains unexplained even after controlling for the business environment, firms' ages and ownership, and market sizes. Addressing these constraints calls for long-term solutions that strengthen firms' capabilities to produce quality goods, in addition to a better business environment.

African firms need to better anticipate and respond to the coming megatrends

The African continent has changed greatly and will continue to do so in the coming years. Five megatrends at the continental and global levels create significant opportunities and challenges for African firms in starting, managing and growing their businesses. These trends include demographic growth, rapid urbanisation, climate change, the New Industrial Revolution and the shifting terms of trade to other emerging economies in the eastern part of the globe.

Table 1. **Five megatrends affecting Africa's productive transformation**

Megatrend	Main risks	Main opportunities
"Shifting wealth" and the rise of emerging economies	• Competition from other emerging markets • Creating one-dollar jobs • New "scramble for Africa" • Environmental degradation	• Diversification of the African exports basket • Reallocation of low-skilled manufacturing from Asia to Africa • Attracting FDI into Africa • New sources of development finance • Skills transfer
New Industrial Revolution	• Automation • Re-shoring manufacturing to advanced economies • Unprepared skill and technological base • Illicit financial flows	• Reduction in trade costs, especially for small firms • Creation of new niches and markets • Use of new technologies to improve access to public services and quality of public policies
Demographic transition	• High youth unemployment and higher informal sector employment • Increased pressure on public services and environmental resources • Migration and brain drain	• Growth of Africa's workforce • Greater savings, consumption and GDP growth due to increased labour supply and wealth creation • Growth of an African middle class
Africa's urban transition	• Increased urban poverty and inequality • Inequality between rural and urban areas • Urban congestion • More air pollution and inefficient use of water and other natural resources	• Growth of an "urban" middle class and demand for high value-added goods, food and urban infrastructure • Generating economies of scale and social innovation • More sustainable use of resources thanks to efficient sharing of infrastructure in high density areas
Climate change	• Natural disasters, droughts and changing weather patterns • Loss of livelihoods and economic activities	• Expansion of new green sectors • Higher job creation in green sectors

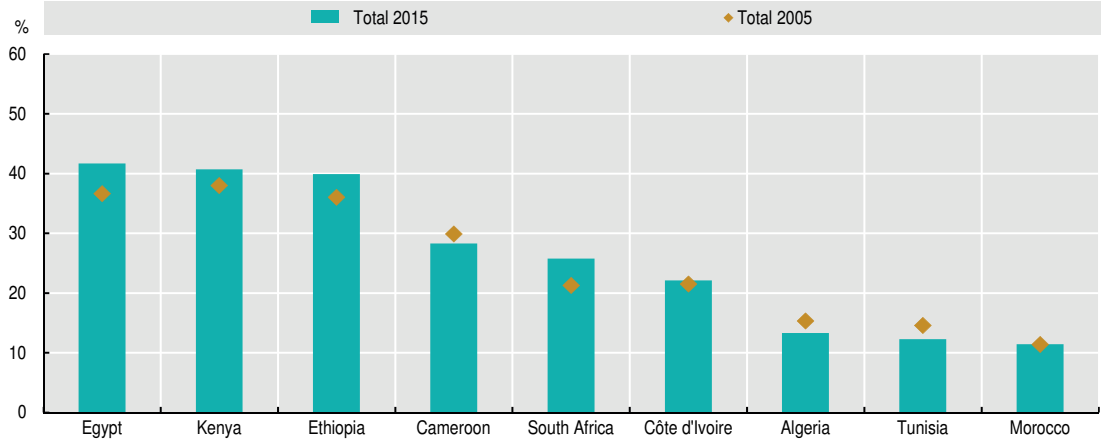
These megatrends will be game changers. They offer new sources of finance, new markets and demand patterns, and new possibilities for "leapfrogging" by using novel opportunities for technology transfer and business management practices. For example, greening extraction techniques can enhance competitiveness in the mining sector and the rest of the economy (e.g. the OCP in Morocco, South Africa Industrial Energy Efficiency Project). They also bring demand for better job creation, new competitors, and new risks to inclusive growth and the environment.

Currently, most African firms risk losing out to new competitors both at home and in emerging markets. Between 2009 and 2016, African exports of consumption goods to African markets decreased from USD 12.9 billion to USD 11.8 billion. At the same time, imports of consumption goods from the rest of the world grew from USD 11.2 billion to USD 19.0 billion. In emerging markets such as China, African exporters also lag behind new competitors from Asia and Latin America in tapping this new demand. African exporters accounted for only 0.3% of the increase in China's consumption imports, compared to 12.0% from countries of the Association of Southeast Asian Nations and 5.1% from LAC.

Firms' survival rates in exports show that firms need to improve their capacity to thrive in highly competitive markets. African firms have been trying to diversify their exports, but only 18% of the continent's new exporters survive after their third year compared to 22% of exporters in other developing countries. Several firm-level factors prevent African firms from innovating and scaling up.

These changes imply that African countries cannot replicate past approaches to industrialisation, due to different contexts. No unique model of country-level transformation exists. The pathways of productive transformation depend on many factors, which play out differently in diverse countries and sectors and according to varying historic and global economic contexts. For example, manufacturing increasingly depends on services and other sectors such as information and communications technology (ICT), marketing and transport, and distribution. Services counted for 40-42% of the value addition in these sectors in 2015 in Egypt, Ethiopia and Kenya (Figure 3). Globally, services support functions make up between 25% and 60% of employment in manufacturing firms. Governments should thus focus on strategic value chains and not exclusively on manufacturing.

Figure 3. **Services value-added contents in total export of manufacturing, mining and agricultural products in nine African countries**



Note: Total export of "manufacturing, mining and agricultural products" defined as ISIC codes D01 to 03 (agriculture) + codes D05 to 09 (mining) + codes D10 to 33 (manufacturing).

Source: Authors' calculations of preliminary results based on the underlying data sources of OECD Inter-Country Input Output System for the 2018 TiVA indicators.

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Time to act: A call for proactive and co-ordinated productive transformation strategies

Accelerating the development of Africa's productive sectors is critical to meet the continent's objectives laid out in several on-going pan-African initiatives (Kouassi, 2015a). The African Union through Agenda 2063 envisions transforming the structure of African economies in order to create strong, robust and inclusive growth, generating jobs and opportunities for all. The entry into force and operation of the African Continental Free Trade Area (AfCFTA) in 2019 marks the strong commitment by African leaders towards productive transformation (see Table 2). Together with other pan-African initiatives such as the Single African Air Transport Market and Africa's single passport, these initiatives emphasise the importance of industrialisation for a sustainable economic transformation.

Table 2. **Ten ongoing continental initiatives for Africa's industrialisation**

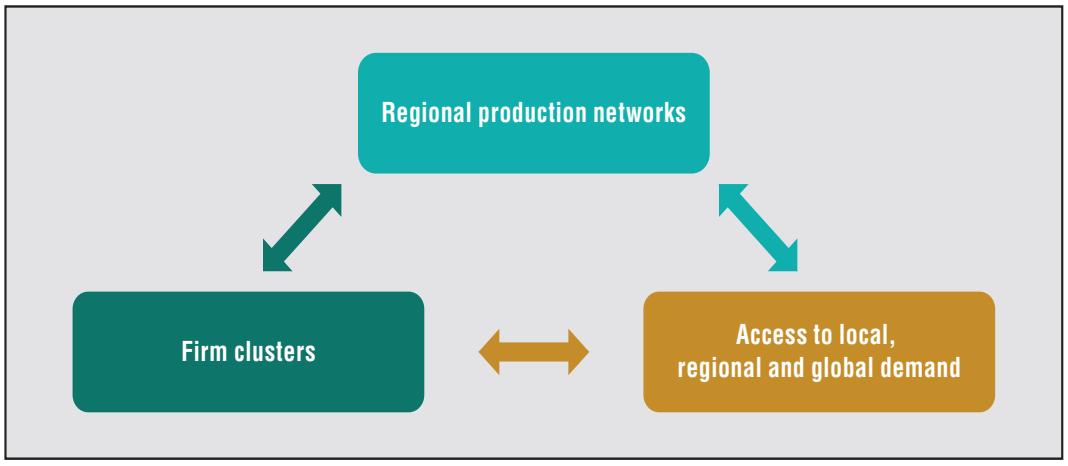
	Ongoing continental initiatives (list not exhaustive)	Key institutions	Timeframe
1	Agenda 2063 Aspiration 1: "A Prosperous Africa Based on Inclusive Growth and Sustainable Development"	AUC	2013-63
2	AU Action Plan for the Accelerated Industrial Development of Africa (AIDA)	AUC	2008-ongoing
3	African Continental Free Trade Area	AUC	2019-ongoing
4	The United Nations Third Industrial Development Decade for Africa (IDDA III)	UNIDO	2016-25
5	Programme for Infrastructure Development in Africa (PIDA)	AUC, NEPAD, AfDB, ECA	2012-40
6	The Science, Technology and Innovation Strategy for Africa 2024 (STISA)	AUC	2014-24
7	The African Agribusiness and Agro-industries Development Initiative (3ADI)	FAO, IFAD, UNIDO	2010-20
8	Comprehensive Africa Agriculture Development Programme (CAADP)	AUC, NEPAD	2003-ongoing
9	The Africa Mining Vision	AUC	2009-ongoing
10	The African Productive Capacity Initiative (APCI)	UNIDO	2003-ongoing

Note: AUC – African Union Commission; UNIDO – United Nations Industrial Development Organization; NEPAD – New Economic Partnership for Africa's Development; AfDB – African Development Bank; ECA – United Nations Economic Commission for Africa; FAO – United Nations Food and Agriculture Organization; IFAD – International Fund for Agricultural Development.

The complexity of supporting productive transformation requires a systemic strategy. Africa's productive firms must connect to the continent's growing regional demand. This will enable them to take advantage of the expanding consumer base to which the AfCFTA will ease access. The challenge here is not only to eliminate tariffs, co-ordinate customs procedures at the regional level, and improve the environment to create and grow businesses. Most firms, especially African micro, small and medium-sized enterprises, may not be able to reap the benefits of AfCFTA's reduced tariffs and larger market size without overcoming internal barriers on firms' capability and external barriers such as excessive transportation costs, barriers to cross-border investment and other non-tariff barriers.

This systemic approach to productive transformation in Africa entails focusing on three sets of policies: i) developing strategic clusters of firms; ii) facilitating regional production networks and (iii) enhancing firms' abilities to thrive in new markets. These policies aim to improve African firms' capabilities, notably their capacity to anticipate future trends, adapt to changing market conditions, be aware of and upgrade their potential, and form linkages with each other (Primi, 2016).

Figure 4. **Three interrelated sets of policies to support African firms in productive transformation**



Source: Authors' elaboration.

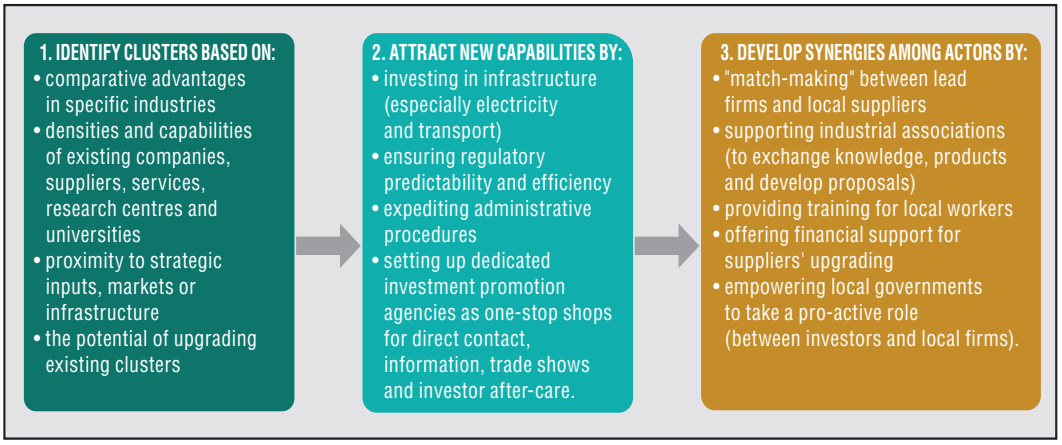
The scale and the cross-cutting nature of the challenges for African firms call for co-ordinated policies among African governments. For example, an infrastructure gap estimated at 3.1-6.9% of GDP a year remains a major impediment to private sector development in Africa (Ashiagbor et al., 2018). Closing this gap requires sustained and long-term solutions, including common approaches to domestic resource mobilisation. Réné Kouassi (2008, 2015a and 2015b) highlighted the importance of co-ordinated strategies at the national and continental levels. Successful approaches are inclusive and enjoy strong participation and ownership by national, regional and local actors. The success of such strategies also depends on the transformative leadership from both public and private actors and requires strengthening the capacity of both sectors. Such capacity building can be done progressively over time (ACBF, 2019).

Focus on clusters of firms: Provide business services to improve specialisation, linkages and skills

Clusters can be used strategically to develop an economy's comparative advantages (see Chapters 2-6 showing the comparative advantages for each region). Clusters enable resource-constrained governments to make the most of their assets by investing in a targeted place, instead of dispersing them. In this process, countries can approach the global technology frontier by attracting FDI and enabling technology transfer. The relatively higher density of companies, suppliers, service providers and associated institutions in a cluster can lead to higher spill-overs and knowledge transfers, further increasing policy impact. As the economist Alfred Marshall said, the mysteries of trade are "as it were in the air" in industrial districts.

Policy makers can follow a three-step approach to building effective clusters (Figure 5). African governments have made considerable strides in the first two steps of identifying better location for clusters and attracting new capabilities through FDI. To ensure long-term impact on productive transformation, African policy makers need to pay more attention to creating linkages among actors in these clusters. Knowledge transfer requires using higher local capabilities in targeted sectors that have comparative advantages.

Figure 5. **Three steps toward building effective clusters**



Source: Authors' elaboration.

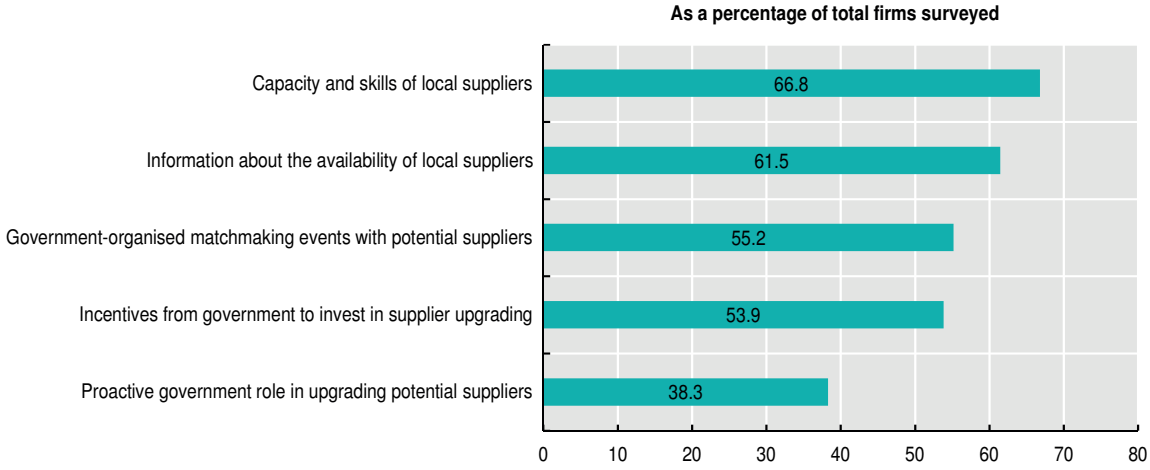
In the first step, clusters' success depends on the strategic choice of their location with respect to the country's comparative advantage. It requires a critical mass of interdependent firms and actors based on their specialisation, composition and development stage, the intensity of existing linkages, and the ability to create inclusive jobs. In contrast, several past special economic zones in Central Africa and West Africa turned into "cathedrals in the desert": they were located in remote areas without the necessary supporting conditions.

In the second step, governments must attract leading firms into clusters. African countries are becoming more successful at this. Recent clusters such as Tangier-Med (Morocco), Eastern Industry Zone and the Hawassa Industrial Park (Ethiopia), and the Kigali Special Economic Zone (KSEZ, Rwanda) have attracted world-class multinationals in sectors ranging from automotive and aeronautics manufacturing to textile, garments and shoe production. For example, firms moving into the KSEZ are associated with a 206% increase in sales, a 201% increase in value added and a further 18% increase in the number of permanent employees compared to similar firms that did not move there.

Focusing on the basics is the most important factor to attract FDI, by ensuring stability and access to business services. In these clusters, governments are actively providing access to quality infrastructure (especially electricity and road transport) and successfully creating regulations, such as custom procedures, taxation and business permits. Domestic political and macroeconomic stability and the dependability of the regulatory environment rank among the top four determinants of FDI inflows. On the contrary, low tax rates and low labour costs are not enough to attract international investors; globally, they rank as the seventh and eighth motivations out of ten.

Access to direct business services also boosts local suppliers' capabilities to ensure linkages. Specific interventions can help local firms upgrade their capacities in producing intermediate goods and services for larger firms, domestically and internationally. In Ethiopia, Bole Lemi Phase-I Industrial Park organises trade shows for potential buyers and suppliers to help them understand each other's opportunities, capacities and demands. It also provides a matching grant of up to 60% for SMEs to invest in their operation and upgrade.

Figure 6. **What matters for foreign investment firms to source from local suppliers**



Note: The total sample of the survey includes 750 multinational investors and corporate executives. The percentages represent respondents who answered "important" or "critically important" to the question "How important are the capabilities of local firms to act as suppliers in your decision to invest in developing countries?"

Source: Authors' calculations based on World Bank (2017), *Global Investment Competitiveness Report: Foreign investor Perspectives and Policy Implications*.

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Stronger involvement across different government levels can help identify new activities inside clusters and improve their implementation. In Ethiopia's Eastern Industrial Zone and the Hawassa Industrial Park, the lack of autonomy prevented their management from adopting quick reforms and purchasing essential tools and equipment for maintenance. In contrast, municipal governments in China and Viet Nam work closely with firms and investors in SEZs to match investment in infrastructure and skills with their needs. Local governments can play a match-making role between lead firms, local suppliers and other stakeholders such as research institutions, labour associations and investors. South Africa's Durban government funded official industrial associations in the apparel and automotive sectors, which led to information exchanges and cost-saving synergies, for example in training workers.

Targeted support for SMEs and innovative skill policies to ensure inclusive productive transformation

African SMEs face varying needs. Twenty-three per cent of the continent's SMEs cite access to finance as the most binding constraint to their businesses. This share is almost double that for large African firms with more than 100 employees (13%). However, the three different types of African small growing businesses (SGBs)[1] have distinct financing needs, depending on their growth and innovation profile (see Table 3):

1. **High-growth ventures** are SGBs seeking disruptive business models and targeting large markets. While often accounting for less than 10% of SGBs in developing countries, high-growth ventures can disproportionately contribute to the economy through their high growth potential and innovation. They usually require staged "risk capital investments", connected networks of investors, highly-skilled workers and infrastructure.
2. **Dynamic enterprises** deploy existing products or proven business models as they seek to grow through specialisation in niche markets, market extension or step-by-step innovations. Their growth and scale potential is moderate and depends on their access to markets. These firms often face the "missing middle" financing gap, which means they are too big to qualify for microfinance loans but too small

or risky for traditional bank lending, while they lack the growth, return and exit potential for venture capital funds.

3. **Livelihood-sustaining enterprises** are often small-scale entities maintaining a source of income for an individual family. They tend to replicate existing business models, serving local markets or value chains. Their financial needs depend on short-term working capital. These firms become better integrated thanks to the diffusion of ICT and to urbanisation. This type of firm does not include subsistence-driven micro-enterprises that have limited growth prospects.

Table 3. **Three types of small growing businesses in Africa, their specific needs and policy approaches**

Type of small growing business	Examples of specific needs	Potential policy approaches
High-growth ventures with disruptive business models and very high growth potential	- Highly specialised skills and embedded supporting infrastructure (e.g. investors, incubators, accelerators) - Staged risk capitals	- Focus on supporting the business ecosystem through legal framework on competition, standards, intellectual property rights, among others - Invest in science, technology, engineering and mathematics (STEM) education, technical and vocational training, and skills
Dynamic and niche enterprises with moderate growth potential	- Difficulty to access formal firm financing, particularly medium- to long-term loans - Small market sizes, limited to specific niches - Weak management skills	- Facilitate access to markets - Support quality certification and quality upgrading - Offer individualised consulting programmes - Enhance the variety of credit channels available (e.g. asset-backed lending, credit guarantee schemes, micro-equity)
Livelihood-sustaining, small-scale enterprises serving local markets	- Short-term working capital - Weak organisational capabilities	- Adopt reskilling policy to help the less competitive entrepreneurs enter the labour market - Provide basic management training - Improve financial inclusion through micro-loans

Addressing the new skill demands also require policies to develop stronger public-private alliances, encourage innovative training methods and foster intra-Africa talent mobility:

1. Public and private actors can co-operate further in developing curricula, specific courses and training and in matching workers with firms. In Kenya, Generation Kenya is an intensive training programme that works with 300 employers and 30 public technical and vocational education and training institutions to re-train graduates through intensive boot camp-style training.
2. Digitalisation has opened up the possibility to provide high quality training on a large scale. In rural Niger, mobile phone-based training within the *Project Alphabétisation de Base par Cellulaire* (Basic Cellular Literacy Project) increased adults' writing and math test scores by 20-25% higher than the standard adult literacy and numeracy programme.
3. Talented Africans need to be able to easily move across the continent to meet the skill shortage. According to the Africa Visa Openness Index, African citizens still needed a visa to travel to 51% of the other African countries in 2017, down from 54% in 2016.

Focus on regional production networks: Strengthen value chains, develop norms and co-ordinate investment

Regional linkages are key to generating economies of scale between African countries, rather than a competitive zero-sum game. Taken individually, most African countries may not offer sufficiently large economies of scale and enough fundamentals to attract as much FDI as their global competitors. For example, Ethiopia's total exports of textile and

clothing products increased to USD 235 million in 2017, which makes it the fifth largest export; however, it hardly competes with Bangladesh at USD 37 billion. African countries will have to think globally and act regionally to generate greater scale.

Regional value chains have much scope for growth since regional sourcing remains significantly weak. For example, African producers only source 12.9% of their inputs from within the region, compared to Southeast Asia's 21.6%. The share of intra-Africa value addition in exports is highest in East Africa at 25%, driven by the development of the East African Community since 2000. In contrast, the share of intra-Africa value addition only accounts for 4% of value added in exports from North Africa.

Several African regional economic communities are working to strengthen strategic regional value chains. Most notably, the Action Plan for the SADC's Industrialization Strategy prioritises six key clusters for regional value chain development: agro-processing, minerals and beneficiation, pharmaceuticals, consumer goods, automobiles, and modern services. The action plan identified and costed specific projects to better align and carry out existing strategies (e.g. Industrialisation Upgrading and Modernisation Programme and Minerals Beneficiation Strategy), develop technical skills (e.g. SADC Centres of Excellence), and address service trade. Implementation of the action plan has been slow, partly due to political uncertainty and uneven commitment since the strategy was approved.

Strong benchmarking and monitoring can help sustain the political commitment to implement regional strategies. Several good examples exist on the continent:

- The East African Community's (EAC) Common Market scorecard tracks member countries' progress in removing legislative and regulatory restrictions to the movement of capital, services and goods.
- The SADC is monitoring the implementation of its Investment Policy Framework through a number of indicators based both on a framework of laws and conditions and on investment outcomes and development benefits.

Regional commodity exchanges can help bringing smallholder producers together and linking them to regional value chains. They can reduce costs associated with identifying market outlets, storage, inspecting product quality and finding buyers or sellers. For instance, thanks to a partnership with several financing institutions, farmers can deposit their cereals in a warehouse of the East African Exchange (EAX) and use the receipt given by the exchange as collateral for loans of up to 75% of the produce value. Since EAX's creation, farmers have accessed USD 4.7 million to improve their agricultural enterprises. However, the EAX's trade volumes remain limited and mostly concentrated in Rwanda for the moment. Over the medium term, increased co-operation and co-ordination among member countries can expand the exchange's coverage, increase the volume of commodities traded and boost sufficient liquidity in the market.

Building on local specificities can help African entrepreneurs to develop new niche products and markets. Product differentiation, quality upgrading and certification are essential for value addition in most agricultural value chains. Quality grading systems, labelling and certification can help producing countries move beyond traditional commodity trade on global markets for high-value crops (e.g. coffee, tea, cocoa), increase earnings from exports and raise resilience to price shocks. Co-operation among small producers through formal and informal structures can also help them become more productive and upgrade to higher value-added activities (Ralandison, Milliot and Harison, 2018). Partnerships between public research institutions and local firms can help identify new niches. For example, the Ghana Centre for Scientific Research into Plant Medicine partnered with Kasapreko, a local firm, to introduce Alomo Bitters (an herbal-based

alcoholic drink) which became a commercial success in Ghana and other markets in West Africa.

African policy makers can attract higher FDI quality and gain new capabilities by identifying their key selling points for each type of FDI. Between 2013 and 2017, total FDI inflows to Africa amounted to USD 51.0 billion a year and were mainly directed to Southern Africa (USD 12.5 billion a year), North Africa (USD 12.0 billion a year) and West Africa (USD 11.6 billion a year). FDI can fall into four categories based on investors' motivations: market seeking, efficiency seeking, natural resource seeking and strategic asset seeking. In recent years, investment trends have shifted to move from resource-extraction FDI to market-seeking FDI. The latter motif attracted 53.4% of new FDI projects to Africa in 2013-17. By redefining their selling points for each type of FDI, countries can better attract investments that can readily work with the local workforce and local firms.

FDI strategies can be better co-ordinated at regional, national and local government levels to enable local enterprises to gain new capabilities. In a globalised world where distance is less a barrier, the landscape of competition between cities for FDI is not just local, national or regional but global. For example, no African city belongs to Johannesburg's top five competitors (Bogota, Chicago, Istanbul, Delhi and Buenos Aires). The main competitors for FDI for Cairo are also outside the continent (Al Manamah, Vilnius, Lima, Kiev and Riyadh). Only Abidjan counts three African cities among its top five competitors (Kampala, Kigali and Dar es Salaam), followed by two non-African cities (Vientiane and Lahore).

Regional co-operation is essential to avoid a "competitiveness race" that would lead to lower welfare for host countries. For example, the SADC has called for wide collaboration on tax incentives to reinforce regional co-ordinated actions and respond to the issue of harmful tax competition. Establishing a programme of tax regulatory convergence could gradually harmonise laws, align national regulations or create regional standards.

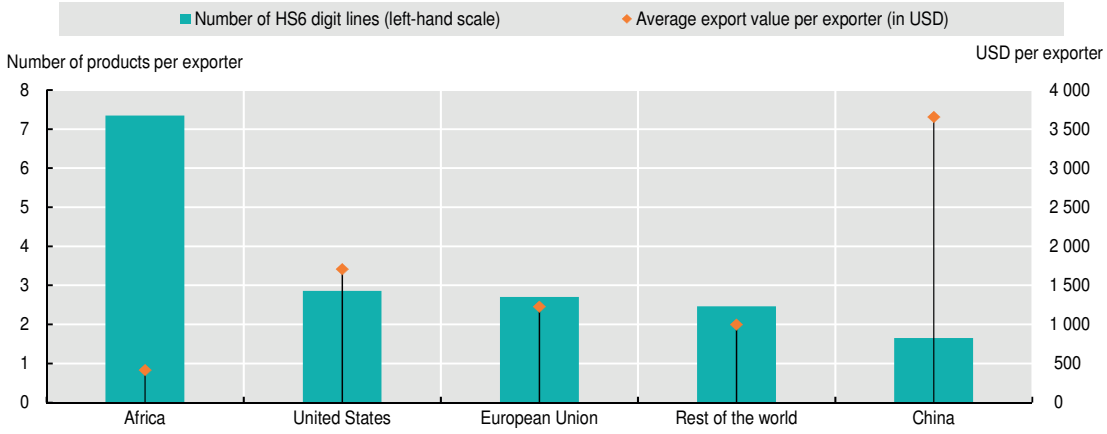
Focus on firms' ability to thrive on growing demand: Target specific markets, improve trade facilitation and remove non-tariff barriers to trade

Export strategies need to differentiate between the challenges faced by firms tapping intra-African and global markets. African exporters are segmented by destination markets. Export strategies must better target those different markets. African firms' exports to intra-African markets are 4.5 times more diverse than those to extra-African markets but have a value 8.5 times lower than exports to China (Figure 7). These differences reflect various selection processes that attract and retain different types of firms in diverse markets. They also call for targeted approaches to tapping export markets, rather than a "one-size-fits-all" policy approach to exports promotion. The set of policy interventions can differ, both in scope and tools:

- **Intra-African trade is key to diversify export products and destinations and to accumulate new capabilities, particularly for SMEs.** Producing for regional markets allows SMEs to scale up their supply capacity and improve their marketing and distribution process in an environment they know better. Larger firms can also benefit from larger economies of scale and scope. For example, Senegalese firms are 8% more likely to upgrade to more sophisticated products when they export to regional market than when exporting to OECD markets. Policy interventions should aim to make trade easier by reducing uncertainties linked to market access.
- **Global trade remains important for export growth as well as for technology transfer.** Global trade requires more fixed investment and larger scale operations. Therefore,

it tends to remain more accessible to larger or already-established African firms. Governments could boost firms' abilities to anticipate and respond to changes in standards and consumer demand by providing information on destination markets, facilitating trade financing solutions and promoting SME branding and access to export markets via e-commerce.

Figure 7. **Export values to African and other markets per exporters in Africa**



Note: Weighted for the number of exporters per origin country.
Source: Authors' calculations based on World Bank (2019b), *Exporter Dynamic Database*.
StatLink https://doi.org/10.1787/888933966675

Regional policies can achieve some "quick wins" by reducing administrative procedures and by promoting and streamlining logistics services. Beyond tariffs, fast and efficient customs and port procedures are essential to the smooth operation of supply chains. Harmonising transport procedures and regulations, simplifying customs procedures and improving freight services and warehousing management through competition in regional logistics services could reduce transit costs. For example, the implementation of the EAC's Single Customs Territory significantly reduced transit times and cost for goods entering the EAC from Mombasa, by approximately 50% and 30%, respectively.

African policy makers need to further promote the adoption of proprietary, industrial and commercial standards by local firms. African countries filed only as many ISO certifications as Malaysia in 2015, despite tripling them since 2000. Evidence from firms in 41 African countries shows that having a certificate is associated with 77% higher sales per employees for manufacturing firms and 55% higher sales per employees for service firms. Governments can support the development of institutions for accreditation, testing and calibration depending on the availability of existing capabilities in these domains and the projected needs of the productive system. Matching grants or low-cost loans may also help firms pay off the cost of certification: adopting and maintaining ISO 14001 could cost between USD 7 000 and USD 16 000. At the regional level, governments can harmonise regional standards and accelerate the implementation of mutual recognition agreements as seen in the Common Market for Eastern and Southern Africa, the EAC, the Economic Community of West African States and the SADC.

In the medium term, improving regional infrastructure can reduce costs for firms and boost trade and economic growth across the continent. Energy transmission and generation, roads, ports, and payment systems are particularly important. In a fully integrated energy supply scenario, power pools could create savings of USD 41 billion per year by 2040. Additionally, the levelled cost of energy would lead to savings of between 6% (in Southern Africa) and 10% (in East Africa) for end-users, equivalent to nearly

USD 10 billion per year. The poor quality of Africa's transport infrastructure accounts for 40% of logistics costs in coastal countries and 60% in landlocked countries. Adopting a regional approach to infrastructure reform would help overcome the inefficiencies that emerge as formal trade barriers fall (e.g. tariffs and administrative procedures).

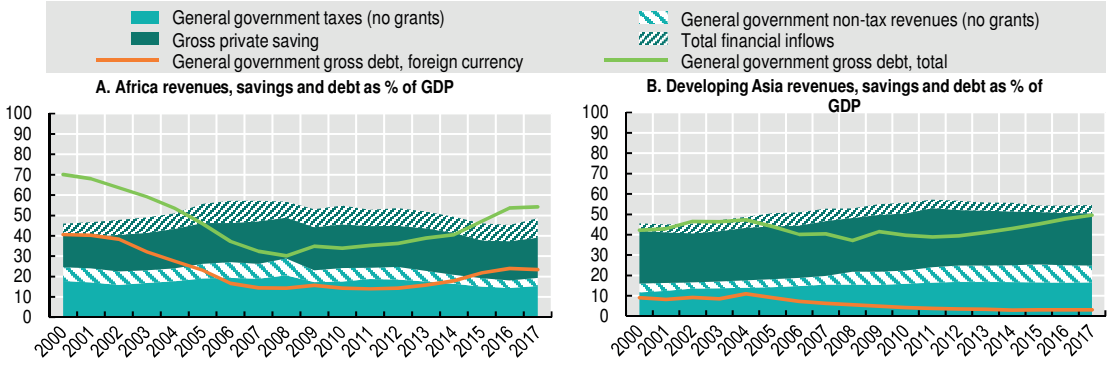
For intra-African exporters, removing non-tariff barriers and trade facilitation can reduce uncertainties for exporters, boosting regional trade and multiplying gains. A significant share of trade costs faced by firms depends on non-tariff barriers such as administrative barriers and the non-consistent application of standards and regulations. Removing non-tariff barriers to intra-African trade can multiply the welfare gains by 5, from 0.65% to 3.15% of GDP. Investing in cross-border, multimodal and holistic infrastructure can push regional trade and integration. Policy makers can focus on dynamic regional corridors to invest resources and attract investment, as seen with the LAPSSET Corridor (Kenya-Ethiopia), the Maputo Development Corridor (Mozambique-South Africa) and the Walvis Bay Corridor (five SADC countries).

Financing policies for productive transformation requires mobilising new resources

Public spending on its own will not sustain productive investment and capital accumulation in the medium term. The number of low-income countries in debt distress or facing a high risk of it increased from 7 in 2013 to 16 in 2018. Forty-three per cent of the debt accumulated by African governments is in a foreign currency, compared to 6.3% in developing Asia (Figure 8). The share of Africa's debts held by private banks and bondholders has also increased, while the relatively shorter maturities and higher interest rates of these debts may not match the needs of long-term project financing.

Therefore, maintaining Africa's growth momentum will also require mobilising more resources from domestic savings and remittances. Private savings amount to USD 431.5 billion in 2017, representing 19.7% of GDP compared to 25.5% in Asia. However, policies need to encourage investment in activities that increase productivity and create jobs (Table 4).

Figure 8. **Revenues, savings and debt in Africa and developing Asia**



Source: Authors' calculations based on IMF (2019), *World Economic Outlook* (database).
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African governments can simultaneously raise public revenues and encourage private sector growth if they pursue tax policies consistent with productive transformation. Such policies will find a balance between increasing tax collection and having a positive impact on the business environment.

- African countries generally have relied heavily on value added tax (VAT) reforms to increase their tax levels. Increases in VAT revenues on average accounted for 32%

of total increases in tax revenues from 2006 to 2016 for the 21 countries featured in *Revenue Statistics in Africa 2018*, and in the case of Morocco, 93%. VAT reforms require a tax regime that has the capacity to process refunds in a timely manner and prevent fraud – as experienced in Zambia.

- More focus on land value mobilisation is needed in the context of Africa's rapid urbanisation. South Africa started using computer-assisted mass appraisals for more efficient property valuations and land taxes. Improving land administration can also have benefits beyond tax collection. In Ethiopia and Rwanda, certifying ownership of agricultural land increased the propensity to invest and hence the farming land productivity. In Ethiopia, the propensity to invest in soil and water conservation measures increased by 20-30 percentage points. For Rwanda, registered households were twice as likely (10%) to invest as those whose land was not registered.
- Providing incentives for businesses and individuals to register with the government can improve public records and compliance. For example, many small and micro-enterprises that made use of South Africa's Business Linkage Centres to obtain contracts and work with large corporations began as informal businesses and then formalised later. The South African Revenue Service decreased compliance costs by 22.4% after introducing e-filing.

Table 4. **Financial flows and tax revenues to 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	16.1	46.0	46.7	46.7	52.0	50.8	52.4	56.6	53.2	41.8
		Portfolio investments	1.8	10.4	36.8	23.2	37.6	33.7	30.2	20.8	5.9	46.0
		Remittances	14.2	41.9	54.7	61.7	66.8	65.9	70.2	70.0	66.9	74.4
	Public	Official development assistance	20.5	38.8	42.8	46.5	46.4	52.0	47.9	44.9	44.1	47.0
Total foreign inflows			**52.5**	**137.1**	**181.0**	**178.2**	**202.8**	**202.4**	**200.7**	**192.4**	**170.0**	**209.1**
Tax revenues			**118.6**	**266.9**	**330.3**	**403.2**	**417.7**	**414.5**	**408.8**	**339.5**	**309.5**	**328.7**
Private savings			**130.8**	**299.1**	**423.5**	**448.5**	**475.0**	**508.0**	**516.2**	**427.3**	**418.8**	**431.5**

Productive transformation in Southern Africa

Since 2000, Southern Africa's GDP has grown at an annual average of 3.4%, which was lower than other African regions. The trend will continue, with growth for 2019-21 projected at 2.2% per year. Although Southern Africa appears to have weathered the brunt of the global financial crisis and a recovery seems to be underway, the region's two largest economies (South Africa, which represented 63% of the region's GDP in purchasing power parity in 2018, and Angola) have stagnated since 2013. This has resulted in a decline of Southern Africa's share of African GDP, from 21.7% in 2000 to 18.9% in 2017.

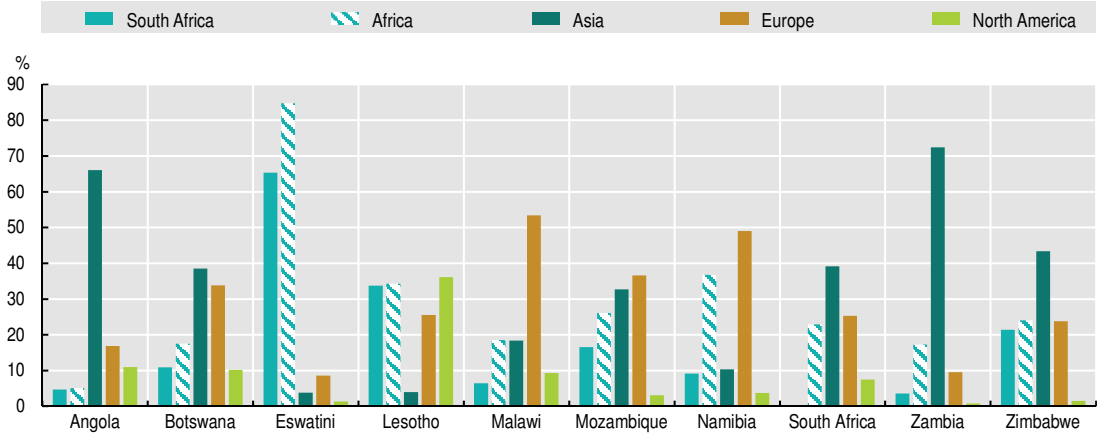
Portfolio investments have remained the largest financial inflow into Southern Africa since 2009. At USD 21 billion, portfolio investments represented 59% of total inflows to the region in 2017, ahead of official development assistance at USD 6.9 billion (19%), FDI at USD 3.8 billion (11%) and remittances at USD 3.7 billion (10%). Johannesburg attracts significant portfolio investment: the Johannesburg Stock Exchange (JSE) is Africa's largest, and its financial sector operates as a hub for pan-African investments.

The transformation of Southern Africa's economic structure has been limited. Since the 1990s, Southern Africa's average share of manufacturing value added in GDP has declined, from about 20% in 1990 to below 10% in 2017. This has resulted in loss of industrial and international competitiveness. Southern African countries have stagnated in the Competitive Industrial Performance Index, ranking on average 103 out of 138 countries. The region's impact on world production and trade has declined, due to other world regions' industrial outputs growing faster. Infrastructural deficits and a dearth of skills for maintaining the competitiveness of traditional sectors and developing new industries are the leading constraints.

Resource dependence, low value addition and few knowledge-intensive exports characterise the region's productive structure. Reliance on unprocessed natural resources is eroding Southern Africa's capacity for industrial diversification and complexity. The region's countries face the challenge of transitioning from this commodity-dependent growth path to value-adding, knowledge-intensive and industrialised economies.

Southern Africa is experiencing low intra-regional trade and a lack of linkages and of regional complementarity. South Africa is the main destination for most intra-regional exports. This results from the remaining countries in the region sharing production and export profiles similar to each other. Southern Africa incurs high overland transport costs to regional trade largely due to lack of competition and to structural constraints. Regulatory and administrative bottlenecks impose additional costs on regional trade and transportation. Southern African countries rank outside the top 100 in efficiency of customs services.

Figure 9. **Export destinations for Southern Africa, 2016**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
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Policies for productive transformation must increase productivity and competitiveness by addressing infrastructure deficits, especially in energy. The region lacks sufficient energy supply to serve increased industrial production and provide access for its growing population. Although electricity production has expanded, it remains at the same per capita level as in 2007 due to population growth (WEF/WB/AfDB, 2017). In South Africa, the state-owned power utility, Eskom, battles to meet growing energy demand and faces difficulties in servicing its debt, with coal prices having soared by about 50% in the past ten years.

The region should enhance participation in global value chains (GVCs) to help transform its economic structure. Participation in value chains can start at the regional level and evolve to the global level. Southern Africa can strengthen complementarities between its countries by creating a mechanism for financing regional public goods. It can promote linkage industries that supply the mining sector to achieve industrial and technological upgrading. The majority of Southern African countries are mineral-based economies, but they fail to link the mining industry to upstream and downstream services. Countries can learn from South Africa, which has developed mining sector linkage industries and dominates the regional mining capital equipment market.

The issue for Southern Africa is how to upgrade regional value chains and where to enter GVCs. The region's participation in GVCs has significantly increased over the course of the last decade and is greater than that of the rest of the continent. However, Southern Africa remains under-represented and asymmetrically integrated into GVCs. Except for South Africa, the countries most involved are resource-poor economies with

small populations, like Eswatini and Lesotho. Their participation mainly owes to their proximity to the regional hub, South Africa.

Table 5. **Opportunities and challenges for value chains in Southern Africa**

Value chain	Opportunities	Specific challenges to address
Agri-business (horticulture and sugar)	• The value of intra-regional trade in the agro-processing sector exceeds USD 2.5 billion and accounts for around 28% of the region's exports.	• Location of some production activities is not necessarily based on the most efficient supply chain economics for today's markets (e.g. Botswana, Namibia). • Climatic conditions, market scale and an underdeveloped input sector constraining Botswana, Eswatini, Lesotho and Namibia.
Automotives	• South Africa has a strong automotive industry. • Production of intermediary inputs already exists in the region (e.g. batteries from Botswana, car seat kits manufactured in Lesotho).	• Need to identify niches and supply at a competitive rate. • Small market size. • Mainly dependent on global demand.
Meat	• Beef is the mainstay of the agricultural sector in Botswana, Namibia and (to a lesser degree) Eswatini, as well as a significant part of the South African agricultural sector. • Botswana, Eswatini and Namibia all have abattoirs approved for exports to the European Union.	• Different veterinary zones with different veterinary statuses in Botswana, Eswatini, Namibia and South Africa, with exports only allowed from disease-free zones. • Trade barriers: Botswana's export monopoly and ban/restrictions on exports of live cattle, South African livestock import regulations, bans on animal feed exports from Zambia. • High transport costs. • Low capacity utilisation in abattoirs.
Minerals	• The majority of Southern African countries are mineral-based economies. • Value addition of mineral products in the region can create jobs and skills and increase export revenue (e.g. Diamond Trading Company Botswana). • Linkages can be created between global lead firms and the local private sector.	• Need for strong co-ordination and collaboration with the private sector. • Need to tap the region as one market for companies supplying equipment and providing services for the mineral value chain. • Inefficient business strategies, information asymmetries and low capacity in both public and private sectors.
Textiles and apparel	• Every country has some activity in the sector, although most of the region's activity is concentrated in Lesotho and South Africa.	• Access to fabric. • Lack of skills at the technical and middle management levels. • Access to finance at competitive rates. • High transport costs and lack of speed/flexibility in transport.

Source: Authors' compilation and World Bank (2016), *Factory Southern Africa? SACU in Global Value Chains*.

Southern Africa needs to fast-track the negotiation and implementation of free trade agreements which are ambitious enough to include services. Services have been growing significantly in the region and are essential for attracting private investors and for driving growth in the manufacturing sector. To this end, the SADC Development Fund could finance integrated regional transport and logistics infrastructure projects. These include transport corridors to link sea and inland ports especially for landlocked countries. SADC could also promote greater integration and harmonisation of financial and payment systems to facilitate the settlement of international trade invoices.

Policies for productive transformation and industrialisation require addressing three domains:

1. **The region needs to improve firms' productivity and competitiveness by increasing access to energy and finance, improving skills and encouraging initiatives that help SMEs.**
   - Regarding energy, the SADC Infrastructure Fund could prioritise investments in infrastructure especially electricity, emphasising generation capacity and interconnectors to the remaining non-operating countries. Until the Fund becomes fully operational, the Development Bank of Southern Africa needs support in its role as the seed financial institution.
   - Concerning access to finance for SMEs, lessons can be learnt from Namibia's SME post-loan mentorship programme. It has expanded SMEs' financial access while mitigating risk through business development services. Namibia's two major commercial banks, the Development Bank of Namibia and Bank Windhoek, provide financial access to SMEs with generous terms. The financing is linked

to a mentorship and post-loan assistance programme to improve entrepreneurs' business management skills in order to lower the risk of loan default (AfDB/OECD/UNDP, 2017). In addition, the region could implement innovative private sector-led programmes to obviate bottlenecks to financial access. JSE established the first SME-tailored trading platform in 2003. It has since seen over 120 firms listed, a quarter of which graduated to the JSE Main Board. Other stock exchanges in the region have adopted this innovation.

2. **Southern Africa should support initiatives that enhance regional complementarities by promoting regional public goods and by harmonising customs procedures and payments systems.** The Maputo Development Corridor, linking South Africa's Gauteng region to Mozambique's deep-water port in Maputo, is an example of integrated infrastructure that promotes the connectivity of rural areas. It is also multimodal, integrating road, rail and sea transport. Financial integration is taking place through the SADC Integrated Regional Electronic Settlement System, which uses the South African rand as the settlement currency. Overall in Africa, the rand increased in use from 6.3% in 2013 to 7.2% in 2017.
3. **The region must create conditions for better integration into GVCs by developing regional value chains that leverage South Africa's participation in GVCs.** This requires loosening constraints imposed by access and by technological capability. For example, Southern Africa has the latent potential to expand mining linkage industries upstream, e.g. by supplying equipment, off-road vehicles, and pumps and valves. The Action Plan for the SADC Industrialization Strategy prioritises six key clusters for regional value chain development: agro-processing, minerals and beneficiation, pharmaceuticals, consumer goods, automobiles, and modern services. The action plan identifies specific projects to better align and carry out existing strategies (e.g. Industrialisation Upgrading and Modernisation Programme and Minerals Beneficiation Strategy), develop technical skills (e.g. SADC Centres of Excellence), and address service trade. Another example is Zambia, which promoted upstream and downstream linkages in the mining industry while training the workforce through an extensive technical and vocational education programme conducted with the mining sector. Finally, Southern Africa needs to facilitate public-private alliances for deepening regional integration and develop technological capabilities through centres of excellence.

Productive transformation in Central Africa

Central Africa has experienced a positive growth dynamic since the 2000s, despite strong instability. Annual GDP growth in 2000-18 averaged 4.8%, with growth for 2019-21 projected to slow down to 3.5%. Growth in Central Africa is more volatile than that of Africa in general and is highly dependent on global economic conditions. It peaked at 11.4% in 2004 before falling to 3.7% in 2006, nearly three times less in two years. This strong instability is observed over the rest of the 2007-18 period, although with a growth cycle correlated with that of Africa in the rising and recession phases (at about 6% growth in 2013-15 followed by less than 3% in 2016-18). Exposure to external shocks is reflected in the fall of activities between 2008 and 2009, during the international financial crisis, and in 2013 with the decline in oil prices. The largest economy in purchasing power parity value is Cameroon, making up 31% of the region's GDP in 2018, followed by the Democratic Republic of Congo (DR Congo).

In 2010-17, the region received USD 48.5 billion in FDI, the lowest in Africa and about 12% of total FDI flows to the continent. FDI was the first financial inflow in 2017, followed by official development assistance at USD 5.4 billion (47%). Remittances and portfolio investments made up respectively 3.2% and 1.9% of total financial inflows.

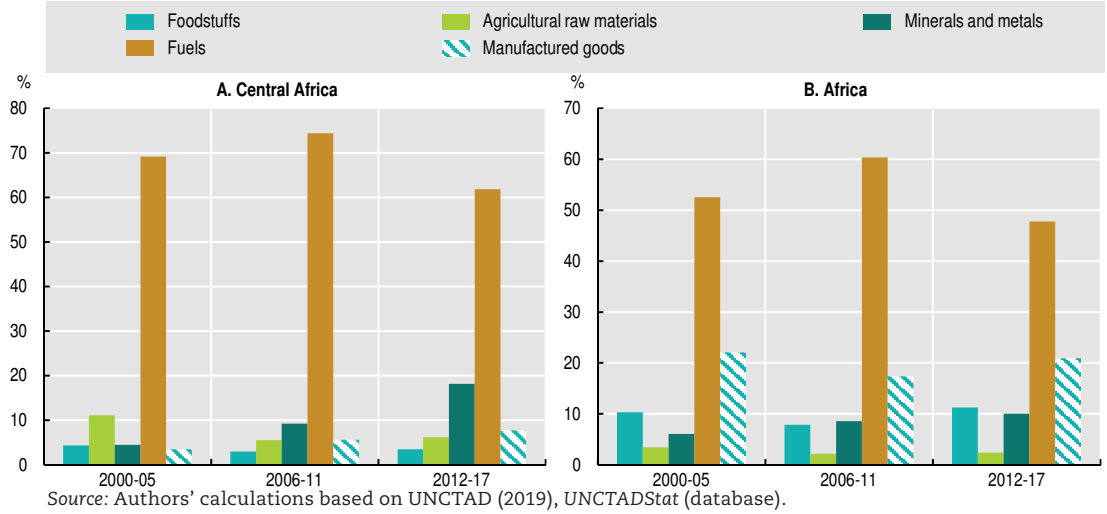
The region has experienced no major increase in manufacturing or agricultural development. Natural resources explain the positive dynamics of industry, especially

over the period 2000-12, with a contribution to GDP estimated at 45% in 2011. Since then, this share has stabilised at around 40%, with a majority of foreign operators. At the end of 2016, only four countries had a manufacturing sector representing more than 10% of GDP: DR Congo, Equatorial Guinea and Gabon at around 18% and Cameroon at 15%. Agriculture has contributed negatively to GDP growth as well as exhibiting the lowest growth rate compared to the sector in other regions. Nevertheless, at 16.1%, agriculture's share of the Central African economy remains above the African average of 15.8%. The tertiary sector accounted for 36% to 37% of GDP in 2000-13, then 42.5% in 2016 (compared with an average of 52% in Africa), exceeding the industry share. These services, however, remain of low value added, as they mainly concern retail trade.

The institutional environment and the quality of infrastructure are hindering Central Africa's productive transformation. Of all the continent's regions, Central Africa is the most lacking in basic infrastructure, particularly in electricity and transport, two elements considered by businesses as major obstacles. Electrification rates range from 83% for Gabon to only 5.6% in Chad, but the regional average is close to that for Africa at around 30%. Only 1 in 100 people own a landline telephone, compared to 3 in Africa. The creation of clusters of skills, technology and innovation requires massive public and private investments in training and research and development (R&D). The interstate universities between Cameroon and the Republic of the Congo (Congo) and the pan-African institution of the African Union are examples. Although expensive, R&D must be a priority because of its contribution towards establishing regional value chains in sectors that can exploit raw materials produced in the region (Table 6).

The level of concentration of the economies' exports remains very high, as only five products account for more than 75% of exports. Oil accounts for nearly half of these sales abroad (47.7%), followed by refined copper and copper alloys (16.4%). The region also faces a very high concentration of its trading partners. The top five markets (China, the United States, Spain, France and Italy, in that order) account for more than 60% of total exports. The productive specialisation, based on oil, is losing ground because it produces rent-generating situations that do not create value added or jobs.

Figure 10. **Share of product types in exports from Central Africa and Africa, 2000-17**



Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).

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Intra-regional trade in Central Africa does not exceed 3% of the total. All the countries of the region are members of the Economic Community of Central African States (ECCAS), a free trade area created in 1983. In addition to the structural problems common to all African regions (e.g. lack of infrastructure, high commercial tariffs and

low diversification), the weakness of regional trade can be explained by the strong dependence on raw materials and resulting low levels of complementarity. Since the raw materials are not transformed, their integration into the global economy can take place at the lowest level of the value chain (Table 6).

The region's revealed comparative advantages are mainly in low-value added products. On average, Central Africa exports more raw materials than any other region of the world. An analysis of the level of sophistication of the productive structure confirms this situation. Similarly, no country in the region has the capacity to produce goods with a high knowledge content. The Economic Complexity Index values for Cameroon (-1.65), the Congo (-1.28) and Gabon (-1.43) are well below the average for Africa (-1.02). The strong extraversion of the economies and a low level of complementarity of the exported products hinder the development of regional trade. The positive dynamics of the industrial sector are driven by the mining industries, to the detriment of manufactures.

Table 6. **Opportunities and challenges for value chains in Central Africa**

Value chain	Opportunities	Specific challenges to address
Cotton/textiles	• Major clothing brands could possibly relocate in search of cheap labour and better quality raw materials.	• Improve the textile factory in Chad and the ginning capacity in the region.
Fruits (bananas)	• The region could focus on three end products: natural beverages, dried fruit, and waste recycling into organic and natural fertiliser.	• Strengthen linkages within the value chains, collective marketing and penetration into high-value chains and improve processing techniques.
Petroleum products	• Petroleum offers production opportunities in diverse sectors (textiles, packaging, building materials, asphalting roads…). • Several refineries already exist: a more comprehensive value chain could extend to other regions and integrate Nigeria.	• Offer quality training in petrochemicals.
Wood processing	• Forest products are diverse (ayous, *okoumé*, sapelli, etc.). • A large panel of activities is possible: construction, paper pulp, furniture, energy, etc.	• Strengthen the processing capacity (sawing, debarking, and cutting trees for plywood and veneer), dominated by informal firms. • Better valorise traditional know-how. • Ensure sustainability of wood exploitation to avoid deforestation and develop sustainable ecosystems.

Transforming Central Africa's economic structure requires appropriate and foundational policies:

1. **Creating complementarities and economies of scale by integrating production capacities and building on the similarities of export profiles in the region.** Ongoing initiatives include: a regional strategy for industrialisation, private sector development and economic diversification; strategies for promoting coffee and palm oil value chains; and further initiatives on food security and rural development in the framework the Comprehensive Agriculture Development Programme for Central Africa and the Central African Cotton Initiative (AfDB, 2019). However, these efforts require strong implementation, and the results must be monitored and evaluated.
2. **Increasing access to energy in a region with enormous potential.** The region's main potential is in hydropower, but large projects such as the Inga 3 dam extension have not yet materialised. The region has also large wind and solar potential. It could draw inspiration from the strengthening of the Noor solar power plant in Morocco. However, political instability and lack of transparency have hampered investment and loans in the energy sector as guarantees for long-term capital investment are not always met. At the regional level, the Central African Economic and Monetary Community (CEMAC) recently established a Central African Energy Policy for 2035 to ensure reliable, efficient energy infrastructure for the region's physical integration (AfDB, 2019). The Central African Energy Pool aims to create a regional energy market through physical connections (e.g. transmission lines) and

harmonised regulations. Achievements so far include a Central African Electricity Procurement Code and a development fund for the region's electricity sector.

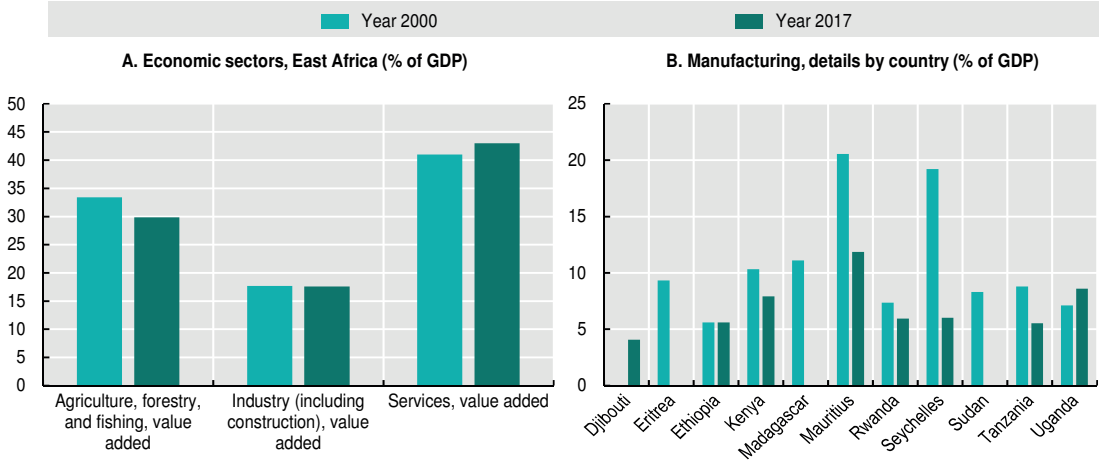
3. **Strengthening human capital and adapting training to the labour market.** The mismatch between supply and demand in the labour market results in very different rates of unemployment depending on the level of education. A platform could allow private operators to express their training needs, which would then be taken into account in programme development. This could be done in a concerted framework with the African Union through its Science, Technology and Innovation Strategy for Africa 2024, or the Continental Strategy for Technical and Vocational Education and Training (TVET) to Foster Youth Employment. An ambitious education policy at more foundational level for Central Africa could entail mandatory schooling to the age of 16 as well as specific provisions to encourage education for girls. In DR Congo for example, the 2016-25 sectoral strategy on education and training (*Stratégie sectorielle de l'éducation et de la formation*) increases mandatory schooling to eight years. Strengthening human capital also rests on the free movement of persons. In March 2019, the six member countries of the CEMAC adopted a common emigration, immigration and border protection policy, aimed in particular at speeding up the abolition of visas for all citizens circulating in the bloc.
4. **Developing regional standards.** Central African countries face difficulties harmonising their regional norms because of a lack of regional institutions. Only three countries have an operational national standards body: Cameroon, DR Congo and Gabon, while the Central African Republic and the Congo are setting up one (UNIDO, 2014). Too many local standards setting institutions exist in the region. This creates difficulties for SMEs in meeting quality standards, because of their high costs and long procedures. Streamlining certification requirements and regulations, notably in the areas of consumer health, phyto-sanitary and technical standards could promote intra-regional trade and the quality of exports.
5. **Creating physical and digital infrastructure.**
   - Massive investment in transport infrastructure would boost private sector activity. The region can benefit from continental initiatives such as the Programme for Infrastructure Development in Africa. For example, the planned Kinshasa-Brazzaville Bridge road and rail project could alleviate logistic bottlenecks on the Congo River and potentially accommodate 3 million passengers and 2 million tonnes of freight annually by 2025. Trade corridors in the region are still at an infant stage, yet ECCAS is working towards developing multimodal corridors to boost transport connectivity (AfDB, 2019). One of these is the Central Corridor, which has lowered the cost of linking Central Africa to the Indian Ocean by connecting DR Congo to the port of Dar es Salaam (Tanzania) by road, rail and inland waterways through Burundi, Rwanda and Uganda (CCTTFA, 2019).
   - Moving ahead with the ECCAS plans to harmonise regulations and develop a regional fibre optic network would close the digital connectivity gap with the rest of Africa. Central Africa's level of Internet usage remains low, as well as access to the broadband network. The penetration rate of mobile telephony is higher, at 76% against almost 96% at continental level. Pursuing mobile phone technology has the potential to offer the most immediate results in terms of digital inclusion as well as provision of services relying on mobile platforms. Key regional initiatives to pursue include: enacting model laws on telecoms, ICT and cybersecurity as well as a regulatory framework for cross-border interconnections; attracting foreign investors in ICT infrastructure and security (following the Brazzaville Declaration); and creating regional Internet exchange points (AfDB, 2019).

Productive transformation in East Africa

East Africa has sustained a 5.2% GDP growth in 2000-18 and is projected to maintain a similar growth rate (4.9%) until 2021. This growth is the second highest and the most stable among the five African regions, outpacing the African average by over half a percentage point. This more stable growth owes in great part to the region's relatively low dependence on commodities, rapidly expanding exports, growing local demand and important public investment. At the same time, growth remains uneven across countries. A recent moderation (to approximately 5%) is attributable to a drought-induced decline in agricultural output in 2016 for Kenya, Rwanda and Uganda and political instability in Somalia and South Sudan. The largest economy is Ethiopia, making up 22% of the regional GDP in purchasing power parity in 2018.

Over the past two decades, sectorial contribution to GDP has changed. Services have become the largest sector of the regional economy, representing 43% of GDP in 2017. Agriculture stands at 30% of GDP, approximately where it was at the turn of the century. Although manufacturing has been growing in absolute terms, its share of total value added has declined by four percentage points since 2000, now at 7% of GDP (Figure 11).

Figure 11. **Sectoral share of gross domestic product in East Africa**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
StatLink https://doi.org/10.1787/888933966751

Governments have introduced reforms to promote integration and facilitate trade. However, the business environment, as a whole, needs to improve. Overlapping memberships of different regional economic communities by individual countries prevent deeper integration. Notable exceptions in terms of the business environment are Mauritius and Rwanda, which rank respectively 20th and 29th globally in the World Bank Doing Business Index. Conversely, Eritrea, Somalia and South Sudan rank in the bottom ten globally. These issues will continue to limit higher levels of intra-regional trade and the emergence of regional value chains.

Over the past two decades, exports' share of GDP declined from 19% to 14%, despite the growth of services. Services now account for over 50% of total exports. Major export sectors for services in the region include tourism, transport, ICT and finance. The shares of exports from agriculture and minerals have increased over time, accounting for 26% and 6%, respectively, in 2017. On the other hand, manufacturing exports fell from 20% a decade ago to 12% in 2017, despite the efforts that East African countries are putting into growing their industrial base. Emerging economies (i.e. China, India and countries

from the Association of Southeast Asian Nations) have become more prominent trading partners. In 2017, these countries represented 33.6% of total trade with some of East Africa's major economies (EAC region, Ethiopia and Mauritius), up from 12.8% in 2001. As a comparison, the European Union decreased from 32.9% in 2001 to 16.3% in 2017.

Countries are gaining a revealed comparative advantage (RCA) in similar sectors and goods, limiting the role intra-regional trade can play in export diversification. The similarities in RCA and productive inputs such as in glass and metal manufacturing as well as stones processing impede countries from moving to higher levels of economic complexity. Countries in the region do not produce complex goods and, with the exception of Uganda, are not moving towards higher levels of complexity. 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 lag behind in complexity compared to most other countries. Despite the region's robust economic growth, its complexity value is not catching up with other emerging countries.

The region scores low on global competitiveness indicators, ranking towards the bottom of global indices for competitiveness, human capital and innovation. Mauritius is the only country in the region ranking above the global average, with a score of 63.7% in 2018. Mauritius' advancement is driven by increasing openness, a business-friendly fiscal policy, and improvements in governance and institutions' service delivery. On indicators for corruption, most East African countries also score poorly and in some cases are even regressing (such as Eritrea, Madagascar, Somalia, Sudan and Uganda). A child born in 2018 will be only 43% as productive as he or she would be 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%. On innovation, East African countries perform only slightly better than the continental average. On average, the region spent 0.27% of GDP annually on R&D in 2000-16, still well below the Agenda 2063 target of 1%.

East African countries should continue to implement reforms that increase private sector competitiveness and support private sector growth. At a national level, continued reform and support to business are required, taking example from different best practices in the region such as Mauritius or Rwanda. At the East African regional level, governments should target projects that allow for greater economies of scale and that improve the regional competitiveness. For example, the regional dimension should include stronger integration to lower the costs and time to transport goods across the region as with the East African Community's Single Customs Territory. Countries can better co-operate to achieve policy complementarity and coherence between national and regional policies. The implementation of the EAC's Single Customs Territory significantly reduced transit times and costs for goods entering the EAC from Mombasa, by approximately 50% and 30%, respectively. Finally, future growth through high productive sectors, including manufacturing, will be complemented by so-called industries without smokestacks, such as ICT and business services, agri-business and horticulture (Table 7).

Increased competitiveness at national and regional levels can be achieved by:

1. **Improving the business environment and offering targeted firm level support.** A number of countries in the region are far behind on the global Doing Business Index, while others are among the strongest globally. Improving the business environment is an adaptive path, and governments should continually look for innovative approaches to staying at the frontier of business reform. A powerful

engine of capability building is the promotion of firm-to-firm interactions in supply chains. Lead firms usually apply stringent international standards in their sourcing, thereby exposing local producers to export grade standards. The Kigali Special Economic Zone (KSEZ) has contributed to Rwanda's economic development since its creation in 2013. Firms moving into the KSEZ are associated with a 206% increase in sales, a 201% increase in value added and a further 18% increase in the number of permanent employees compared to similar firms that did not move there. Better infrastructure is also key to improving business activity in the region. In the EAC, augmenting investments in road infrastructure by 10% could increase exports of manufactured goods by almost 37%.

2. **Increasing investment in human capital and promoting R&D and the adoption of new technologies.** 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. The growing role of technology in business means that an increasing number of jobs (even low-skilled ones) require more advanced cognitive skills. Countries' private and public sectors need to work both in partnership and individually to provide the health and educative facilities required for a healthy, skilled and diverse pool of workers. Additionally, mutual recognition agreements (MRAs) covering academic qualifications and professional services enhance human capital mobility. For example, the EAC has MRAs in place which recognise the validity of academic titles throughout the region and allow citizens to practice regulated professions in other countries.
3. **Focusing on regional co-operation as a means to generating efficiency and competitiveness gains.** Regional co-operation in East Africa holds potential for generating efficiency gains at a national level as well as for significant improvements in competitiveness. Enhancing regional competitiveness through targeted projects beyond trade and market integration allows countries to co-operate on practical interventions without the need to deepen the integration. Practical examples include:
   - Free movement of persons in the EAC: all but one country have visa-free travel regimes for all nationals of the bloc. Free movement of persons increased African travel to Rwanda by 22% and grew its bilateral trade with Uganda and Kenya by 50%.
   - Introducing a single East Africa tourist visa: this would boost the potential for tourists to travel to different countries in the region.
   - The EAC Single Customs Territory and the introduction of one-stop border posts: since November 2018, the EAC has fully operationalised and trained personnel at 13 OSBPs, with reduced transit times and costs.
   - Regulating fees for cross-border mobile calls and mobile money transactions.
   - The simplified trade regimes of the Common Market for Eastern and Southern Africa (COMESA) and EAC for small scale traders.
   - The East African Commodity Exchange: the Exchange can help integrate smallholder farmers into agricultural value chains.

Table 7. **Opportunities and challenges for value chains in East Africa**

Value chain	Opportunities	Specific challenges to address
Agri-business	• Value addition through intellectual property instruments such as trademarks and geographical indications (e.g. Ethiopian Coffee Trademarking and Licensing Initiative). • East Africa's position as a quality producer of flowers and other products (e.g. tea, coffee).	• Ensuring traceability and quality along the value chain. • Guaranteeing that farmers benefit from increased export prices. • Financial backstops for investors, as returns on investment could take time.
Financial services	• Building on cross-listing of stock exchanges and regional commodity exchange already in place.	• Ensuring broader access to finance for SMEs and households including for women. • High costs, administrative burdens and lack of harmonisation across countries.
ICT / digital economy	• Good ICT infrastructure and mobile phone penetration. • Potential for integration with digital/mobile payment platforms, which are already widely used. • The region's existing enabling ecosystems for ICT start-ups (e.g. Kenya, Rwanda and Uganda).	• For e-commerce, the negative effects of inefficient logistics and infrastructure on shipping goods across the region. • Need for new legislation and regulations, e.g. on cyber security, online payments, servers and privacy.
Tourism	• Increased export earnings (tourism receipts accounted for almost 50% of Uganda's total services export revenue in 2016, and tourism is now Rwanda's largest single export sector). • Expansion of air transport (Ethiopian Airlines, Kenya Airways and RwandAir). • Reduction of administrative entry barriers for tourists (visa on arrival, single East Africa tourist visa). • Promotion of green tourism and preservation of ecological sites, better-value traditional customs, wildlife and national heritage. • Creation of jobs for unskilled workers.	• Administrative costs, lack of infrastructure in remote areas. • Training and promotion required to create awareness of East Africa as a tourist destination (regional packages). • Security issues in some countries.

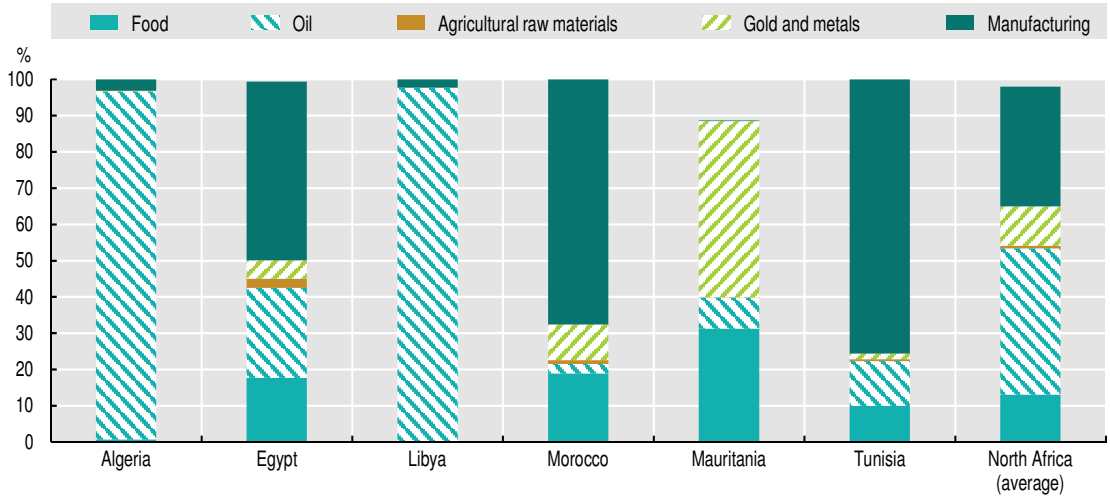
Productive transformation in North Africa

North Africa's growth in 2000-18 was 4.3% and is projected to accelerate to 4.4% per year in 2019-21. The region has not yet succeeded in maintaining strong and stable growth because of a number of obstacles: unstable oil prices, low rainfall levels, political tensions and terrorist attacks (Egypt, Libya and Tunisia). Capital accumulation and increased public spending have driven growth since the mid-2000s, as has domestic demand. The region's largest economy is Egypt, making up 52% of the regional GDP in purchasing power parity in 2018.

External resources (remittances and FDI) have increased, although they showed a slight decline in 2015-17. A large diaspora outside of the region contributes substantial remittances that sometimes exceed 5% of GDP, with a peak of 8.4% in Tunisia between 2015 and 2017, compared to 0.5% in Algeria. With the exception of Morocco, FDI stock is largely concentrated in the same sectors. For Algeria, Egypt and Tunisia, five sectors account for more than 90% of FDI, with industry being the most attractive. In Egypt, the oil sector has received the majority of FDI, due to the economic zone established by China. Overall, the construction industry, telecommunications and tourism are all equally attractive sectors for FDI. This is not the case for the agricultural sector, due to climate risk.

North African countries can be characterised by poorly diversified export baskets, dependency on mineral resources and limited specialisation. Oil, its derivatives and low value-added products dominate sales abroad (Figure 12). For instance, Algeria and Libya rank 18th and 21st in the world for oil production, and 95% of their exports are derived from this product. Their economies are narrowly based and vulnerable to external shocks. With the exception of Morocco, the other countries of North Africa also export oil, but to a lesser degree. Manufacturing is the sector of specialisation in non-oil exporting countries: 75.5% of exports were manufactured goods in Tunisia, 67.5% in Morocco and 49.3% in Egypt over the period 2010-17.

Figure 12. **Average share of merchandise exports in North African countries (by product type), 2010-17**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
StatLink https://doi.org/10.1787/888933966770

Countries in the region do not take full advantage of international trade. Only 26.2% of North African exports go to low-income countries, of which 3.9% go to sub-Saharan Africa. Weak regional integration is a result of strategies which favour North-South, rather than South-South, integration. Nevertheless, the share of Chinese imports rose consistently between 2010 and 2015 (14.7%) before falling between 2016 and 2017. Intra-regional trade represented only 4.7% of total trade between 2010 and 2017, lower than other blocs in Africa. This can be explained by the limited complementarity between countries' export structures.

Egypt, Morocco and Tunisia have diversified their exports. Egypt is the most diversified, with 242 export products representing approximately 90% of sales abroad. Opportunities for export diversification are limited in Algeria, Libya and Mauritania due to the dependence on commodities. In addition, apart from Morocco and Tunisia, there are few high value-added products among exports with latent comparative advantage in the region.

The region needs to address the following issues to achieve productive transformation:

1. **Productive transformation requires not only product diversification but also quality upgrading.**
   - Currently, the share of high tech goods remains minor throughout the region, except in Morocco and Tunisia, with high-tech exports representing 5.6% and 5.4% of their total exports, respectively, in 2010-16. For countries to successfully transform their economic structures, they must embrace the technologies needed to develop sophisticated goods.
   - Quality upgrading can occur rapidly through clusters development as seen in Egypt, Morocco and Tunisia. For instance, the Suez Economic Zone has allowed Egypt to move up the value chain in the oil industry (drills and components). Similar zones have appeared in Mauritania (mining), Morocco and Tunisia (manufacturing), and Algeria and Libya (oil). Conversely, Mauritania's fishing industry remains underdeveloped, exposed to foreign competition and relying on artisanal vessels and exports of unprocessed fish (about 20-40% of total exports, against less than 10% of the processed catch).

2. **Public policies can strengthen human capital by supporting R&D and boosting innovation through financing and technology transfers.**
   - The Bizerte cluster in Tunisia, for example, consists of an agri-food tech hub, a network of "Agro'tech" partners and 150 hectares of industrial space. In addition, making agriculture more competitive requires the use of ICT in decision-making, irrigation management, fertiliser control and disease prevention. Another successful innovation is the company GS1 Tunisia's "Tunicode" coding programme, which provides barcodes for local products according to GS1 standards. The Oum-Er-Rbia project in Morocco provides irrigation services and improves farmers' access to technology, financing and agricultural markets.
   - These initiatives can be accompanied by career guidance, information systems to better anticipate skills for the labour market, and stronger links between business associations and the state. For instance, in Morocco's automotive sector, business associations set up working committees in order to recommend specific policies to the government (creation of test laboratories, research subsidies and financial incentives for entrepreneurs). This resulted in a more educated and highly-skilled workforce. The OCP (*Office chérifien du phosphate*) in Morocco integrates local businesses into its upstream activities and develops workers' skills by offering contracts to local SMEs in construction, sub-contracting and industrial engineering.
3. **Boosting trade between North Africa and other African regions relies on harmonised standards and improved infrastructure.** Governments need to remove barriers to the free movement of goods and services (particularly non-tariff barriers). Introducing mutual recognition agreements – as done in regional blocs such as COMESA, the Economic Community of West African States (ECOWAS) and SADC – could help accelerate the harmonisation of technical and health standards. On infrastructure, major trans-African highway projects are in progress, such as the Cairo-Dakar highway or the Algiers-Lagos highway. In addition, new shipping lines are being planned, like that of Wazzan II in Morocco and another in Tunisia, linking the region to West Africa. The port of Alexandria in Egypt sees a high percentage of foreign trade (60%) pass through each year. In 2015, the Great Alexandria Port 2035 Strategy was launched to expand the port area and modernise infrastructure, among which new cargo terminals, logistics centres and a special economic zone.
4. **Finally, improving security and the business environment is key**. The business climate was adversely affected by the Arab Spring. Businesses in all countries are confronted with problems that affect their competitiveness, namely property transfer, financing, corruption and non-payment. Although Morocco and Tunisia are improving in this area, major progress needs to be made in the areas of entrepreneurship and insolvency laws, in particular in Algeria, Libya and Mauritania. This can be improved through a better regulation of the labour market, the protection of intellectual property, greater access to information, a simplification of administrative procedures and the prevention of monopolies.
5. **Likewise, governments should adhere to providing coherent regulations and official documents.** Fiscal stability should take precedence over temporary exemptions for certain investors. In addition to attractive investment codes, tax incentives for public-private partnerships (PPPs) are to be encouraged. Existing government codes and investment laws, especially in Egypt, Morocco and Tunisia, are favourable to foreign investors but require further improvement to enable these countries to integrate regional and global value chains. The PPP model for the construction of the "Noor" solar power plant in Ouarzazate, Morocco, can be an example of how to attract foreign partners.

Table 8. **Opportunities and challenges for value chains in North Africa**

Value chain	Opportunities	Specific challenges to address
Aeronautics	• Geographic proximity to industry leaders and existence of on-site industrial assembly platforms (Midparc and Nouacer in Morocco, Aéropôle M'Ghira in Tunisia).	• Necessity to develop skills in prototype design, modelling and production. • Need for appropriate logistical infrastructure required for FDI in high added-value activities.
Agri-business	• Presence of industrial processing clusters, diversified production and growing demand for quality from markets.	• Necessity to develop a number of distribution techniques (marketing, branding, certifications).
Automotives	• Linkages to assembly activities to attract more investors and improve productivity.	• Weak competitive position of the industry, as integration into GVCs is based on low cost and assembling medium technology.
Energy	• Availability of natural resources (oil, gas and mining). • Production of oil (crude and refined) and natural gas to supply processing plants (e.g. plastics and composites, synthetic fibres and fabrics for the clothing industry).	• Need to set up/expand the capacity of refining units both in exporting countries (Algeria, Egypt and Sudan) and in net oil importing countries (Morocco and Tunisia).
Textiles / clothing	• Geographical proximity to the European Union and free trade agreement with the United States. • Accumulated know-how. • Availability of raw materials in most of the region (wool, cotton, etc.).	• Need to target specific niches to move upmarket in this chain (design, branding, marketing, etc.).

Productive transformation in West Africa

West Africa is characterised by high economic growth, despite vulnerability to external shocks and to Nigeria's economic fluctuations. During 2000-18, GDP growth averaged 5.9%, with higher growth rates until 2014 and a slowdown thereafter due to lower commodity prices (in particular oil). Despite rapid demographic growth, GDP per capita has grown at 3.1% per year since 2000, the highest rate in the continent (compared to a 2% continental average). As an exporter of unprocessed raw materials (cocoa, cotton, rubber, uranium, oil), West Africa depends on the global economy and remains vulnerable to external shocks. The regional performance also depends on Nigeria and its oil production, this country making up 67% of the region's GDP in purchasing power parity and 52% of its population in 2018.

Migrants' remittances made up 45% of the financial inflows into West Africa in 2017. Remittances to West Africa increased from USD 27.3 billion in 2011 to USD 31.5 billion in 2017, rising to over USD 32 billion in 2018. Seventy per cent (70%) of the total West African remittances went to Nigeria in 2018. Some countries are highly dependent on remittances, like Cabo Verde, Gambia and Liberia, whose remittances make up 12.5%, 14.4% and 17.7% of GDP, respectively.

Room exists to increase tax revenues. The region's tax revenues reached USD 41.8 billion in 2017, similar to East Africa's USD 40.4 billion but less than half of revenues in North and Southern Africa. Recent tax reforms included policies to widen the fiscal base through VAT reform (Togo), simplification of tax systems (Senegal), as well as more efficient communication with tax payers and tax compliance. For instance, Côte d'Ivoire charges a flat tax on businesses below a certain revenue threshold to encourage compliance and expand the tax base into the informal sector (OECD, 2016).

Productive transformation in the region remains limited and faces a number of challenges. Despite several industrial development initiatives, industry has not grown and represents approximately 20% of regional GDP (with manufacturing making up only 9.3% of GDP). Agriculture's share in GDP has shrunk by 3.1 percentage points in the last decade – in contrast to growth in most regions. Services have expanded by 3 percentage points, but less than the continental average of 3.8 percentage points. Total factor productivity growth has declined since 2000, mostly due to insufficient technological development. The region has also fallen behind the global average for innovation, global competitiveness, innovation intensity and manufacturing value added to high and medium technology.

Intra-regional trade remains low, and export baskets are not diversified. Less than 15% of formally traded goods stay in the region, despite efforts within ECOWAS to expand intra-regional trade. Unprocessed raw materials made up 75% of the region's exports to other continents in 2016. The European Union and China are West Africa's main trading partners, covering 32.6% and 13.5% of the region's trade, respectively. On average, five products make up over 75% of regional exports. Senegal has the most diversified exports basket, with 28 products adding up to 90% of its exports. Between 2007 and 2017, only four countries (Guinea, Liberia, Niger and Togo) managed to diversify their export baskets. These mixed results highlight the limited success of the strategies followed so far for productive transformation.

West Africa is a leading exporter of several primary commodities. For 13 agricultural products, between 5 and 9 West African countries featured among the world's top 20 producers in 2017 (Table 9). The region has a near-monopoly of world production of *karité* nuts, fonio and yams, with shares exceeding 90%. The region also leads in cocoa beans, cashews and cassava. However, this has not translated into an increase in complexity or value addition of exported products.

Table 9. **Products for potential value chain creation in West Africa**

Products	Total production, 2017 (in thousands of tonnes)	Share of West Africa in world production (in %)	Number of West African countries in world top 20 producers
Fonio	671.4	99.9	9
Cashew nuts, with shell	1 410.5	35.5	9
Karité nuts (shea nuts)	548.2	99.9	7
Yams	67 309.3	92.2	7
Millet	9 128.0	32.1	7
Okra	2 722.4	28.2	7
Groundnuts, with shell	6 006.6	12.8	7
Kola nuts	228.4	84.0	5
Cow peas, dry	6 177.9	83.4	5
Cocoa, beans	3 302.3	63.5	5
Cassava	96 223.9	33.0	5
Rubber, natural	849.6	6.0	5
Oil, palm fruit	14 789.0	4.7	5

Source: Authors' calculations based on FAO (2019), *FAOstat* (database).

Five key sets of policies can help accelerate productive transformation in West Africa. The region has many experiences with industrial policies since the 1960s, which offer several lessons for policies. Regional co-operation is important to design and implement strategies. It can help tackle the significant risks brought by youth unemployment, institutional fragility and insecurity, and climate change. An important step towards regional integration in West Africa is the project of setting up a single currency for the 15 ECOWAS countries by 2020, whose name "ECO" was validated in June 2019.

1. **Further exploit comparative advantages for developing the industrial sector and strengthening regional complementarities**. West African countries showing high complementarities should co-ordinate their production efforts. Côte d'Ivoire and Ghana are starting to work together to transform cocoa beans locally, since the two countries export between 45% and 65% of the world's cocoa. Promoting agricultural regional value chains requires good management of farming sectors and the appropriation of technologies to valorise agricultural products. Senegal has set up five centres of intensive agricultural services in employment, focused on the training of farmers with ten hectares of land, access to water, availability of warehouses for harvesting, as well as marketing and packaging facilities.

2. **Focus on firms' needs in industrial sectors generating strong externalities for the economy.**
   - Increasing the productivity and competitiveness of firms requires better access to skills, energy, finance and land. Improving education and professional training can help meet the needs of the labour market, particularly given the labour shortfall in technical professions. Medium- and long-term credit increased to 42% of total loans in 2015. However, access to finance still needs to be improved, especially for SMEs. Interest rates and collateral requirements remain too high, deterring investment in productive sectors that require long-term capital.
   - Policies should continue promoting the integration of the regional financial sector. The use of the West African franc (XOF) increased for intra-African commercial (i.e. bank-to-bank) payments from 4.4% in 2013 to 7.3% in 2017. Regional exchanges (stocks and commodities) can also help create deeper financial markets. Initiatives to increase access to electronic payment systems for consumers in countries of the West African Economic and Monetary Union (WAEMU) lowered transaction fees for low-value transactions by 25% and increased the number of card transactions by at least 10% annually (ECA/AUC/AfDB, 2010).
3. **Strengthen access to national, regional and continental markets through the development of transport infrastructure and competitive logistics services.**
   - **Initiatives such as the Abidjan-Lagos corridor need strengthening and mainstreaming.** Set up as an independent authority, the corridor aims to facilitate trade between Côte d'Ivoire, Ghana, Togo, Benin and Nigeria (from west to east). Already, the project has reduced port dwell and border crossing times as well as the number of road checkpoints in most of the member countries (OCAL, 2018). The ECOWAS Community Development Programme plans other interventions, including the Lagos-Dakar motorway, the Cotonou-Niamey-Ouagadougou-Doris-Abidjan railway loop and the Ouagadougou-Bamako railway. The recently built Senegambia Bridge eases travel through Gambia and Senegal by removing the need to wait for ferry transport, which delayed transporters by up to a week (Jahateh, 2019).
   - **Developing port infrastructure and deep water harbours will lower transport costs and boost trade.** Countries are doing reforms: Côte d'Ivoire recently expanded the Abidjan deep sea port (with co-operation from China), and Nigeria built special economic zones such as the LADOL logistics base to Lagos port. However, no West African port ranks among the top 70 globally, with Nigeria lagging behind in the region in terms of container handling capacity.
   - **Regional trade barriers must be removed**. Simplifying rules of origin requirements and streamlining preferential trade regimes at the ECOWAS level can help West African firms trade – and grow – more easily. For example, Senegalese firms are 6% less likely to continue exporting to all ECOWAS countries compared to its five neighbouring countries.
4. **Facilitate integration into regional and global value chains.** Processed food products and value addition in the mining sector could offer better chances of success (Table 10).

Table 10. **Opportunities and challenges for value chains in West Africa**

Value chain	Opportunities	Specific challenges to address
Cassava products	• The fact that West Africa represents a third of the global production. • High potential of profit due to the expanding demand of cassava products.	• Need to expand industrial processing capacities to keep pace with demand. • Need to encourage the installation of industrial transformers near major agricultural production areas.
Cocoa industry	• The fact that Côte d'Ivoire and Ghana represent 50% of the global cocoa bean production. • Opportunity to create a cross-border special economic zone.	• Need to develop activities and services that create more value added (branding, marketing, transforming, quality control, etc.).
Mining sector	• Abundance of mineral resources (iron, copper, nickel, coal, oil and gold).	• Improve local skills and industrial linkages. • Base local transformation policies on activities that have a strong "push effect" on the rest of the economy.
Rice	• Significant improvements in rice productivity in recent years. • Increase in annual consumption of rice in the region.	• Necessity to improve infrastructures to better connect surplus production or processing areas and major markets. • Develop local varieties of rice.
Shea butter	• Seven largest producing countries located in West Africa. • Reinjection of the revenues generated into other types of economic activities.	• Exported raw while it could be processed locally, generating jobs and sustainable financial resources.

5. **Ensure coherence of national and regional policies.** A harmonised approach can stimulate the competitiveness of exports and optimise the potential for industrial complementarity between countries producing the same raw materials. The region has already made noticeable progress in the free movement of people, whereby all ECOWAS countries allow visa-free travel within the region. However, administrative obstacles to the free movement of goods in West Africa remain too high. On the main roads of the region, four checkpoints are set up every 100 km, often sources of petty corruption. This number is of the same order of magnitude on the WAEMU road axes as on those connecting the other ECOWAS countries.

Notes

1. *The Collaborative for Frontier Finance report* (CFF, 2018) defines small growing businesses as "businesses, commercially viable, with 5 to 250 employees having significant potential and ambition for growth".

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Chapter 1

Africa's productive transformation in a changing world

This chapter analyses how public policies can support African firms' productive transformation. It first explains why productive transformation matters for the continent's development agenda. Second, the chapter proposes three main sets of policies to accelerate productive transformation in a fast-changing world. The first set consists of developing clusters of firms. Successful clusters enable local firms to specialise and scale up their production. The second set of policies aims to develop regional production networks. Governments can strengthen regional public goods, like cross-regional infrastructure and institutions, as well as regional complementarities in value chains. The third set focuses on increasing African firms' capacity to thrive in export markets. Exports will become ever more important as African governments implement the Continental Free Trade Area. The chapter highlights innovative practices on the continent relevant to African policy makers at local, national, regional and continental levels.

IN BRIEF

Africa's growth is projected at 3.6% in 2019. Domestic demand is growing at 6.7% and is shifting towards processed goods. These developments are creating opportunities that many firms are seizing in order to expand across the continent.

However, most African firms are less productive than their global competitors. The Africa-to-Asia labour productivity ratio decreased from 67% in 2000 to 50% in 2018. In some African countries, almost 91% of the non-agricultural workforce remains in informal employment.

Three sets of policies can help transform Africa's production structure. This is especially important for the young, small enterprises responsible for 22% of net job creation:

- First, governments must ensure that **clusters of firms** have access to business services. Africa's private sector is diverse; it includes dynamic "champions", stable corporations, small growing businesses, and livelihood-sustaining and informal firms. Successful clusters improve linkages, specialisation and skills. Firms that have moved into the Kigali Special Economic Zone have doubled their value added. Clusters require developing comparative advantage involving investors and local governments and strengthening the existing ecosystems for firms. Hence, 49% of African start-ups are concentrated in five cities: Cape Town, Lagos, Johannesburg, Nairobi and Cairo.
- Second, policies must strengthen **regional production networks**. Regional sourcing remains under 15%. Countries can better co-ordinate their strategies regionally: 49% of the sectors that new industrialisation strategies target currently overlap. Regional norms help smallholders integrate into regional value chains, particularly in agriculture which accounts for 50% of all employment. Co-ordinating strategies for foreign direct investment will attract investors, develop regional capabilities and avoid undercutting taxes.
- Third, policies are needed to help African exporters thrive. Only 18% of new exporters survive beyond three years. **Export strategies** must better target different markets. African firms' exports to intra-African markets are 4.5 times more diverse than those to extra-African markets but have a value 8.5 times lower than exports to China. Removing non-tariff barriers reduces uncertainties for exporters and may increase fivefold the gains from tariff removal. Exporters need simpler administrative procedures and better connectivity and infrastructure, especially flights, roads and ports. Exporters must meet quality standards: despite tripling ISO certifications since 2000, African countries filed for as many certifications as Malaysia in 2015.

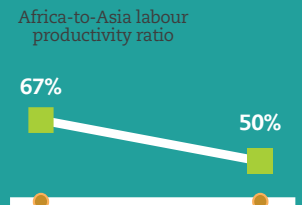
Africa's productive transformation in a changing world

Growth

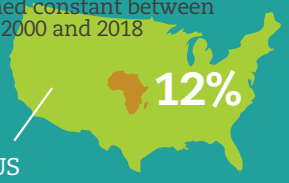
Africa's growth is projected to accelerate in 2019

Productivity

Overall productivity is not catching up

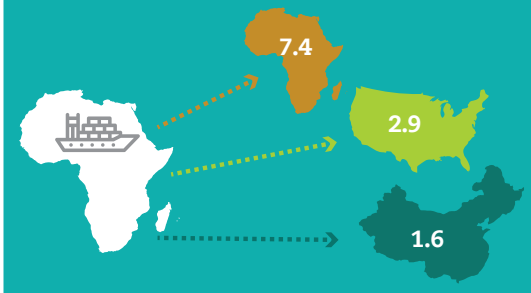


Africa's labour productivity as a % of the US's level remained constant between 2000 and 2018



Trade

On average, African firms export a wider range of products to the continent than globally...



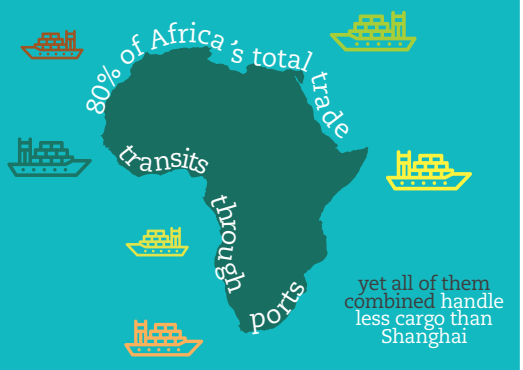
... but the **value** of exports to the US and to China is x4 and x8 higher

Informality

In several countries, most of the non-agricultural workforce remains in informal employment

Improving connective infrastructure can reduce costs for Africa's firms

Africa has the world's highest maintenance costs for road and rail networks



yet all of them combined handle less cargo than Shanghai

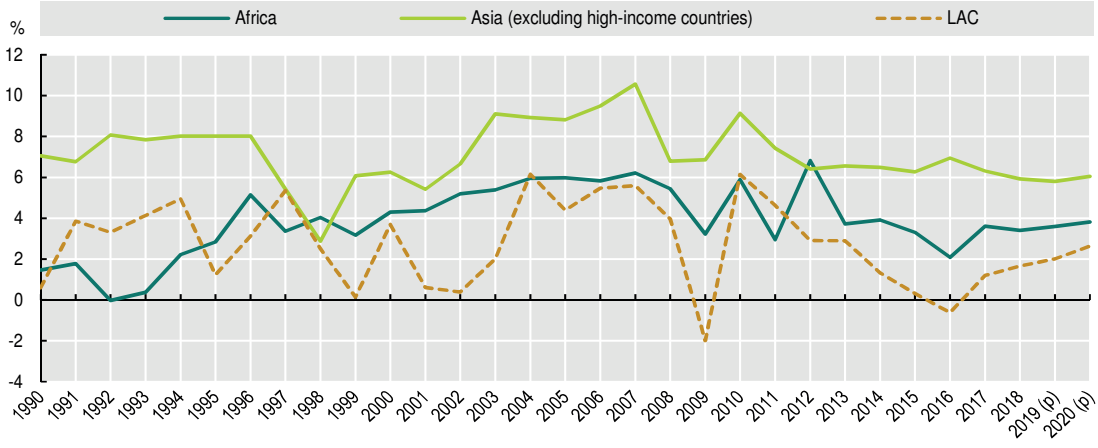
Indicators of productive transformation: Africa in the global economy

Table 1.1. **Capabilities for productive transformation in Africa, Asia, and Latin America and the Caribbean, 2000 and 2018**

			Africa		Asia		LAC	
		Source	2000	2018*	2000	2018*	2000	2018*
Production technology	Employers and paid employees and as % of total employment	ILO	29.0	31.8	34.6	45.7	62.7	66.1
	Labour productivity as % of United States productivity	CB	12.5	12.1	18.6	24.4	27.1	22.8
	Private gross fixed capital formation as % of gross domestic product (GDP)	IMF	13.5	15.9	14.5	23.7	16.3	16.7
	Capacity for innovation, 0-100 (best)	WEF	-	29.0	-	36.7	-	32.8
Regional network	Intra-region as % of trade in intermediate goods	Comtrade	11.0	11.9	17.1	28.3	8.1	10.2
	Intra-region as % of greenfield foreign direct investment inflows	fDi Markets	-	6.8	-	50.1	-	13.8
	Venture capital availability, 1-7 (best)	WEF	-	2.5	-	3.2	-	2.6
Capacity to meet demands	Share of world's total ISO9001 certification (%)	ISO	1.2	1.1	10.6	44.6	2.0	3.2
	Fully- and semi-processed goods as % of region's total goods export	Comtrade	44.1	51.3	82.8	89.9	75.5	72.4
	Share of world total consumption goods import (%)	Comtrade	2.0	2.9	4.2	11.3	4.7	4.5

Notes: * 2018 or most recent year. Asia and Latin America and the Caribbean (LAC) include lower- and middle-income countries only. 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 1.1. **Growth dynamics in Africa, Asia, and Latin America and the Caribbean, 1990-2020**



Source: Authors' calculations based on IMF (2019), *World Economic Outlook* (database).
StatLink https://doi.org/10.1787/888933966789

Table 1.2. **Financial flows and tax revenues to 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	16.1	46.0	46.7	46.7	52.0	50.8	52.4	56.6	53.2	41.8
		Portfolio investments	1.8	10.4	36.8	23.2	37.6	33.7	30.2	20.8	5.9	46.0
		Remittances	14.2	41.9	54.7	61.7	66.8	65.9	70.2	70.0	66.9	74.4
	Public	Official development assistance	20.5	38.8	42.8	46.5	46.4	52.0	47.9	44.9	44.1	47.0
Total foreign inflows			**12.1**	**25.9**	**52.5**	**137.1**	**181.0**	**178.2**	**202.8**	**202.4**	**200.7**	**192.4**
Tax revenues			**44.4**	**104.4**	**118.6**	**266.9**	**330.3**	**403.2**	**417.7**	**414.5**	**408.8**	**339.5**
Private savings			**35.4**	**76.8**	**130.8**	**299.1**	**423.5**	**448.5**	**475.0**	**508.0**	**516.2**	**427.3**

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 (2018a), *World Development Indicators* (database).

What is productive transformation, and why does it matter for Africa?

Accelerating the development of Africa's productive sector is critical to meet the continent's objectives laid out in the African Union's Agenda 2063. What countries produce and trade determines overall development outcomes and shapes the capacity of economic systems to generate and redistribute wealth (Hausmann, Hwang and Rodrik, 2007; Primi, 2016).

What is productive transformation?

Productive transformation is the process of accumulating and diffusing organisational, production and technological capabilities within an economy. During this process, the economy increases its productivity to catch up with higher-performing economies. At the same time, resources and workers move from activities with low-knowledge content to the newly created activities with higher-knowledge content. Increasing productivity and developing new activities through improving firm- and economy-wide capabilities is crucial to unlock stronger growth, create more and better jobs, and reduce inequalities.

No unique model of country-level transformation exists. The pathways of productive transformation depend on many factors, which play out differently in diverse countries and sectors and according to varying historic and global economic contexts. Today's fast-changing world offers opportunities for policy makers to drive countries' transformation though various policy approaches (Nübler, 2014; AfDB/OECD/UNDP, 2017; see Annex 1.A1). This process can be measured in different ways at the firm and country levels (Box 1.1). Here are two examples:

- **Morocco** expanded its production to new activities during the 2000s, such as aeronautics, the automotive industry, electrical equipment and off-shoring. It did so by taking advantage of its geographical proximity to European Union markets and investors, of existing trade agreements and of its relative political stability.
- Since 2004, **Ethiopia** has taken advantage of new opportunities emerging in global markets to increase the value added from its coffee production. The Ethiopian government launched the Ethiopian Coffee Trademarking and Licensing Initiative, which uses a range of intellectual property rights to differentiate "The Ethiopian Fine Coffee". The brand is run by a stakeholder committee made up of co-operatives and private exporting companies, in partnership with the Ethiopian Intellectual Property Office and other government bodies.

Sustaining the productive transformation process requires strengthening the density and variety of firms in the production networks, and activating their capabilities to upgrade and their potential to learn from each other.

At the firm level, productive transformation is the process of accumulating and diffusing new capabilities to perform certain tasks. Two examples are:

- The **MeTL Group** (Mohammed Enterprises Tanzania Limited) is a diversified conglomerate in Tanzania that employs 24 000 workers and is Tanzania's largest private sector employer. The firm's move from trading to industrial processing came in 1998. At that time, it established new ventures and acquired enterprises in agribusiness and manufacturing (see Annex 1.A1).
- The **OCP** (*Office chérifien du phosphate*) in Morocco has generated several spillover effects since 2006, by strengthening agricultural productivity, and the chemical industry, integrating Moroccan businesses into their upstream activities and developing local skills. The OCP became a limited company in 2008 (see Annex 1.A1).

Box 1.1. **Measuring productive transformation**

Productive transformation is multi-faceted. Measuring its wide-ranging implications for production, trade, employment and social development requires using multiple indicators. In theory, productive transformation can be measured by an economy's progress in creating and diffusing new capabilities for organisation, production and technology.

- The **structural change** perspective analyses productive transformation through the patterns of changes in sectoral inputs and outputs (e.g. Hausmann and Klinger, 2006; Hausmann and Hidalgo, 2011; Lin and Monga, 2010).
- The increase in **global value chains** (GVCs) has a significant impact on ways countries can drive structural change (e.g. Gereffi, 1999; Udo and Bruce, 1995; Borrus, Ernst and Haggard, 2000; Humphrey J. and Schmitz H., 2010; Martin and Rafiq, 2003; Dean J, Fung KC and Wang Zhi, 2007; Escaith, Lindenberg and Miroudot, 2010; Cattaneo, Gereffi and Staritz, 2010; Baldwin, 2011).
- Another strand of the literature, the **process perspective**, tries to understand how the economic outcomes endure over the long run. It discusses capabilities as the determinant of the behaviour of firms and the ability of economies to perform tasks such as co-ordinating, investing, innovating, identifying and solving problems, and learning (Chang, 2010; Dosi, Nelson and Winter, 2000; Lall, 1992; Lall, 2000; Nelson, 2008; Nelson and Winter, 1982; Sutton, 2012; Teece, Pisano and Shue, 1997).

In practice, such studies may benefit from a battery of analysis at both country and firm levels. The dearth of data, concerns over quality of statistics and the prevalence of the informal sector in Africa call for a combination of analytical tools at the level of countries and firms.

At the **country level**, the analysis often employs three types of indicators:

1. **Diversification into new products.** This, along with higher value-added activities, can be measured by trade-based indicators such as the Export Complexity Index and Revealed Comparative Advantage Indices (Balassa, 1965; Hausmann, Hwang and Rodrik, 2007). More recently, databases using multi-country input-output tables such as the OECD-WTO Trade in Value-Added database, the World Input-Output Database, UNCTAD-EORA and the Global Trade Analysis Project allow the tracking of countries' participation in global value chains.
2. **Technological upgrading** through growth accounting exercises, sectoral productivity by using databases such as the Conference Board Total Economy Database, the UNIDO INDSTAT and analysis of the technological level of exports (see for example Lall, 2000).
3. **Creation of better-paying jobs in the economy**. This includes the analysis of sectoral reallocation across sectors (see for example McMillan, Dani and Verduzco-Gallo, 2014; de Vries and Timmer, 2015).

At the **firm level**, the ability to switch to a new product or a new business model or to adopt new technologies from the global product and technology space is critical (Nübler, 2014).

Metrics of performance could examine: i) how good the existing firms are at developing new products, at introducing them to markets and at tapping new export markets; and ii) how competitive firms are in meeting social, environmental and quality standards.

Box 1.1. **Measuring productive transformation** *(cont.)*

Firm-level surveys can help evaluate the adoption of information and communication technology (ICT). Firm censuses help understand firm survival and growth dynamics. Administrative data such as fiscal data, customs transaction and patent registration can provide an accurate picture of firms' productivity and innovation dynamics.

In Africa, firm-level data remains limited for cross-country analysis and informed policy making. Industrial censuses of firms are irregular in African countries, with the exception of Ethiopia, Ghana and South Africa. The World Bank's Enterprise Surveys are the most popular internationally comparable set of surveys to understand firms' characteristics in Africa. However, self-evaluated responses often overestimate innovation (Cirera and Muzi, 2016) and make productivity estimates less reliable. More recent initiatives have unlocked new sources of administrative data on firms. For example, the Exporter's Dynamic Database has enabled analysis of trade at export level. However, country coverage remains limited and the level of aggregation high for most countries.

Source: Authors' compilation from the literature review.

Why does productive transformation matter for Africa's development agenda?

Accelerating the development of Africa's productive sectors is critical to meet the continent's objectives laid out in several on-going pan-African initiatives. The African Union through Agenda 2063 envisions transforming the structure of African countries' economies in order to create strong, robust and inclusive growth, generating jobs and opportunities for all. In addition to the pan-African initiatives already mentioned, others emphasise the importance of industrialisation for a sustainable economic transformation: i) African Union Action Plan for the Accelerated Industrial Development of Africa; ii) African Productive Capacity Initiative; iii) Science, Technology and Innovation Strategy for Africa 2024; iv) Africa Mining Vision; and v) African Agribusiness and Agro-industries Development Initiative. The United Nations General Assembly also proclaimed the period 2016-25 as the Third industrial development decade for Africa.

This pan-African vision requires providing more and better-paying jobs. Africa's gross domestic product (GDP) expansion since the 2000s has not created enough quality jobs and well-being for the population. The continent needs to create jobs for 29 million youth entering the working-age population every year between today and 2030. By comparison, they were 14 million new entrants per year between 2000 and 2015. Additionally, 282 million workers are in vulnerable employment today, and 30% of workers remain poor despite working.

The scale and the cross-cutting nature of the challenges for African firms call for co-ordinated policies within African governments. For example, an infrastructure gap estimated at up to USD 108 billion a year remains a major impediment to private sector development in Africa (AfDB, 2019). Closing this gap requires sustained and long-term solutions, including common approaches to domestic resource mobilisation (see Box 1.2). Successful approaches are inclusive and enjoy strong participation and ownership by national, regional and local actors. The success of such strategies also depends on the transformative leadership from both public and private actors and requires strengthening the capacity of both sectors (ACBF, 2019).[1]

Table 1.3. **Ten ongoing continental initiatives for Africa's industrialisation**

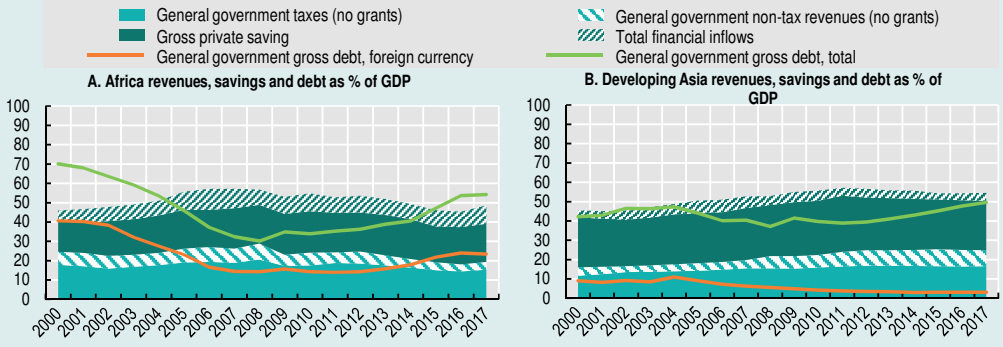
	Ongoing continental initiatives *(list not exhaustive)*	Key institutions	Timeframe
1	Agenda 2063 Aspiration 1: "A Prosperous Africa Based on Inclusive Growth and Sustainable Development"	AUC	2013-ongoing
2	AU Action Plan for the accelerated industrial development of Africa (AIDA)	AUC	2008-ongoing
3	Boosting Intra-African Trade (BIAT) Cluster III – Productive Capacity	AUC, ECA	2012-ongoing
4	The United Nations Third Industrial Development Decade for Africa (IDDA III)	UNIDO	2016-25
5	Programme for infrastructure development in Africa (PIDA)	AUC, NEPAD, AfDB, ECA	2012-40
6	The Science, Technology and Innovation Strategy for Africa 2024 (STISA)	AUC	2014-24
7	The African Agribusiness and Agro-industries Development Initiative (3ADI)	FAO, IFAD, UNIDO	2010-20
8	Comprehensive Africa Agriculture Development Programme (CAADP)	AUC, NEPAD	2003-ongoing
9	The Africa Mining Vision	AUC	2009-ongoing
10	The African Productive Capacity Initiative (APCI)	UNIDO	2003-ongoing

Note: AUC – African Union Commission; ECA – United Nations Economic Commission for Africa; UNIDO – United Nations Industrial Development Organization; NEPAD – New Economic Partnership for Africa's Development; AfDB – African Development Bank; FAO – United Nations Food and Agriculture Organization; IFAD – International Fund for Agricultural Development.

Box 1.2. Resource mobilisation for productive transformation

Public spending on its own can hardly sustain productive investment and capital accumulation in the medium term. The number of low-income countries in debt distress or facing a high risk of it increased from 7 in 2013 to 16 in 2018 (IMF, 2019b). African countries are far more likely to borrow funds in a foreign currency than Asian countries, which could heighten this risk (see Figure 1.2). In the case of sub-Saharan Africa, for example, the share of total public debt denominated in a foreign currency increased from an average of 23% of GDP in 2011-13 to 32% in 2017 (IMF, 2018). The share of Africa's debts held by private banks and bondholders has also increased, while the relatively shorter maturities and higher interest rates of these debts may not match the needs of long-term project financing (Coulibaly, Dhruv and Lemma, 2019). Maintaining Africa's growth momentum will require mobilising sources other than government debt, notably domestic savings and remittances, to encourage investment in activities that increase productivity and create jobs (AUC/OECD, 2018).

Figure 1.2. **African countries' higher reliance on foreign currency debt makes them more vulnerable to debt distress than Asian countries**



Source: Authors' calculations based on IMF (2019a), *World Economic Outlook* (database).
StatLink https://doi.org/10.1787/888933966694

Box 1.2. **Resource mobilisation for productive transformation** *(cont.)*

Governments need to reduce their financial exposure to external shocks. African governments can simultaneously raise public revenues and encourage private sector growth if they pursue tax policies consistent with productive transformation. Such policies will find a **balance between increasing tax collection and having a positive impact on the business environment**.

- African countries generally have relied heavily on value added tax (VAT) reforms to increase their tax levels. For the 21 countries featured in *Revenue Statistics in Africa 2018,* increases in VAT revenues on average accounted for 32% of total increases in tax revenues from 2006 to 2016, and in the case of Morocco, 93% (OECD/ATAF/AUC, 2018). However, as Zambia has concluded, adopting VATs might not always be worthwhile. VAT reforms require a tax regime that has the capacity to process refunds in a timely manner and prevent fraud.
- More focus on land value mobilisation is needed. Taxes on land values are desirable for growth, given Africa's projected urban population growth of about 3.2% between 2015 and 2050. However, taxes on land values require a clear distinction between traditional, public and private property rights to ensure certainty and avoid contestation. Land taxes might be more successful if they were simplified, for example by basing them on land area, rather than land value. South Africa started using computer-assisted mass-appraisals for more efficient property valuations and land taxes. Improving land administration can also have benefits beyond tax collection. In Ethiopia and Rwanda, certifying ownership of agricultural land increased land productivity and the propensity to invest (AUC/OECD, 2018). In Burkina Faso, a project using very high spatial resolution satellite images produced detailed territorial mapping. Sierra Leone's expansion of property tax led to the creation of geographic information system mapping, which helped improve state governance capacity (Moore, Pritchard and Fjeldstad, 2018).
- Providing incentives for businesses and individuals to register with the government, thereby improving public records, can improve data gathering. For example, many small and micro-enterprises that made use of South Africa's Business Linkage Centres to obtain contracts and work with large corporations began as informal businesses and then formalised later. The South African Revenue Service decreased compliance costs by 22.4% after introducing e-filing. The Kenya Revenue Authority's iTax system, gradually introduced between 2005 and 2010, now provides automated administration of all domestic taxes and allows taxpayers to declare and pay their taxes online. Rwanda, in 2013, and Kenya, in 2014, also introduced mobile payment of taxes through their M-Service platforms.
- Governments can also inform tax policy by upgrading the statistical system on the informal sector (OECD/ILO, 2019).
- Better communication between tax administrators and taxpayers will improve tax performance. Communication can ensure not only that tax policies are informed by adequate consultation, but also that businesses and individuals feel a shared interest in taxation to fund national development goals of benefit to all.

African countries would benefit from better statistics, information and experience sharing. Pooling resources and co-operating can help identify best tax practices, find efficiency gains and design strategies to tax international commerce.

Box 1.2. **Resource mobilisation for productive transformation** *(cont.)*

- International co-operation has led to more detailed and comprehensive revenue statistics, such as in the *Revenue Statistics in Africa* publication (OECD/ATAF/AUC, 2018) or in the *African Tax Outlook* (ATAF, 2018).
- Co-operation at the regional level could help better identify perversities in individual tax systems, such as the nearly 400 tariff lines in the East African Community misclassified as finished goods. The Economic Community of West African States has harmonised their import tariffs and VAT standards to reduce incentives for economically damaging tax arbitrage.
- Currently, 23 African countries participate in the Inclusive Framework on Base Erosion and Profit Shifting, and 23 countries attended the Fifth Global Forum on VAT in March 2019.
- Illicit financial flows (IFF) are estimated at about USD 50 million a year. The diversity and complexity of IFFs call for a cross-cutting strategy encompassing various actors at national, regional and international levels which addresses the root causes. African governments can take advantage of regional and international initiatives to increase their capacity to fight IFFs (AUC et al., forthcoming).

Countries can leverage private domestic savings and diaspora remittances for domestic investment. Several policies exist:

- Policy makers and financial institutions work towards locking in the domestic savings in longer-term assets and utilise them to provide more credit without adding pressure to balance sheets.
- Morocco has attracted investment from its diaspora. Likewise, Ethiopia, Ghana, Mauritius and Nigeria set up diaspora schemes to facilitate diaspora investment in the country.

Sources: ATAF (2018), *African Tax Outlook 2018*; AUC et al. (forthcoming), "*Mobilisation of Domestic Resources: Fighting against Corruption and Illicit Financial Flows*"; AUC/OECD (2018), *Africa's Development Dynamics 2018: Growth, Jobs and Inequalities*; Coulibaly, Dhruv and Lemma (2019), "Is sub-Saharan Africa facing another systemic sovereign debt crisis?"; IMF (2019), *Regional Economic Outlook: Sub-Saharan Africa, Recovery Amid Elevated Uncertainty;* IMF (2018), *Regional Economic Outlook: Sub-Saharan Africa, Capital Flows and the Future of Work*; Moore, Pritchard and Fjeldstad (2018) *Taxing Africa: Coercion, Reform and Development*; OECD/ATAF/AUC (2018), *Revenue Statistics in Africa 2018*; OECD/ILO (2019), *Tackling Vulnerability in the Informal Economy*.

Which policies can accelerate productive transformation in today's fast-changing context?

Africa's transformation agenda is taking place in a fast-changing and uncertain global environment, which calls for innovative policy approaches. The future of productivity and drivers of competitiveness in Africa may differ from the experience of East Asian countries that industrialised through expansion of the manufacturing sector. Industrialisation can no longer be envisioned through the sole growth of the manufacturing sector, because manufacturing increasingly depends on services and other sectors (OECD, 2013; AfDB/OECD/UNDP, 2017; Hallward-Driemeier and Nayyar, 2018). Globally, between 25% and 60% of employment in manufacturing firms is found in services support functions, such as transport and logistics marketing, after-sales services, and information technology

back-office support (Miroudot and Cadestin, 2017). Climate change is also reshaping requirements and opportunities within the global production landscape.

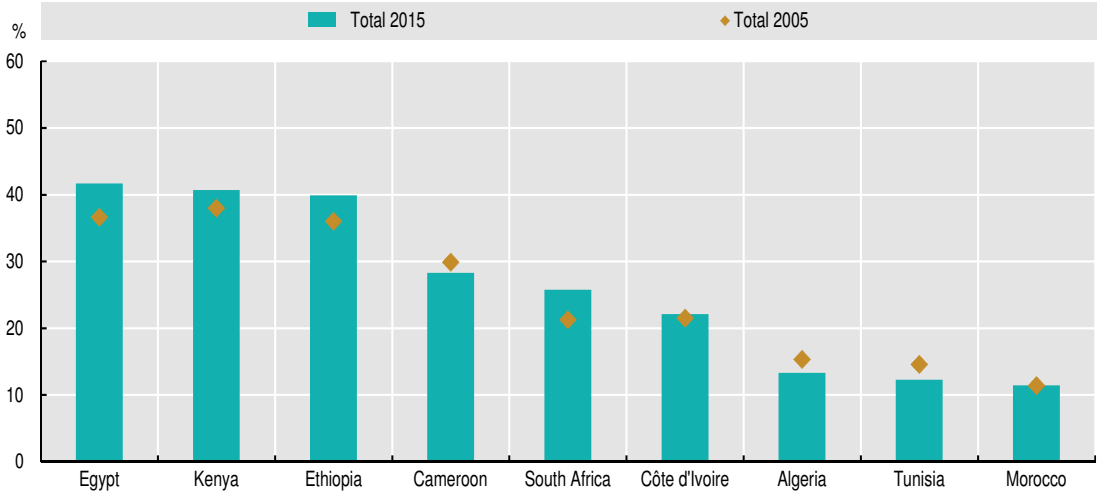
The continent is changing fast, differing from experiences elsewhere. The combination of Africa's demographic revolution, spatial transformation, rapid urban transition, and regional integration bring unique challenges and opportunities for policies and firms. These changes offer new sources of finance, new markets and demand patterns, and new possibilities for "leapfrogging" by using novel opportunities for technology transfer and business management practices. They also bring demand for better job creation, new competitors, and new risks to inclusive growth and the environment. Such a highly evolving policy environment means that the continent may learn from, but not repeat, what other countries did in the past.

Africa's productive transformation policies need to go beyond the previous industrialisation agenda of supporting manufacturing activities or industrial sectors. They need to cover other productive activities such as modern agriculture and services, taking stock of the African specificities and the fast-changing global context. Africa is embracing broader policy tools such as supporting innovation activities, developing business clusters and boosting integration into global and regional value chains. The complexity of supporting productive transformation requires a systemic strategy beyond the agenda of removing market failures for production and service delivery. This agenda differs from past policies of "picking winners". The current doing-business environment agenda is important, but it will not suffice to transform the continent's production. Africa's current place behind other developing countries' productivity also owes to weak firm management practices and limited industrial linkages, which are not directly related to the business environment (AUC/OECD, 2018). Policies need to improve African firms' capability, notably their capacity to adapt to changing market conditions and anticipate future trends (Primi, 2016).

- **Policies for productive transformation in Africa need take into account these changing contexts and the local economic structure and institutional capacity.** Africa's private sector today is a mix of successful "champions", promising start-ups, and a diverse continuum of smaller businesses. About 22% of Africa's working-age population are starting new businesses, the highest rate in the world (AfDB/OECD/UNDP, 2017), compared to 19% for Latin American countries and 13% for developing countries in Asia. At the same time, the largest share (55%) of Africa's entrepreneurs is now working in non-tradable services. About a third of young entrepreneurs start a business out of necessity rather than because of a clear business idea (AfDB/OECD/UNDP, 2017).
- **Governments should focus on strategic value chains, not only manufacturing.** Countries need to upgrade their service sectors to boost their manufacturing, mining or agricultural sectors. Services play an important role in value addition. Services counted for 40-42% of the value addition in these sectors in 2015 in Ethiopia, Egypt and Kenya (Figure 1.3), followed by Cameroon, South Africa, and Côte d'Ivoire (in that order). The success of industrial strategies may depend on supporting services such as ICT, marketing and transport, and distribution.
- **"Leapfrogging" opportunities in the global technology landscape can build new competitive edges.** The decreasing prices of renewable energy make a new business case for bridging Africa's infrastructure gap with greener energy. Africa's resource-rich countries could also use the changes in the technological landscape as a leveller for green innovation, for instance in the mining sector (Alova, 2018):

- First, greening extraction techniques can enhance competitiveness in the mining sector and the rest of the economy (e.g. the OCP in Morocco, South Africa Industrial Energy Efficiency Project).
- Second, the revenues from green innovation can help firms enter new value chains for clean manufacturing (e.g. waste management by Africa Global Recycling Company in Togo). The experience of Chile is illustrative (OECD/UN, 2018). Chile strategically reinvests its lithium and copper revenues to fund the research and development of low-carbon technology over the following ten years. The country aims to become a global hub for clean mining technology by investing in electro mobility, solar energy and low emission mining through a consortium of universities, local firms and global companies.

Figure 1.3. **Services value-added contents in total export of manufacturing, mining and agricultural products in nine African countries**



Note: Total export of "manufacturing, mining and agricultural products" defined as ISIC codes D01 to 03 (agriculture) + codes D05 to 09 (mining) + codes D10 to 33 (manufacturing).

Source: Authors' calculations of preliminary results based on the underlying data sources of OECD Inter-Country Input Output System for the 2018 TiVA indicators.

StatLink https://doi.org/10.1787/888933966637

This chapter proposes fresh policy for productive transformation by focusing on: i) **clusters of firms** where governments need to provide business services to firms in order to improve specialisation, linkages and skills; ii) **production networks** by strengthening regional value chains, developing regional norms and co-ordinating investment; and iii) **firms' access to markets**. The first section identifies policy interventions to help different kinds of firms upgrade their capabilities by innovating, by attracting and spreading new capabilities, and by specialising. The second section shows how national and regional policies can work together to create opportunities for SMEs to thrive in regional value chains. The last section highlights policy options to enhance productive firms' access to the continent's growing local and regional markets, as well as global markets. It recommends targeting different local and exports markets, streamlining administration and logistics in the medium term and upgrading infrastructure in the longer term.

Focus on clusters of firms: provide business services to improve specialisation, linkages and skills

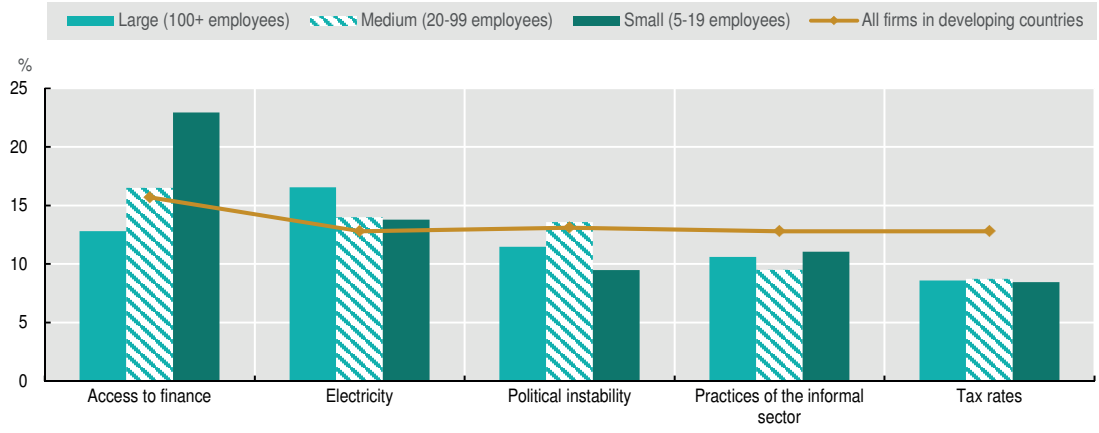
Boosting firms' capabilities is key to Africa's productive transformation. Among other things, strengthening the production systems requires more and better linked firms. Policy can accelerate productivity growth and job creation by:

- **encouraging strategic clusters:** develop strategic sectors by building on local assets, facilitating linkage among firms and providing business services
- **removing constraints for small growing businesses:** help different kinds of African SMEs build new niches, grow and create jobs using a tailored approach
- **addressing the new skill demands:** develop stronger public-private alliances, encourage innovative training methods and foster intra-Africa talent mobility.

Lagging productivity levels and slow total factor productivity gains are challenges when competing on global markets. The Africa-to-Asia ratio of labour productivity has decreased since 2000. The widening labour productivity gap is more pronounced in agriculture, but it is also occurring in market services such as transport, financial activities, construction and manufacturing (AUC/OECD, 2018). Closing this gap requires sustained and long-term solutions, while the current doing-business environment agenda is too short-sighted.

As the challenges are huge, governments need to prioritise policies beyond the usual Doing Business reforms. Beyond the basic constraints related to doing business, several firm-level factors prevent African firms from innovating and scaling up. African firms still face many constraints related to finance, infrastructure, tax administration and skilled labour (Figure 1.4). Addressing these basic constraints would require long-term commitments to sustained investment in infrastructure and skills – which this chapter will show later. At the same time, firms' management methods and the personal circumstances of owners and managers greatly affect the firms' survival and growth (Bloom and Van Reenen, 2010; Davies and Kerr, 2018). A study of entrepreneurs in Côte d'Ivoire, Madagascar, Peru and Viet Nam reveals that most firms lack basic capabilities: doing basic bookkeeping, laying out a plant, using tools to plan over a multiyear horizon, identifying a relevant technological advance and cultivating human resources (OECD, 2017a). In addition, African firms tend to be smaller than firms in other regions of the world: about 60% of the size gap between African firms and those in other developing countries remains unexplained even after controlling for the business environment, firms' age, ownership, and markets size (Iacovone, Ramachandran and Schmidt, 2013).

Figure 1.4. **Top five constraints to doing business globally and in developing countries, by firm size**



Source: World Bank (2019b), *World Bank Enterprise Surveys* (database).
StatLink https://doi.org/10.1787/888933966808

This section proposes three sets of measures that can boost firms' capability to compete today and to thrive in the future. These measures would complement the ongoing doing-business reforms:

- *carry out strategic cluster policies*: develop strategic sectors by building on local assets, facilitating linkage among firms and providing business services
- *unlock constraints for small, growing businesses*: use a tailored approach to help different kinds of African SMEs build new niches, grow and create jobs
- *address the new skill demands:* develop stronger public-private alliances, encourage innovative training methods and foster intra-Africa talent mobility.

Policies need to strengthen existing clusters to create linkages between firms and diffuse technologies and business innovation

Productivity policies should not only focus on the leading big firms. The weak linkages among African firms limit the diffusion of innovations from lead firms to the others, due to the large size of the informal economy. Benefits from public investment in African "champions" may not spread economy-wide productivity gains. Moreover, these leading firms only account for only a small proportion of formal employment on the continent. Given the large size of the incoming youth population, governments should ensure inclusive growth by helping African SMEs to create more and better jobs.

Improving Africa's productive systems requires accumulating and spreading new capabilities across different types of firms. Usually, larger firms are better positioned than SMEs to accelerate productivity growth – particularly as they drive most export growth (McKinsey, 2018; Goswami, Medvedev and Olafsen, 2018; UNDP, 2018). However, their overall improvement on the economy depends on the productivity of other firms. The general performance of African firms is heterogeneous across the categories of innovation outcomes:

- Product and process innovations exhibit the most important gaps between African firms and their global competitors, for example in India (Table 1.4). They are slightly more innovative in organisation and marketing. Firms that engage in R&D are more likely to introduce any type of innovation.
- Africa's gross domestic expenditure on research and experimental development (GERD) as a percentage of GDP is at 0.45%, far below the 1% current target for African Union member countries. By comparison, the world's GERD is at 1.3% (UNESCO, 2019).

Table 1.4. **Innovation rates in ten African countries and India**

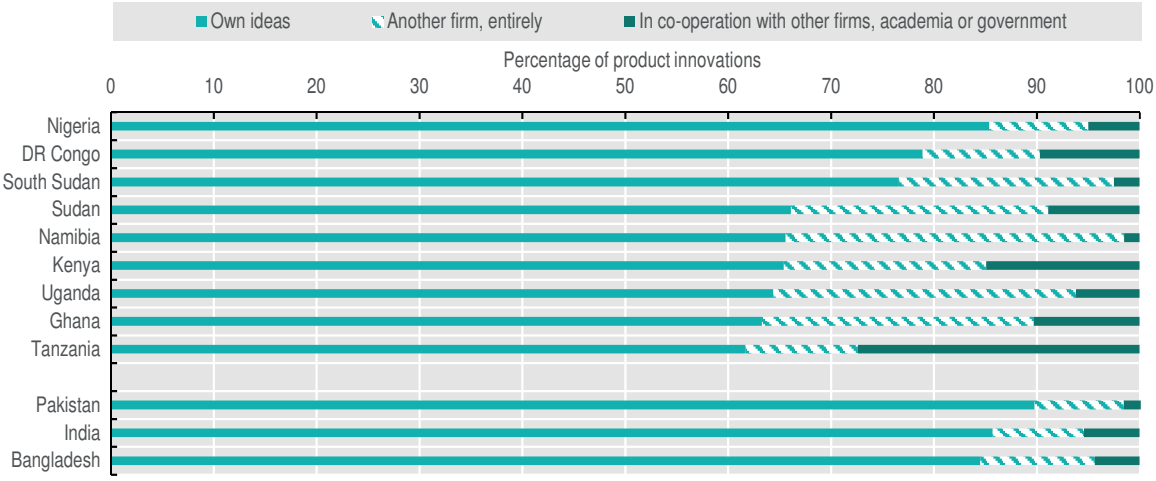
	Product	Process	Product or process	Organisation	Marketing
Nigeria	13.8%	29.6%	37.1%	47.1%	51.6%
Ghana	17.1%	25.3%	36.3%	30.5%	51.9%
Kenya	25.4%	26.4%	43.8%	35.9%	39.0%
Africa average (ten countries)	27.2%	30.7%	46.5%	40.6%	46.1%
India	58.1%	66.2%	91.1%	55.1%	63.8%

Note: Africa average includes: DR Congo, Ghana, Kenya, Namibia, Nigeria, South Sudan, Sudan, Tanzania, Uganda and Zambia.
Source: Buba et al. (2016), *An Assessment of the Investment Climate in Nigeria: The Challenges of Nigeria's Private Sector.*

Existing technologies and know-how must extend beyond the islands of excellence made by the lead and innovative firms. Today Africa's productive structure is highly segmented across firms in terms of productivity and innovation capacities. Though the dearth of data prevents a comprehensive overview of Africa's industrial structure, the evidence available shows large gaps in productivity, management practices and product standards between a small group of highly productive firms – mostly large domestic firms and multinational enterprises (MNEs) – and the rest of the economy. For example, Ghana's top 1% most productive firms produce on average 169 times more value-added per firm than the other 99% (Teal, 2016).

The diffusion of existing technologies and innovation practices is not automatic. As shown in Figure 1.5, firms in Africa do not co-operate with other firms to develop product innovations,[2] nor do they have strong innovation linkages with academia or government institutions. In nine African countries considered in the World Bank's Enterprise Surveys, more than 60% of firms rely on their own ideas and skills to develop product innovations (Buba et al., 2016). In Nigeria, 85% of firms develop them in house: they depend entirely on internal capabilities.

Figure 1.5. **Modalities through which firms develop product innovations in nine African countries, Bangladesh, India and Pakistan**



Note: The World Bank Enterprise Survey asked to which extent innovations are developed in the enterprise or in co-operation with other firms or institutions. In this figure, the modalities though which firms develop product innovation are classified in four groups: i) developed using own ideas in the enterprise, including the hiring of specialised staff or companies; ii) developed in co-operation by other firms or consultants; iii) developed by other firms; and iv) developed in co-operation with academia or government institutions.
Source: Buba et al. (2016) and authors' calculations based on World Bank (2019b), *World Bank Enterprise Surveys* (database).
StatLink https://doi.org/10.1787/888933966827

Box 1.3. **Business innovation and its expected impacts on the economy**

Multiple factors affect firm's innovation and productivity growth.

1. The **level of competition** forces all firms to become more productive to survive and more innovative to escape price competition. Competition also reduces the profit of less productive firms and drives them out of business, thus increasing aggregate productivity levels through a process of "creative destruction" (Schumpeter, 1942; Aghion and Howitt, 2006).
2. The currently dominant policy approach in Africa emphasises the importance of **good business environment and infrastructure** in improving firms' productivity. Indeed, African firms face a number of cross-cutting challenges with their needs varying significantly.
3. Recent research on drivers of firms' upgrading in Africa underlines the role of sector- and **firm-specific characteristics**, such as management capability, the prevalence of the informal sector and the strength of industrial linkages (Bloom et al., 2016; Rodrik, 2016; Altenburg and Lütkenhorst, 2015).
4. New empirical evidence on the heterogeneity of firms and **knowledge linkages** emphasises the bottlenecks in the diffusion of existing technologies and knowledge from national frontier firms to other firms (Andrews, Criscuolo and Gal, 2016; OECD, 2015). This finding suggests that the future of productivity growth will largely depend on reviving the policy channels of diffusing existing technologies and knowledge from national frontier firms to laggards. *Africa's Development Dynamics 2018* pointed to the prevalence of informal firms, the difficulty of formalising them and weak management as additional explanations for African firms' lagging performance (AUC/OECD, 2018).

Economy-wide productivity growth results not only from the ability of the domestic lead firms to catch up with the new technologies and knowledge developed at the global frontier, but also from the need for diffusion of existing technologies and knowledge from national frontier firms to the others. Using the firm-level data in OECD countries between 2001 and 2013, Andrews, Criscuolo and Gal (2016) found that labour productivity at the global frontier increased at an average annual rate of 2.8% in the manufacturing sector, compared to productivity gains of just 0.6% for laggards. This divergence was even more pronounced in business services.

The 2018 update of the *Oslo Manual* defines business innovation outcomes as "a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)".

Source: OECD/Eurostat (2018), *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition*.

Cluster policy can develop strategic sectors by building on local assets and providing business services to help lead firms strengthen their linkages to the local suppliers

Clusters are strategic to develop an economy's latent and revealed comparative advantages (see Chapters 2-6 for the regional analysis of comparative advantages). Cluster policy goes hand-in-hand with foreign direct investment (FDI) policy and the strategy for productive transformation. Clusters enable resource-constrained governments to prioritise by investing in a targeted place; they build linkages among governments,

firms, investors and universities. Governments can simultaneously address barriers to investment and to doing business, for example by providing access to quality infrastructure (especially electricity and road transport), and by creating regulations, such as custom procedures, taxation and business permits. In this process, countries can approach the global technology frontier by attracting FDI using higher capabilities in targeted sectors that have comparative advantages. The relatively higher density of companies, suppliers, service providers and associated institutions in a cluster can lead to higher spill-overs and knowledge transfers, further increasing policy impact.

African countries are becoming more successful in building industrial clusters. Morocco has developed the Tangier-Med into a world-class automotive and aeronautics cluster that produces many parts and components for European manufacturers. In Ethiopia, Eastern Industry Zone and the Hawassa Industrial Park have attracted Chinese manufacturing firms in the textile, garments and shoe manufacturing industry. The Kigali Special Economic Zone (KSEZ) has contributed significantly to Rwanda's economy since its recent creation in 2013. Firms moving into the KSEZ are associated with a 206% increase in sales, a 201% increase in value added and a further 18% increase in the number of permanent employees compared to the trend of similar firms that did not move there (Steenbergen and Javorcik, 2017). This comes in stark contrast with the failure of past SEZs to take off: they had limited linkages with regional economies, so that firms and governments eventually abandoned many projects (Farole, 2011).

In Africa, the low production complexity of the majority of firms limits the scope for interaction between local and internationally-competitive lead firms (Hirschman, 1958; Rodriguez-Clare, 1996)**.** Local firms lack the capabilities to identify potential opportunities and synergies and to seize them. For example, FDI-driven model of SEZs alone may not foster productive transformation in Africa. Linkages between MNEs and domestic firms are weaker in Ethiopia, Ghana, Kenya, Mozambique and Uganda than in Cambodia and Viet Nam, preventing technology transfer by limiting vertical linkages in the supply chains.

Both **backward and forward linkages** are relatively weak:

- Backward linkages to domestic suppliers: 66% of intermediate goods and services for firms in Kenya that receive FDI are imported, compared to 25% in Viet Nam.
- Forward linkages: only 3% of FDI firms in Kenya produce inputs for other Kenyan firms, compared to 61% in Viet Nam (Newman et al., 2019).

Local assets and business services matter for successful cluster policies. At least three aspects are important for African governments to ensure that cluster policy can transform the production structure.

First, the success of cluster depends on its location and linkage with the existing local economy. Governments should identify clusters with a critical mass of interdependent firms and actors based on their specialisation, composition, development stage, the intensity of existing linkages and the ability to create inclusive jobs (Donahue, Parilla and McDearman, 2018). For example, Morocco has successfully taken advantage of the Tangier-Med region's close geographic proximity to European markets, strong local universities and existing infrastructure to support the development of its automotive and aeronautics industry. In Rwanda, a key feature to the success of the Kigali Special Economic Zone is its proximity to the capital, where there are already a critical mass of local suppliers and consumers (Steenbergen and Javorcik, 2017). In contrast, past special economic zones in Central Africa, Tunisia and West Africa were often "cathedrals in the desert": they were located in remote areas without the necessary supporting conditions (Farole, 2011).

Promoting existing clusters may be more effective than building new ones. Clusters such as the Otigba ICT cluster in Nigeria, the Nnewi automotive components cluster and

the Nollywood industry have emerged spontaneously as a result of direct entrepreneurial decisions rather than state planning (Benner, 2012; Otsuka and Sonobe, 2011). In Ghana, the Suame Magazine Industrial Development Organization was created after some 200 000 informal car parts producers had developed into an informal cluster. Policies were introduced *ex post* to support the informal cluster by improving infrastructure, business services and training and by accrediting technical skills that were informally acquired.

Second, local governments can play a match-making role between lead firms, local suppliers and other stakeholders such as research institutions, labour associations and investors. Governments can help create entities that co-ordinate interaction between different stakeholders (Harrison and Rodríguez-Clare, 2010). In South Africa's Durban automotive cluster, the local government brought firms together in industrial associations in the apparel and automotive sectors that were precursors to fully developed clusters. It did so mainly by funding official associations, which led to information exchanges and cost-saving synergies, for example in training workers (Morris and Barnes, 2006).

Stronger involvement across different levels of governments can help identify new activities inside the clusters and improve their implementation. Local governments may be better placed to implement policies thanks to their proximity. In Nigeria in 2004, the Kwara State Government created Shonga Farms, a public-private venture in commercial agriculture, by co-ordinating with local banks, community members and 13 displaced farmers from Zimbabwe. Shonga Farms have grown to be one of Nigeria's biggest agricultural producers, employing between 4 500 and 6 000 workers, depending on the season.

Giving more responsibilities to local governments calls for giving them the capability to raise more resources. Experience from SEZs developed in China and Viet Nam highlights the importance of empowering municipal governments to work closely with firms and investors in the zones to match investment in infrastructure and skills with their needs. In contrast, a recent review of SEZs in Ethiopia reveals a lack of local autonomy, as the Industrial Park Development Corporation built, owned and operated most of them. The lack of autonomy prevented the park management from adopting quick reforms or purchasing essential tools and equipment for maintenance (Tang, 2019).

Many African cities lack the basic infrastructure, urban planning and management capacity to boost their competitiveness (AfDB/OECD/UNDP, 2016). Weak finance resources partly explain this mismatch. Municipalities tend to have larger populations in Africa than in LAC, Europe and North America, yet subnational governments only account for 8% of public spending in Africa compared to 24% in a sample of 95 countries (AfDB/OECD/UNDP, 2015; OECD/UCLG, 2016). Giving more autonomy to local governments to generate their own resources can help bridge this gap, provided transparency and macro-prudential regulations are properly carried out. Cities such as Banha, Egypt, or Nyagatare and Rubavu, Rwanda, generate less than 25% of their revenues locally, compared to over 80% for Medellin in Colombia (AfDB/OECD/UNDP, 2016).

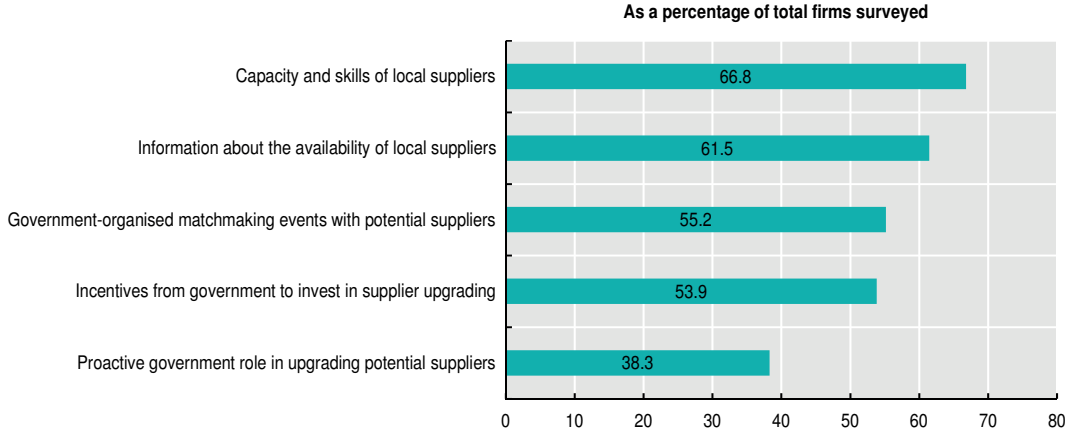
Third, cluster policy comes together with direct services that boost local suppliers' capabilities. Specific interventions should help SMEs upgrade their capacities in producing intermediate goods and services for larger firms, domestically and internationally. The skills of local suppliers and information about them are the two most important factors for foreign firms when they consider working with local suppliers (Figure 1.6).

In Ethiopia, Bole Lemi Phase-I Industrial Park, with the support of the International Development Association, is piloting a new programme to address these concerns. The interventions include trade shows for potential buyers and suppliers to understand the opportunities, capacities and demands of each other. It also provides a matching grant of up to 60% for SMEs to invest in their operation and upgrade.

Past experience from Asia highlights the need to provide support to local suppliers in order to benefit from linkages with international companies in the cluster. In the 1980s,

Singapore was successful in attracting foreign investments through their clusters policy: 75% of their manufacturing output and 80% of exports came from foreign MNEs, with foreign-owned firms accounting for a large part of the services sector, such as financial services, hotels and transport. However, domestic SMEs were lagging behind and had limited links to the leading foreign multinational enterprises. Singaporean government then contracted with the Japanese Productivity Center to set up what is now known as the Standards, Productivity and Innovation Board SPRING to support the capability of local firms. From an initial focus on improving firm management, the Singaporean SPRING now offers a wide range of firm-capability programmes. These include incentivising the private sector through awards and prizes, making equity investments or co-investments, and building capacity in the entire ecosystem through multiple national and international partnerships (Cirera and Maloney, 2017).

Figure 1.6. **What matters for foreign investment firms to source from local suppliers**



Note: The total sample of the survey includes 750 multinational investors and corporate executives. The percentages represent respondents who answered "important" or "critically important" to the question "How important are the capabilities of local firms to act as suppliers in your decision to invest in developing countries?"

Source: Authors' calculations based on World Bank (2017a), *Global Investment Competitiveness Report: Foreign investor Perspectives and Policy Implications*.

StatLink https://doi.org/10.1787/888933966656

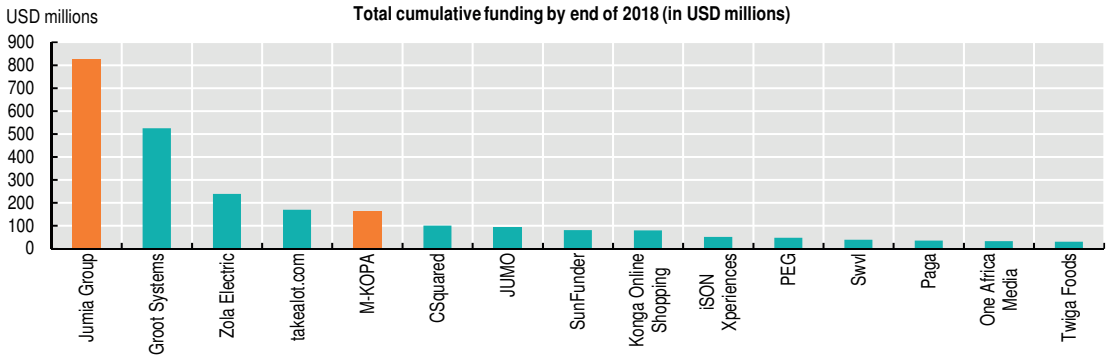
Nonetheless, developing infrastructure for clusters can only be part of a broader strategy to create millions of decent jobs. In Kenya, almost 20% of all manufacturing jobs are located in Export Processing Zones (Signé, 2018). Still Kenya needs to create more jobs beyond these geographic areas. Total employment in Kenya increased by 5.9% annually between 2013 and 2015 (KIPPRA, 2017), but it was largely driven by the rise in informal jobs, which accounted for 85% of all new employment. The employment-to-population ratio was still only 32% in 2014. SMEs represent around 25% of GDP and 83% of informal employment in Kenya, and 50% of GDP in South Africa (Ngarachu, Draper and Owino, 2017). In sub-Saharan Africa, SMEs provide around 80% of informal jobs (UNCTAD, 2017).

Help Africa's small growing businesses specialise in niches and scale up

Africa's small growing businesses (SGBs) remain a pillar of inclusive growth and business innovation.[3] Small young firms with fewer than 20 employees and less than 5 years of experience account for the largest share of net job creation, at 22% (Ayyagari, Demirguc-Kunt and Maksimovic, 2014). Helping these new ventures grow is key to creating jobs on the continent. They can also bring dynamism to the economy through innovation and product differentiation: 20% of new entrepreneurs in Africa introduce a new product or service. Figure 1.7 shows a list of 15 successful African start-ups, all founded less than 10 years ago. Two examples of small growing businesses developed by global entrepreneurs in Africa are:

- Jumia Group, founded in 2012, valued at over USD 1 billion at Initial Public Offering on the New York Stock Exchange (NYSE) in April 2019. Jumia is the first African-based start-up on the NYSE, heralding in a new era of optimism for investments into the sector. The Lagos-based company is now present in more than 18 African countries, providing platforms for e-commerce, holiday booking, food delivery and payment services, among others.
- M-KOPA is a Kenyan solar energy company founded in 2011. During 2016-17, it reported selling more than 100 000 solar photovoltaic panels made in Kenya by Solinc East Africa. While some of its panels have come from overseas, by 2021, M-KOPA hopes to source all its panels from Kenya; this will amount to half a million panels representing 6.6 MW of power. Solinc plans to hire an additional 30 engineers over the next two years to fulfil growing M-KOPA orders.

Figure 1.7. **Fifteen examples of young and fast growing firms in Africa, founded after 2009**



Source: Authors' calculations based on Crunchbase (2019), *Crunchbase Pro* (database).
StatLink https://doi.org/10.1787/888933966846

***The Collaborative for Frontier Finance* (2018) report defines small growing businesses (SGBs) as "businesses, commercially viable, with five to 250 employees having significant potential and ambition for growth".** Concentrated in large and diversified cities, these firms operate across a wide spectrum of sectors (see Box 1.4). Segmenting these SGBs by their growth orientation and their innovation profile reveals three distinct types of firms in Africa (CFF, 2018; Woodruff, 2018):

1. **High-growth ventures** are SGBs seeking disruptive business models and targeting large markets. While often accounting for less than 10% of SGBs in developing countries, high-growth ventures can disproportionately contribute to the economy through their high growth potential and innovation. To fuel their growth, high-growth ventures usually require staged "risk capital investments", embedded ecosystems of investors, highly-skilled workers and infrastructure. In 2018, African tech start-ups raised almost USD 1.2 billion in equity compared to USD 560 million in 2017 (Collon and Dème, 2018).
2. **Dynamic enterprises** deploy existing products or proven business models as they seek to grow through specialisation in niche markets, market extension or step-by-step innovations. Their growth and scale potential is moderate and depends on their access to markets. These firms often face the "missing middle" financing gap, because they are too big for microfinance, too small or risky for traditional bank lending, and lack the growth, return and exit potential for venture capitals.
3. **Livelihood-sustaining enterprises** are often small-scale entities maintaining a source of income for an individual family. They tend to replicate existing business

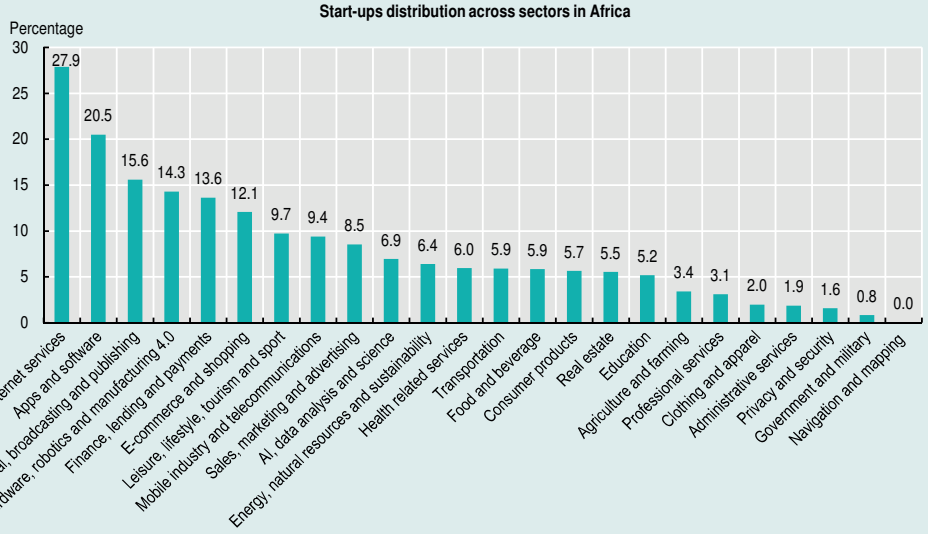
models, serving local markets or value chains. Their financial needs are centred on short-term working capital. Competition can drive the less productive firms out of the local markets, which are becoming better integrated thanks to the diffusion of ICT and to urbanisation (Jensen and Miller, 2018). This type of firm does not include subsistence-driven micro-enterprises that have limited growth prospects.

Box 1.4. **Start-ups in Africa: Where are they and what do they do?**

The majority of start-ups in Africa concentrate in large cities with supporting infrastructure and service providers. This highlights the importance of having a strong supporting ecosystem. For example in 2019, 5 cities host 49% of the 7 000 African start-ups identified by Crunchbase (2019): Cape Town (12.5%), Lagos (10.3%), Johannesburg (10.1%), Nairobi (8.8%) and Cairo (6.9%). These cities offer a strong ecosystem with a critical mass of skills, supporting infrastructure, investors and community for entrepreneurship. Accelerators and mentorship by experienced founders show a positive correlation with the likelihood of receiving funding for early-stage technology firms (Qian, Mulas and Lerner, 2018). Incubators for local start-ups have sprouted in South Africa, such as Jozihub, Capetown Garage, Black Girls Code, Shanduka Black Umbrellas, Raizcorp and The Innovation Hub (see Southern Africa chapter). In contrast, a recent study on tech start-ups in Dar es Salaam reveals that a fragmented start-up ecosystem, where accelerators, mentors and the business community have few linkages, is not conducive to start-up development. The study identified, for example, only 11 investors that made a total of 11 investments in 9 tech start-ups (World Bank, 2017b).

Africa's start-ups are engaging in a variety of sectors. The top three activities by Africa's start-ups are related to IT and Internet; the Apps and software; and the creation of audio-visual contents and broadcasting (Figure 1.8). E-commerce comes 6th (12%). The majority of start-ups in Africa run more than one activity (56.3%). Indeed, 29% run two categories of activities and 27.3% to three or more. Those focusing on only one activity account for 43.7%.

Figure 1.8. **What do African start-ups do?**



Source: Authors' calculations based on Crunchbase (2019), *Crunchbase Pro* (database).
StatLink https://doi.org/10.1787/888933966865

More tailored interventions also are key to help SGBs innovate and scale up, in addition to continuing broad-based reforms for doing business and infrastructure development. National agencies, regional economic communities and the African Intellectual Property Organisation can join forces to promote and facilitate the registration of brands, patents, industrial designs and trademarks in Africa. To date, such registration remains costly and often takes up to a year or more. Government enforcement agencies are not effective in combatting counterfeiters and infringers of intellectual property rights (i4Policy, 2018). Measures to help SMEs co-operate through formal and informal structure can also help them become more productive (Ralandison, Milliot and Harison, 2018a; Ralandison, Milliot and Harison, 2018b).

Policies need to build on local specificities and firms types to help African entrepreneurs develop new niche products and markets. The three types of SGBs mentioned above have different specific needs for policy support (Table 1.5), though they share common challenges such as access to financing and infrastructure. Public policies can help expand business accelerators and community practices that enable firms to carry out innovative activities by focusing both on the business environment and financing of different SGBs:

a. **High-growth ventures**:

- Governments can support the development of the start-up ecosystems through i) updating legal and regulatory frameworks to the new digital context, ii) investing in technological infrastructure and iii) improving the quality of education – especially for science, technology, engineering and mathematics (STEM) education and non-cognitive skills (see more in the next section). Interventions need to be designed and implemented in collaboration with strong inputs from the private sector. For example, Tunisian Startups, an umbrella organisation for startups in Tunisia, was instrumental in drafting and campaigning for the recent Tunisia Startup Act.
- A growing number of funds adopting alternative structures and instruments represent new financial solutions for high-growth ventures. These include using mezzanine instruments (e.g. revenue-share structures); evergreen funding (that gradually infuse capital into enterprises); and permanent capital vehicles that provide more flexibility on time horizons.

b. **Dynamic enterprises**:

- Governments can target support for upgrading firms and expanding their access to markets. Policy makers can help connect firms to global value chains through e-commerce platforms (see Box 1.7) or promote the adoption of standards and quality certifications (see Box 1.10).
- Improving financial intermediation, encouraging local and regional commercial banks to develop specialised products and stimulating local investors through investor networks are key to serve the financing needs of the **dynamic enterprises**. For example, in 2002, Ethiopia's Export Credit Guarantee Scheme and customers' advance payment enabled **Al-Impex** to start exporting oilseeds, pulses and spices. Al-Impex now has grown into a multinational commodity-trading hub in East Africa with an annual turnover of USD 16 million. More recently, new specialised financial service providers such as XSML are targeting this group with a range of financial instruments – equity, mezzanine structures and longer-term financing – and technical support. Since 2010, the XSML fund has provided almost USD 100 million in growth capital to small businesses in Central and East Africa.

c. **Livelihood-sustaining enterprises**:

- Governments can promote the development of basic capabilities. They can also benefit from participating in global value chains by selling through agricultural commodity exchanges or joining trade co-operatives. Quality skills matching job markets needs can be critical for self-employed workers to transition back into gainful employment.
- New technologies can help reduce the costs of credit assessment and of servicing these enterprises. For example, **Liwwa** is an online platform that connects small investors with many other small borrowers. The platform offers affordable, unsecured loans of between USD 7 000 and USD 70 000 for financing trade and assets in 3 to 36 months.

Table 1.5. **Three types of small growing businesses in Africa, their specific needs and policy approaches**

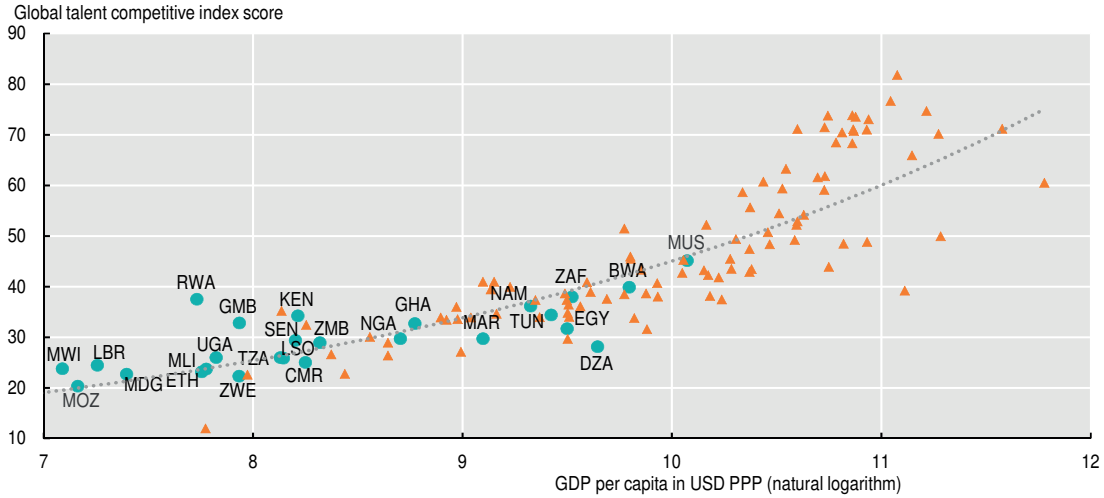
Type of small growing business	Example of specific needs	Potential policy approaches
High-growth ventures with disruptive business models and very high growth potential	- Highly specialised skills and embedded supporting infrastructure (e.g. investors, incubators, accelerators) - Staged risk capital	- Focus on ecosystem - Invest in STEM education and skills
Dynamic and niche enterprises with moderate growth potential	- Difficulty to access formal forms of firm financing, particularly medium- to long-term loans - Small market sizes, limited to specific niches - Weak management skills	- Facilitate access to markets - Support certification and quality upgrading - Offer individualised consulting programmes - Enhance the variety of credit channels available (e.g. asset-backed lending, credit guarantee schemes, micro-equity)
Livelihood-sustaining, small-scale enterprises serving local markets	- Short-term working capital - Weak organisational capabilities	- Adopt reskilling policy to enter labour market - Provide basic management training - Improve financial inclusion through micro-loans

Addressing the skill shortage calls for stronger public-private alliances, deploying new training methods, and increasing talent mobility across the continent

The shifts in technology and global economic order change the composition of demand for skills. For example, the World Bank/LinkedIn Corporation database (2019) shows that the strategic sectors identified by the Southern African Development Community's (SADC) Industrialization Strategy require workers with strong interpersonal, social and behavioural skills. New technology also requires highly-specialised cognitive and technical skills. Nurturing these skills strengthens the adaptability of the workforce to future trends in employment and life-long learning.

- Firms across the region have identified inadequately skilled workforces as a major constraint to their productivity, including 41% of all firms in Tanzania, 30% in Kenya, 9% in South Africa and 6% in Nigeria.
- Proficiency in digital skills is important for African countries to benefit from the Fourth Industrial Revolution. Hence the use of ICT across the continent has much increased: the average ICT intensity of jobs in South Africa increased by 26% over the last decade; the shares of ICT-intensive jobs in Ghana and Kenya's formal sector are 6.7% and 18.4%, respectively (WEF, 2017).
- The Global Talent Competitiveness Index ranks Africa lower than other developing regions when it comes to growing, attracting and retaining talent. The good news is that some African countries are performing better than their income level would suggest, such as Ghana, Kenya, Rwanda and Senegal (Figure 1.9).

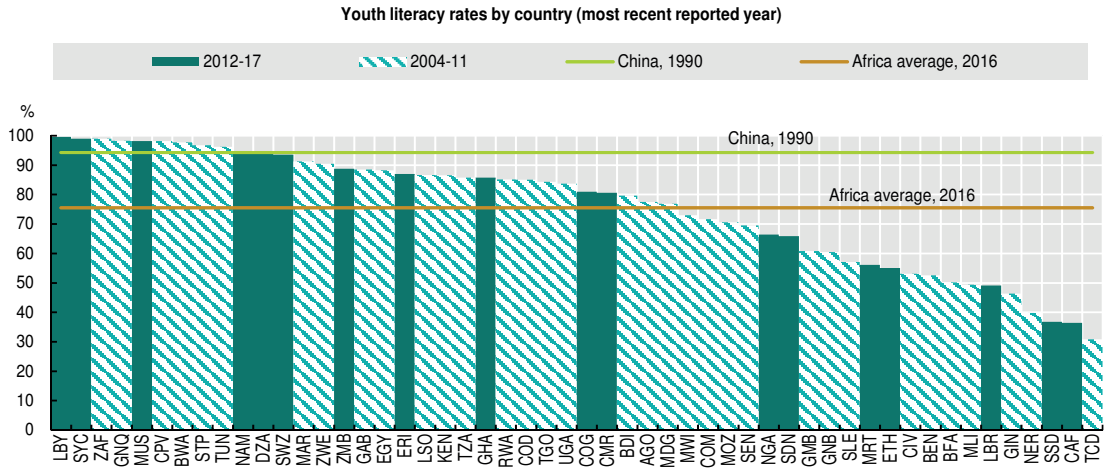
Figure 1.9. **Global Talent Competitive Index scores versus gross domestic product per capita**



Source: INSEAD (2019), *The Global Talent Competitiveness Index 2019: Entrepreneurial Talent and Global Competitiveness.*
StatLink https://doi.org/10.1787/888933966884

Getting skills right for the economy requires stronger co-construction between private and public actors in developing curricula, specific courses and training and in matching workers with firms. Private firms will have to lead this process by identifying their needs and proposing innovative solutions. Local governments need to ensure that learning opportunities remain accessible to all and are not limited only to people who are already employed (AU-EU DETF, 2019). For example in Ghana, the Industrial Skills Development Centre has provided valuable training in mechanical, electrical and process engineering with industry representation on its executive board and strong partnerships with local firms. In Kenya, Generation Kenya is an intensive training programme – founded by USAID and McKinsey & Company in collaboration with the Government of Kenya – to re-train graduates who struggle to find a job (see Box 1.5). In Uganda, the Belgian development agency Enabel has helped the mobile phone operator MTN set up special ICT training programmes in nine vocational training institutions. The largest telephone operator in Africa, MTN provides the technical expertise and equipment as part of its corporate social responsibility initiatives.

Figure 1.10. **Youth literacy rates in Africa, compared to China**



Source: Authors' calculations based on the UNESCO (2019), *Gross Domestic Expenditure on Research and Development* (database).
StatLink https://doi.org/10.1787/888933966903

Box 1.5. Generation Kenya and OCP Skills: Collaborative programmes for youth in Africa

Generation Kenya is a programme that aims to address the skill shortages through intensive boot camp-style training. A demand-driven model, it co-operates with the private sector and with public and private training institutions. Generation Kenya has partnered with 300 employers and 30 TVET partners.

The programme trains youth aged 18-35, mostly secondary school graduates, for high-growth employment activities in Kenya. It prepares them for jobs such as sewing machine operators, financial services sales representatives, retail and restaurant attendants, and hospitality agents. In addition to learning specific technical skills, participants are trained to enhance soft skills, develop positive business mindsets and utilise professional etiquette in the workplace.

Since 2015, Generation Kenya has launched five training programmes in financial services, distributed sales, customer service agents, retail and restaurant services and sewing machine operations. Eighty-five percent of 11 981 Generation Kenya graduates were hired on completion of the programme. The majority (57%) of graduates were women (compared to the national average of 29% in the formal sector). The employers seem satisfied: 82% of supervisors indicate that they would hire Generation Kenya graduates again.

In 2011, the OCP (*Office chérifien du phosphate*), a Moroccan company specialised in phosphates, set up the OCP Skills programme. It promotes skills by paying the university costs for 15 000 young people from mining areas and supports local entrepreneurial projects. The OCP established four skills centres, in the Rhamna, Khouribga and Youssoufia regions, which have benefited 1 463 young people. The centres have also enabled the creation of 172 very small enterprises, subsidised 58 co-operative projects and financed 171 associative projects and 135 projects of income-generating activities.

Sources: USAID (2019), "Generation Kenya: Fact sheet"; Muraya (2018), "Generation Kenya delivers another 4 000 youths for Kenya job market"; Fondation OCP (2018), *Semer le savoir, cultiver l'avenir – Rapport d'activité 2017.*

New technology can complement existing methods of skills training. Digitalisation has opened up the possibility to provide high quality training on a large scale. Firms and development partners can now provide professional training to the workforce using digitalised contents tailored to their needs. In rural Niger, mobile phone-based training within the *Project Alphabétisation de Base par Cellulaire* (Basic Cellular Literacy Project) increased adults' writing and math test scores by 20% – 25% higher than the standard adult literacy and numeracy programme (Aker, Ksoll and Lybbert, 2011).

Regional institutions can adapt the education curricula to firms' specific needs on a larger scale. Successful innovative skills training use technologies in ways that are supplemental and practical, provide relevant curricular materials, focus on the guided use of technology, and build the capacity of qualified instructors. For example, the African Virtual University serves 38 e-learning centres in 26 African countries through open and distance e-learning.

Talented Africans need to be able to easily move across the continent to meet the skill shortage. A pilot survey of several multinational businesses operating in 17 African countries identified inappropriate visa requirements, restrictive quotas and procedural obstacles as constraints to the mobility of skilled labour on the continent. According to the Africa Visa Openness Index, African citizens still needed a visa to travel to 51% of the other African countries in 2017, down from 54% in 2016. The free movement of people continues to vary by region, in part reflecting regional policies. The Economic Community of West African States (ECOWAS) has visa-free travels for all nationals of the bloc (100% open reciprocity), followed by the East African Community (EAC) (90%), the Arab Maghreb Union (AMU) (60%) and the SADC (56%).

Focus on regional production networks: strengthen regional value chains, develop regional norms and co-ordinate investment

Regional complementarities can provide new competitive advantages for many African economies. **Regional value chains** present strong potential for Africa's industrialisation and have much scope for growth, since regional sourcing remains significantly weak. For example, African producers only source 12.9% of their inputs from within the region, compared to Southeast Asia's 21.6%.

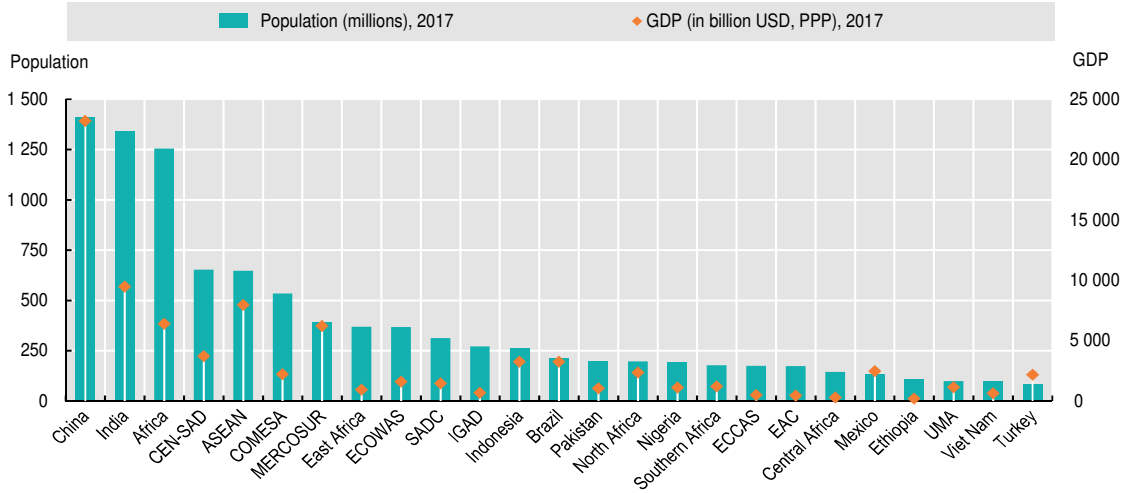
African governments can **join forces** to better attract lead firms and global investors by redefining their main selling points to investors. FDI strategies need further coherence at national and regional levels to become more attractive globally and fine-tune the main selling points to investors.

Investing better in regional production networks leads to larger economies of scale and multiplier effects

African countries will have to think globally and act regionally to generate greater scale. Taken individually, most African countries may not offer sufficiently large economies of scale (Figure 1.11) and enough fundamentals to attract as much FDI as their global competitors. For example, Ethiopia's total exports of textile and clothing products increased to USD 235 million in 2017, which makes it the fifth largest export; however, it hardly competes with Bangladesh at USD 37 billion (Capital Economics, 2018). At the same time, international manufacturers' estimates of labour efficiency and productivity levels in Ethiopia's apparel sector range from 45% to 30% below estimates for Bangladesh and Kenya, respectively (CIIP/World Bank, 2013). Moreover, the Bangladesh Economic Zones Authority (BEZA) aims to develop 100 new economic zones by 2025 (World Bank, 2018a). The BEZA's strategy is to rely mainly on private capital and expertise to build and operate these new zones.

Countries from the Association of Southeast Asian Nations (ASEAN) enjoy several advantages over Africa in attracting Chinese FDI. These include established global production networks, physical and cultural proximity to China, and better competitiveness especially in infrastructure and human capital. They also provide more established financial and business ecosystems, which are needed for FDI.

Figure 1.11. **Population and gross domestic product in selected countries and regions, 2017**



Source: Authors' calculations based on IMF (2019a), *World Economic Outlook*, April 2019 (database).
StatLink https://doi.org/10.1787/888933966922

Regional complementarities are key to generating economies of scale between African countries, rather than a competitive zero-sum game. Countries need to increase coherence between regional commitment and national actions. As shown in Table 1.6, as well as in the regional chapters of this report, policy documents at the sub-regional and country levels share similar ambitions with several overlapping priority sectors. Sometimes, each country aims to become the regional hub in a given sector or to develop one specific industry (e.g. low-skilled manufacturing), directly competing with its neighbours. Realising the potential of regional value chains requires greater co-ordination of national industrial policies, regional industrialisation strategies, and corporate strategies of domestic and transnational firms operating across the region. Beggar-thy-neighbour policies slow down the regional integration process while hindering local capacity development.

Table 1.6. **Sectoral comparison of on-going industrial policies in 20 countries and 4 regional economic communities in Africa**

Country (ISO3)	Strategy (document title)	Timeframe	Agro-food	Metals and mineral processing	Petro-chemicals / fertilisers /plastics	Textiles	Construction materials	Pharmaceuticals	Leather	Wood	Auto industry/ assembly	Electronics
BWA	Industrial Development Policy	2014-28	√	√					√			
CIV	National Development Plan	2016-20	√	√		√	√	√			√	
CMR	Cameroon's Master Plan of Industrialisation	2016-35	√	√	√	√			√	√		
EGY	Industry and Trade Development Strategy	2016-20		√	√	√	√			√		
ETH	Industrial Development Strategic Plan	2013-25	√	√	√	√		√	√	√	√	
GAB	National Industrialization Strategy	2013-25	√	√			√			√		
GHA	An Agenda for jobs: Creating prosperity and equal opportunity for all	2018-21	√	√	√	√		√			√	
KEN	National Industrialization Policy Framework	2012-30	√	√		√		√	√			
LBR	Industry for Liberia's Future	2011-30	√							√		
MAR	Industrial Acceleration Plan	2014-20		√	√	√	√	√	√		√	√
MDG	Act no. 2017-047 on industrial development	2017-25										
MRT	Strategy for the Development of the Industrial Sector in Mauritania	2015-19	√	√	√		√					
MWI	National Industrial Policy	2016-20	√		√			√	√	√		
NGA	National Industrial Revolution Plan	2014-20	√	√	√		√					
RWA	National Industrial Policy	2011-20	√	√	√	√	√	√				
SEN	Plan Senegal Emergent	2014-35	√			√	√					
TUN	National Industry strategy	2011-16	√		√	√	√		√			√
TZA	Integrated Industrial Development Strategy	2011-25	√	√	√	√			√			√
UGA	National Industrial Strategy	2008-ongoing	√		√		√					
ZAF	Industrial Policy Action Plan	2018-21	√	√	√	√		√	√	√	√	
	Total number		**17**	**14**	**13**	**12**	**10**	**7**	**9**	**7**	**5**	**3**
COMESA	Common Market for Eastern and Southern Africa Industrialisation Strategy	2017-26	√	√	√	√		√		√		
EAC	East African Community Industrialisation Policy	2012-32	√	√	√			√				
ECOWAS	West African Common Industrial Policy (WACIP)	2010-ongoing	√				√	√			√	
SADC	SADC Industrialization Strategy and Roadmap	2015-63	√	√				√				

Source: Authors' elaboration based on national and regional industrialisation strategies and Weiss, Windisch and Seric (forthcoming), "Taxonomy for Mapping Industrial Policy".

Firms can gain new competitive edges if African economies develop regional value chains

Most of the identified regional value chains benefit from an abundant access to raw materials or network of suppliers that give them a comparative advantage. The regional chapters in this report show several promising value chains, each with their selected opportunities and challenges (see Table 1.7). For instance, Côte d'Ivoire and Ghana could become significant actors in the chocolate value chain by investing more in quality upgrading strategies such as sustainable farming, brand reputation and trademarking solutions. They already account for two-thirds of cocoa bean production worldwide and have started to move along the value chain by setting up factories to transform their cocoa into intermediary products and chocolate. The major multinational companies in the global chocolate industry already have processing capacities in the two countries.

Table 1.7. **Potential for developing regional value chain in Africa's five regions**

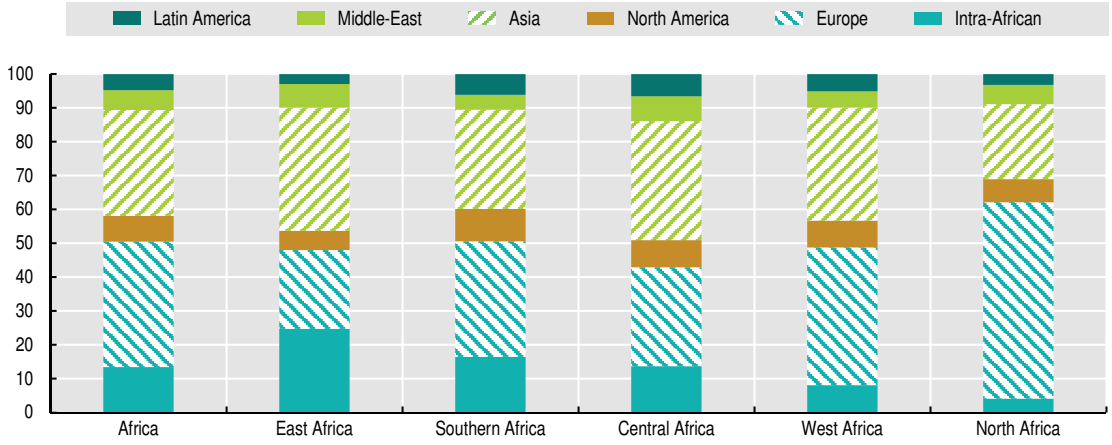
Region	Value chain	Opportunities	Specific challenges to address
Central Africa	Wood processing	Diversity of forest products (ayous, okoumé, sapelli, etc.) Large panel of activities possible: construction, paper pulp, furniture, energy, etc.	Weak processing capacity (sawing, debarking, and cutting trees for plywood and veneer), dominated by informal firms. Better valorise traditional know-how
East Africa	Tourism	Expansion of air transport (notably through Ethiopian Airways, Kenya Airways and RwandAir) Reduction of administrative barriers to entry for tourists (visa on arrival; single East Africa tourist visa for Kenya, Rwanda and Uganda) Emerging regional co-operation to jointly promote East Africa as a tourist destination (regional packages)	Administrative costs, lack of infrastructure in remote areas Promotion of green tourism and preservation of ecological sites, better-value traditional customs, wildlife and national heritage Security issues in some countries
North Africa	Textiles/clothing	Geographical proximity to the European Union and free trade agreement with the United States Accumulated know-how Availability of raw material in most of the region (wool, cotton, etc.)	Need to target specific niches to move upmarket in this chain (design, branding, marketing, etc.)
Southern Africa	Automotive	Strong automotive industry in South Africa Existing production of intermediary inputs in the region (batteries from Botswana, car seat kits manufactured in Lesotho)	Need to identify niches and supply at a competitive rate Small market size
West Africa	Cocoa industry	Global dominance in cocoa bean production Opportunity to create a cross-border Special Economic Zone	Need to develop activities and services that create more value added (branding, marketing, etc.)

Several African regional economic communities are starting to actively support the creation of regional value chains. Most notably, the Action Plan for the SADC's Industrialization Strategy prioritises six key clusters for regional value chain development based on the comparative advantages of each country and the region as a whole: agro-processing, minerals extraction and beneficiation, pharmaceuticals, consumer goods, automobiles, and modern services. The action plan identified and costed specific projects to better align and carry out existing strategies (e.g. Industrialisation Upgrading and Modernisation Programme and Minerals Beneficiation Strategy), develop technical skills (e.g. SADC Centres of Excellence), and address service trade (SADC, 2015). In West Africa, Burkina Faso, Côte d'Ivoire and Mali are launching the first cross-border SEZs to attract private sector investment in agribusiness, agro-industry and the mining sector.

Yet most of these opportunities remain untapped. The level of regional sourcing in Africa remains too weak, the average being under 15% (Figure 1.12). These figures are low when compared to Asian countries. Intra-regional sourcing in Southeast Asia accounts for more than 80% of exports in industries such as motor vehicles, textiles and apparels, and computer, electronic and optical products (OECD, 2018a).

Much heterogeneity exists across African regions. The share of intra-Africa value addition in exports is highest in East Africa at 25%, driven by the development of the East African Economic Community. In contrast, the continental market only accounts for 4% of value added in exports from North Africa. In certain cases, regional value chains have weakened in recent years. For example, the mining chain in Southern Africa traditionally relied on South Africa as a supply hub for capital goods. However, this position was challenged in recent years by more competitiveness imports of capital goods from China (Fessehaie and Rustomjee, 2018). Other agro-based value chains remain limited to primary processing. Activities such as marketing, branding and design could be key to capture higher value addition.

Figure 1.12. **Sources of value addition in African exports**



Source: AfDB/OECD/UNDP (2014), *African Economic Outlook 2014: Global Value Chains and Africa's Industrialisation*.
StatLink https://doi.org/10.1787/888933966941

Strong benchmarking and monitoring can sustain the political commitment to implement the regional strategies. Several good examples exist on the continent:

- The EAC's Common Market scorecard tracks member countries' progress in removing legislative and regulatory restrictions to the movement of capital, services and goods.
- The SADC is monitoring the implementation of its Investment Policy Framework through a number of indicators based both on a framework of laws and conditions and on investment outcomes and development benefits.

Strengthening regional co-operation can facilitate value chain development in the long term. A global review of 279 preferential trade agreements (PTAs) show that deeper PTAs stimulate the development of value chains by facilitating trade of intermediate goods and FDI flows (Osnago, Rocha and Ruta, 2017). Provisions that improve the contractibility of intermediate goods, such as those related to facilitating customs, to addressing sanitary and phyto-sanitary measures and to harmonising product standards and regulations, are particularly important to smooth out differences in contractual institutions and reduce the uncertainty in international transactions. In contrast, the experience from the Southern Common Market (MERCOSUR) shows that tariff reduction does not necessarily lead to higher trade in intermediate goods (Box 1.6).

Development partners could also fill a gap in enhancing resources of regional organisations to effectively manage and monitor regional initiatives. For instance, Africa`s traditional partners have long supported the continent's regional integration efforts through trade-related development aid, with well-established technical support

structures and capacity building initiatives (ICTSD, 2016). Future engagement with donors and development partners could be increased. In particular, donors could help the region integrate the various plans that have been adopted and are in motion (ICTSD, 2016). In the implementation process, political, financial, managerial and technical resources are essential to sustain such a reform. Development partners can also help combine the various sectorial and bilateral approaches to avoid silos.

Box 1.6. The MERCOSUR experience

The creation of South America's Southern Common Market, MERCOSUR, did not lead to a sustainable increase in intra-regional trade. MERCOSUR was established in 1991 with the signature of the Treaty of Asunción. Following its implementation, the share of intra-regional trade in total trade more than doubled in less than a decade. While in 1991 intra-regional traded only accounted for slightly more than 10% of total trade, more than 20% was intra-regional in the late 1990's. This increase was mainly driven by manufacturing and probably did not come from a trade diversification. Indeed, intra-regional and world trade expanded in tandem. Moreover, in the early 2000s intra-regional trade experienced a decline. Since then, the share of intra-regional trade in total trade has remained around 15%.

Two main reasons lie behind this stagnation in the share of intra-regional trade. First is the emergence of China. Second, trade frictions grew inside MERSOSUR. This case study suggests that trade facilitation is needed but is not enough on its own. Complementary measures – such as strengthening firms' capability, fostering regional production networks and common regional norms – are key (IDB, 2018).

Source: IDB (2018), *Connecting the Dots: A Road Map for Better Integration in Latin America and the Caribbean*.

Smallholders can integrate regional value chains if governments develop regional norms and certifications

Product differentiation, quality upgrading and certification are essential for value addition in most agricultural value chains. Quality grading systems, labelling and certification can help producing countries move beyond traditional commodity trade on global markets for high-value crops (e.g. coffee, tea, cocoa), increase earnings from exports and raise resilience to price shocks. Potential exists for upgrading along the regional value chains (RVCs) such as processed foods, fresh fruit and vegetables. Demand for processed agricultural products is growing rapidly in Africa (AUC/OECD, 2018). Urbanisation in the region is reducing the distances between producers in rural areas and consumers in urban and peri-urban areas. This trend is supporting agricultural production and the growth of the agro-food industry, which created 66% of jobs in West Africa alone between 2012 and 2015 (Allen, Heinrigs and Heo, 2018).

Agricultural value chains are an obvious target for intervention, given the central role of agriculture in developing economies, particularly in Africa. Agriculture employs over 50% of the population on the continent (AUC/OECD, 2018). According to a census of agricultural land in 20 African countries, over 75% of land holdings are less than two hectares (Lowder, Skoet and Raney, 2016). Linking smallholder farmers to value chains aligns with the objectives of the Comprehensive Africa Agricultural Development Programme (CAADP) and the commitments of the 2014 Malabo Declaration[4] to: create job opportunities in agricultural value chains for 30% of the youth in the sector; reduce post-harvest losses by 50% and sustain sectoral growth rates of 6% per year. So far, the 47 signatory countries are only partially on track to meet these objectives (AUC, 2018).

Empowering farming associations and co-operatives to carry out services can help bringing smallholder producers together and linking them to RVCs. Generally, Africa's farmers face numerous challenges such as small economies of scale and networks, limited access to credit, and limited business and managerial capabilities (Bamber et al., 2014). Enabling smallholder farmers to join value chains has the potential to raise incomes, stave off poverty, reduce inequalities and boost private sector activity throughout the continent in order to bring long-term sustainable welfare gains (Bamber et al., 2014).

- Interventions promoting value chain integration for smallholder farmers must take into account the need for balance between cash and subsistence crops. Setting up post-harvest solutions such as warehouse receipt systems could benefit farmers from the onset. It has put commodity exchanges on the agenda of development partners that may now be ready to fund larger projects (AfDB, 2013). Nonetheless, many domestic markets in sub-Saharan Africa are too small to support the development of standalone exchanges, hence a regional platform could pull together a much larger market (see Box 1.7).
- Direct technical assistance to farmers can help overcome market asymmetries – including strengthening farmers' bargaining position vis-à-vis large firms – and increase production quality. For example, smallholder farmers play a key role in Ethiopia's agricultural sector, representing approximately 96% of cultivated areas and crop output (Taffesse, 2019). While productivity and market integration are still a long way ahead, smallholders increased their output and transitioned to higher value grain production thanks to extension services and training in the use of improved seeds and the management of farm businesses. Capacity building programmes such as the Support to Farmers' Organizations in Africa Programme are also valuable in bringing together farmers and provide support to better manage their enterprises (IFAD, n.d.).

Building on local specificities can help African entrepreneurs to develop new niche products and markets. For example, the Ghana Centre for Scientific Research into Plant Medicine led scientific research on plant medicine and ensured quality control through careful planning and modern technology. Their partnership with Kasapreko, a local firm, introduced Alomo Bitters (an herbal-based alcoholic drink) which became a major commercial success in Ghana and other markets in West Africa. In 2010, about 951 tonnes of crude plant medicine were sold on Ghana's herbal markets in 2010, with a total value of around USD 7.8 million (Van Andel, Myren and Van Onselen, 2012). This market now features many micro-entrepreneurs establishing herbal clinics and pharmacy shops in urban centres, as well as several large companies mass-producing plant medicine for West African and OECD markets.

Box 1.7. Linking small and medium-sized enterprises to global markets through e-commerce: Côte d'Ivoire, Morocco and Rwanda

In 2014, the International Trade Center (ITC) launched the E-Solution Program offering a package of technical and advisory services to help firms overcome challenges related to online commerce. The intention is to create national co-operatives and online platforms in African countries and to group them into a pan-African collective – the Africa Electronic Commerce Cooperative – for greater scale and impact.

- **Côte d'Ivoire** piloted some of these solutions in 2014, where sellers could receive payments from the United States in a legally compliant manner through PayPal, Visa and MasterCard.

Box 1.7. **Linking small and medium-sized enterprises to global markets through e-commerce: Côte d'Ivoire, Morocco and Rwanda** *(cont.)*

- **Morocco** had a fairly developed domestic e-commerce, but local SMEs had not been able to effectively enter the global e-commerce marketplace (IPEMED, 2015). In 2015, a group of Moroccan SMEs that had been using e-commerce to sell products domestically formed an export co-operative called Made in Morocco. The co-operative asked the ITC for help with solutions for payment services and logistic facilities for foreign markets (OECD, 2017b). On logistics, ITC brokered business-to-business deals with international partners for transportation, storage and distribution. ITC also helped the co-operative establish a formal commercial presence in Europe, the United Arab Emirates and the United States. It reassured customers that they would benefit fully from local consumer protection laws. Export sales of the co-operative sharply increased, the number of the co-operative's members reached 400 SMEs – ranging from olive oil and cosmetics to books and music –, and several of them trading abroad for the first time (Vaena, 2017).

- In 2017, the ITC launched Enabling the Future of E-commerce in **Rwanda** to provide local micro, small and medium-sized enterprises e-commerce training (ITC, 2018). The ITC performed more than 800 interviews to assess consumers' behaviour and expectations from online selling. To address the challenges linked to Rwanda being a landlocked country and to its lack of adequate delivery system, ITC teamed up with DHL to design the E-commerce Service Center (ECSC). It will offer warehousing and transportation services, starting operations halfway through 2019. Grouping orders from multiple companies through the ECSC will reduce transportation costs and the price for the end customer.

- After a pilot phase in **Côte d'Ivoire**, a regional approach was considered in 2018 with the creation of two online platforms designed to facilitate trade and business opportunities within and outside the West African Economic and Monetary Union:
  - The ConnectUEMOA platform offers business-to-business solutions to local SMEs, allowing them to promote their activities and products through a virtual marketplace. Currently, the platform comprises a total of 2 270 registered firms.
  - The Trade Obstacles Alert Mechanism platform gives local firms the opportunity to report the obstacles they encounter while trading, with a particular focus on non-tariff barriers. It also allows the Regional Trade Facilitation Committee to monitor the impact of the implemented changes. The latter was first implemented and piloted in Côte d'Ivoire in 2014 and has received positive feedback.

Sources: Authors' compilation based on IPEMED (2015), *E-commerce in Africa: Morocco, Tunisia, Senegal and Ivory Coast;* ITC (2018), "Rwandan businesses eye e-commerce success"; OECD (2017b), "Made in Morocco: Case study on linking SMEs to the world of e-commerce", *2017 Aid for Trade – Case Study Template*.

Development partners have an important role to play and can bring immediate benefits to smallholders. Development partners – together with national and local governments – can support the capacity building of farmer organisations (Swinnen, Colen and Maertens, 2013). Development partners can assist in providing training for farmers and agricultural workers on standards and supply chain management, as well as on skills upgrading to capture downstream activities such as processing and packaging

(Bamber et al., 2014). Additionally, development partners can share and help implement best practices to promote gender equality in value chain participation, aiding women-owned businesses in overcoming the numerous additional constraints they face (World Bank, 2019d; GIZ, 2013). Often, lead firms in downstream segments of value chains set their own standards, which are *de facto* mandatory for suppliers to follow if they want to remain in the value chain. Most SMEs – regardless of productivity and competitiveness – do not have international certifications, often due to the high cost of obtaining them. Governments and development partners can assist in this phase, enabling firms to be internationally relevant and to increase their chances of joining value chains.

Over the medium term, regional commodity exchanges can overcome issues by increasing breadth (number of commodities) and depth (volume of commodities traded) and by promoting sufficient liquidity in the market. They can reduce costs associated with identifying market outlets, inspecting product quality, and finding buyers or sellers (IFPRI, 2010). Established in 2013, the East African Exchange (EAX) covers the Kenyan, Rwandan and Ugandan markets. Its goal is to create more bargaining power for smallholder farmers by providing accurate and reliable information, secured storage, and increased penetration of credit and agricultural financing (EAX, n.d.). For instance, thanks to a partnership with several financing institutions, farmers can deposit their cereals in an EAX warehouse and use the receipt given by the exchange as collateral for loans of up to 75% of the produce value. Since its creation, farmers have gotten access to USD 4.7 million to improve their agricultural enterprises (Bizimungu, 2018). However, the EAX's trade volumes remain limited and mostly concentrated in Rwanda for the moment, requiring increased co-operation and co-ordination among member countries (Esiara, 2016).

Box 1.8. **Mixed results of agricultural commodity exchanges**

Initiatives by country-level agricultural commodity exchanges in Africa have produced mixed results, and they are unable to tackle all the challenges they face (Songwe, 2016). Except for those in South Africa, many national initiatives have not succeeded due to small market sizes, limited market integration or government interventions:

- Zambia and Zimbabwe suspended their operations following unusual price hikes and subsequent government intervention, despite initial successes.
- The Kenyan Agricultural Commodity Exchange and the Uganda Commodity Exchange, launched in the late 1990s, have not been able to attract sizable trade volumes. Currently, their limited roles include providing price information in Kenya and regulating some warehouses on behalf of the government in Uganda.
- Since 2004, more and more countries have launched exchanges, such as the Agricultural Commodity Exchange in Malawi in 2004, Nigeria's exchange in 2006, the Zambian exchange (ZAMACE) in 2007 and the Ethiopian Commodity Exchange (ECX) in 2008.
- In December 2008, the Ethiopian government launched ECX to promote better linkages between smallholder farmers and markets, an initiative praised by the media (The Guardian, 2012; BBC, 2010). Its coffee trade volumes increased from 138 000 tonnes in its first year to 257 000 tonnes in 2016. ECX effectively linked 2.4 million smallholders through co-operatives and facilitated the dissemination of real time market information to farmers, traders and agricultural processors

Box 1.8. **Mixed results of agricultural commodity exchanges** *(cont.)*

(Haile, Volk and Rehermann, 2017). However, the value that coffee farmers received for their harvests remained decoupled from international prices, suggesting limited smallholder integration into the global market (Hernandez et al., 2017). Recent research showed that ECX could not strengthen its relationship between international and local coffee prices (coffee made up 35% of Ethiopia's exports from 2000 to 2014). The interdependence between farm gate prices and auction and world prices remained low.

The limited outcome of ECX on the international-domestic price dynamics has three possible explanations:

1. The pre-existence of a Coffee Auction Market centralised in Addis Ababa before ECX already integrated markets well enough.
2. The transaction costs associated with stronger regulations can also dampen the effectiveness of some ECX's innovations such as electronic payments.
3. Weak infrastructure and low productivity might affect price relationship between markets.

African firms can gain new capabilities if governments redefine their FDI strategies

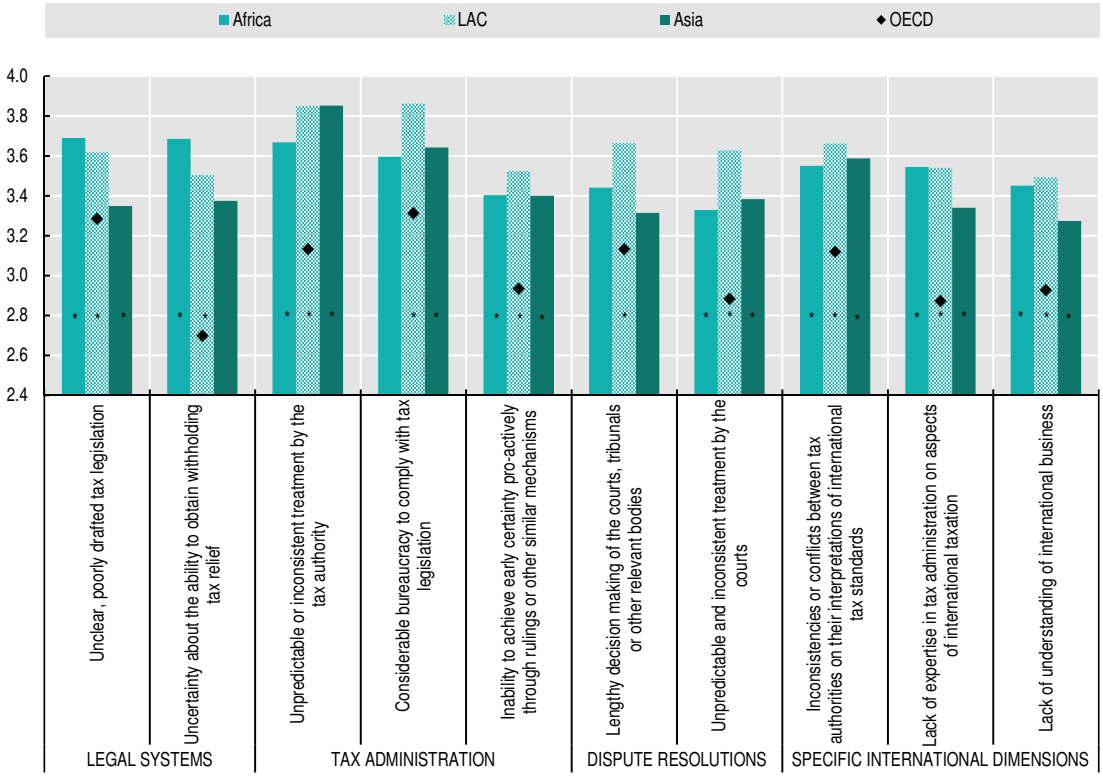
African countries can join forces to better attract FDI. The continent's domestic markets are growing and attracting foreign investments. A rapidly growing population and booming local demand are also attracting FDI: the potential of domestic and regional markets attracted 53.4% of new FDI projects to Africa in 2013-17 (fDi Markets, 2018). However, most individual African economies remain too small. By co-operating, African governments can have more bargaining power to select and monitor better deals for the local economies.

So far, many African national and local governments have been competing globally for FDI, rather than with other African countries or cities. In a globalised world where distance is less a barrier, the landscape of competition between cities for FDI is not just local, national or regional but global (Hanson, 2001; Alderson and Beckfield 2004). For example, no African city belongs to Johannesburg's top five competitors (Bogota, Chicago, Istanbul, Delhi and Buenos Aires). The main competitors for FDI for Cairo are also outside the continent (Al Manamah, Vilnius, Lima, Kiev and Riyadh). Only Abidjan counts three African cities among its top five competitors (Kampala, Kigali, and Dar es Salaam), followed by two non-African cities (Vientiane and Lahore). To attract global investment, national and local governments need to intimately engage with higher scales of policy making, at supra-regional and continental levels. Since attracting global FDI is highly competitive, regional co-operation is critical to amplify individual cities' and countries' negotiation strength (UN-HABITAT/IHS-EUR, 2018).

Relying on low taxes and low labour costs is not enough to attract international investors. Globally, low tax rates and low labour costs rank as the seventh and eighth motivation out of ten. Less than 20% of companies consider benefiting from low tax rates as critically important for their investment decisions (World Bank, 2017a). In contrast, tax uncertainty appears as a major factor for investment decisions in Africa. This is according to the 2016 OECD Business Survey on Taxation covering 724 multinational companies,

which included ambiguity in tax legislation, uncertainty about withholding tax reliefs and inconsistent treatment by tax authorities (Figure 1.13). Similarly, almost half of the companies in the world do not consider the low cost of labour and other production inputs as important or critically important; even for efficiency-seeking FDI, the availability of a skilled workforce is more important.

Figure 1.13. **Top ten sources of tax uncertainty for multinationals operating in Africa, Latin America and the Caribbean, and Asia**



Note: Results for the question, "Please identify in your experience how important each of the below factors has been in increasing the overall uncertainty on tax issues in the countries you have selected?". The respondents could choose from a scale from 5 to 1, where 5 is extremely important and one is the least important. The questions represented in this table were asked separately for each country selected by the respondents, and each respondent could select a maximum of 4 countries.

* denotes significance of 5% in the difference between the region and OECD.

Source: OECD/IMF (2018).

StatLink https://doi.org/10.1787/888933966960

- **African policy makers can better align their FDI strategies by identifying their key selling points for each type of FDI.** FDI falls into four categories based on investors' motivations for investment decisions: market seeking, efficiency seeking, natural resource seeking and strategic asset seeking (Dunning and Lundan, 2008; World Bank, 2017a). Different types of FDI respond differently to policy measures. For example, efficiency-seeking FDI has as its main objective to reduce costs and is sensitive to changes in firms' operational costs. Strong currency volatility or increased difficulties in the free exchange of goods and services could deter such efficiency-seeking FDI. By contrast, the three other types of investors – market seeking, natural resource seeking and strategic asset seeking – tend to be more attracted by the size of local markets, clear property rights and the legal framework for doing business. They may also invest in local currencies.

- **Many African countries have an overlapping base for agricultural production.** This leaves room for more complementarity among countries in most African regions than in other world regions such as Latin America and the Caribbean or Asia. Regional value chains could help to leverage Africa's fast-growing demand for processed food products to promote stronger supplier networks around regional lead firms. Demand for food products is expected to triple by 2030.
- **Getting the basics right is the most important factor to attract FDI in the short term.** Domestic political and macroeconomic stability and the dependability of the regulatory environment rank among the top four determinants of FDI inflows. Establishing a clear and stable regulatory framework, protected from arbitrary decisions, is essential in order to attract FDI. In addition, 66% of investors consider the capacity and skills of local suppliers as critically important for FDI decisions. Investors are more interested in information on the availability of local suppliers rather than in levels of taxation (World Bank, 2017a).
- **Countries can avoid inappropriate tax competition by developing regional co-ordination mechanisms targeting different types of FDI.** When access to domestic markets motivates investors, the leading factor driving decisions to choose an investment location is not the "fiscal incentives". Regional co-operation is essential to avoid a "competitiveness race" that would lead to lower welfare for host countries. For example, the SADC has called for wide collaboration on tax incentives to reinforce regional co-ordinated actions to respond to the issue of harmful tax competition. Establishing a programme of tax regulatory convergence could gradually harmonise laws, align national regulations or create regional standards.

In the medium term, increasing reliability and reducing the cost of electricity through regional power pools will attract more FDI. Five regional economic communities (ECOWAS, the Economic Community of Central African States, COMESA, SADC and AMU) already have active regional interconnection projects and power generation plants. Scaling up the regional power pools can lower capital investments at national level, reduce system operational costs and facilitate the creation of appropriate institutional frameworks for electricity trade. In a fully integrated energy supply scenario, power pools could create savings of USD 41 billion per year by 2040 (UNEP, 2017). Additionally, the levelled cost of energy would lead to savings of between 6% (in Southern Africa) and 10 % (in East Africa) for end-users, equivalent to nearly USD 10 billion per year (Castellano et al., 2015). East Africa's more stable investment climate and better regional interconnections have made it easier to increase electrification rates. The region has accounted for over 80% of the decline in the number of people without access to electricity in sub-Saharan Africa since 2012.

Focus on firms' ability to thrive on growing demand: target specific markets, improve trade facilitation and remove non-tariff barriers to trade

Export strategies need to differentiate between the challenges faced by firms tapping intra-African and global markets:

- Intra-African trade is key for diversifying and for accumulating new capabilities, particularly for SMEs. Policy interventions should aim to make trade easier by reducing uncertainties linked to market access.
- Global trade remains the main driver of export growth and technology transfers. Policy makers should help increase firms' abilities to anticipate and respond to changes in standards and consumer demand.

Regional policies can follow three key steps to enhance firms' ability to export to regional, continental and global markets:

1. Export strategy needs to differentiate between tapping intra-Africa markets and tapping global markets.
2. In the short term, reducing administrative procedures and promoting the development of logistic services can facilitate market access and help firms respond better to market changes.
3. In the medium term, improving regional infrastructure, particularly in energy transmission and generation, roads, ports, and payment systems can reduce costs for firms and boost trade and economic growth across the continent.

Three mega-trends are changing African and global demand now and will continue in the coming decades: shifting wealth (the change in economic geography from advanced to emerging economies); Africa's demographic revolution; and spatial transformation through rapid urbanisation (AUC/OECD, 2018).

- Outside of Africa, the process of shifting wealth has generated new sources of demand in global markets. Emerging markets in Asia and Latin America increased their imports of consumption goods from USD 870 billion to USD 1 279 billion between 2009 and 2016. China accounted for a third of this increase. China's import of consumption goods more than doubled from USD 92 billion to 211 billion between 2009 and 2016.
- Africa's domestic markets are expanding rapidly. Population growth, rising income levels and more concentrated demand in urban centres are making Africa's growing domestic markets more conducive to economic transformation.

However, currently, African firms are losing out to new competitors both at home and in emerging markets. Between 2009 and 2016, African exports of consumption goods to African markets decreased from USD 12.9 billion to 11.8 billion. At the same time, imports of consumption goods from the rest of the world grew from USD 11.2 billion to 19.0 billion. In emerging markets such as China, African exporters also lag behind new competitors from Asia and Latin America in tapping this new demand. African exporters only accounted for 0.3% of the increase in China's consumption imports, compared to 12.0% from ASEAN countries and 5.1% from Latin America and the Caribbean. An example is Kenya's apparel and textile industry: While the quality of the imported fabric is very good generally, "long order-to-delivery times restrict them from competing in the higher margin, fast-fashion segment of the market" (Konishi et al., 2015).

Time and cost to trade across borders remain higher in Africa than other global regions. According to the World Bank's Doing Business data, complying with border and documentary requirements in Africa is on average 21.9% and 32.7% more expensive than in Latin America and the Caribbean and South Asia, respectively (World Bank, 2018b). Nevertheless, significant differences exist between export and import procedures and African regions. For example, import procedures are cheapest and require the least time in Southern Africa compared to the rest of the continent as well as other developing regions. On the other hand, time and cost of export procedures in North, Southern and West Africa are comparable to South Asia and Latin America and the Caribbean.

Improving African firms' export survival rates will help them diversify and adapt to the new demand

Exporting benefits the whole economy, even when a small fraction of firms engages directly in foreign markets. Exporting pushes firms to upgrade their production and

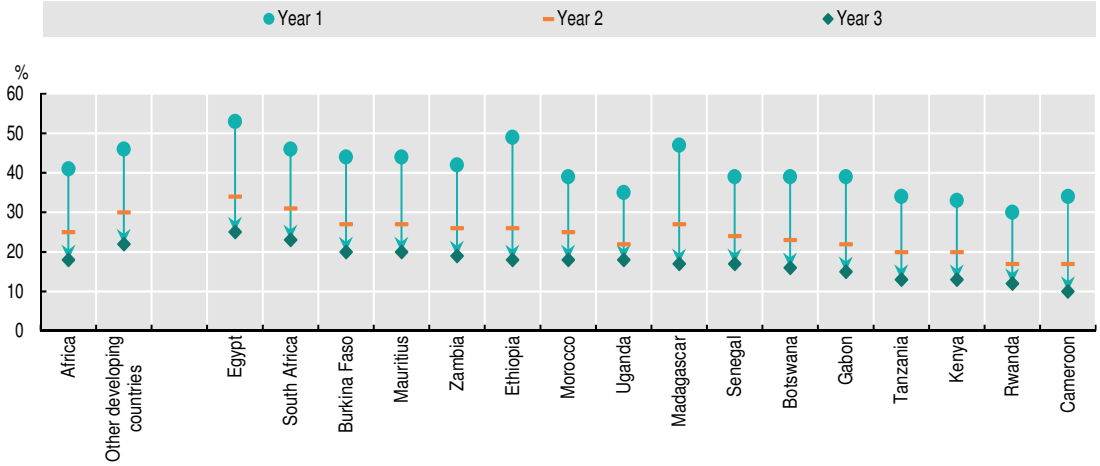
differentiate their products. Competitive firms tend to absorb and implement knowledge that allows them to satisfy demanding buyers (De Loecker, 2003; De Loecker, 2013). The profitability of small rug manufacturers in Egypt increases by 16-26% when they export to more sophisticated foreign firms (Atkin, Khandelwal and Osman, 2017).

Exporting firms also shift to producing fewer outputs of higher quality, i.e. those requiring more labour hours and sold at higher prices. The process of exporting boosts the technical efficiencies of the firms that chose to export through "learning-by-exporting". As these firms become more productive, they create competitive pressure for other domestic firms to upgrade in order to stay relevant in the production chain.

African countries need to amplify this push through exports. So far, only 18% of Africa's new exporters survive beyond their third year, or 4 percentage points less than exporters in other developing countries at 22%. Beyond the third year, however, the survival rate increases substantially for firms (Figure 1.14). Using a smaller subset of 11 countries with exporter-level microdata (including three African countries), the conditional survival rate improves beyond the third year across all countries in the sample. This leads to two observations:

- This low survival rate is a common feature of the global export market. It reflects the intense competition in export markets where relatively less productive firms must exit the market. In a context of high market entry cost, the survival rate increases with firms' export experience (Baldwin, 1990).
- African exporters' slightly lower survival rate than their peers in other developing countries may discourage capable firms from exporting. It lowers the present value of exporting when capable firms face the decision to start exporting (Ruhl and Willis, 2017).

Figure 1.14. **Survival rate of African exporters beyond their third year, compared to other developing regions**



Source: Authors' calculations based on World Bank (2019c), *Exporter Dynamics Database*.
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The relatively low survival rate of young African exporters also prevents firms from tapping new products and new markets. The average African exporter sends 5.4 products to 2.5 destinations, whereas other developing countries export 5.9 products to 3.0 markets on average. Experience in the export market enables firms to boost their capacities by:

accumulating knowledge on the existing demand and its future trends; fine-tuning their production process; reinvesting the export sales to increase their size and capital intensiveness; and boosting their productivity level. Thriving exporters face fewer credit constraints in obtaining loans and can build more durable partnerships with buyers. Importers often start with small purchases when initiating a trade relationship with a new supplier that they do not know well. Orders increase with higher confidence and certainty of the supplier's ability to fulfil the buyer's expectations (Rauch and Watson, 2003; Besedeš, 2008).

Making it easier for African firms to export to regional and global markets can increase their growth potential and promote greater dynamism of the continent's private sector. While it is essential to let uncompetitive firms exit export markets, policy can boost the survival rate of capable firms. Enhancing firms' export capabilities requires addressing binding constraints for these firms to survive in destination markets. Limited access to reliable infrastructure, affordable finance, skilled workers, market information, technology and security lead capable firms to exit export markets. Policy makers should also help firms exporting globally to anticipate and respond to changes, particularly in market standards and consumer demand.

Firms will require different policy interventions depending on their destination markets

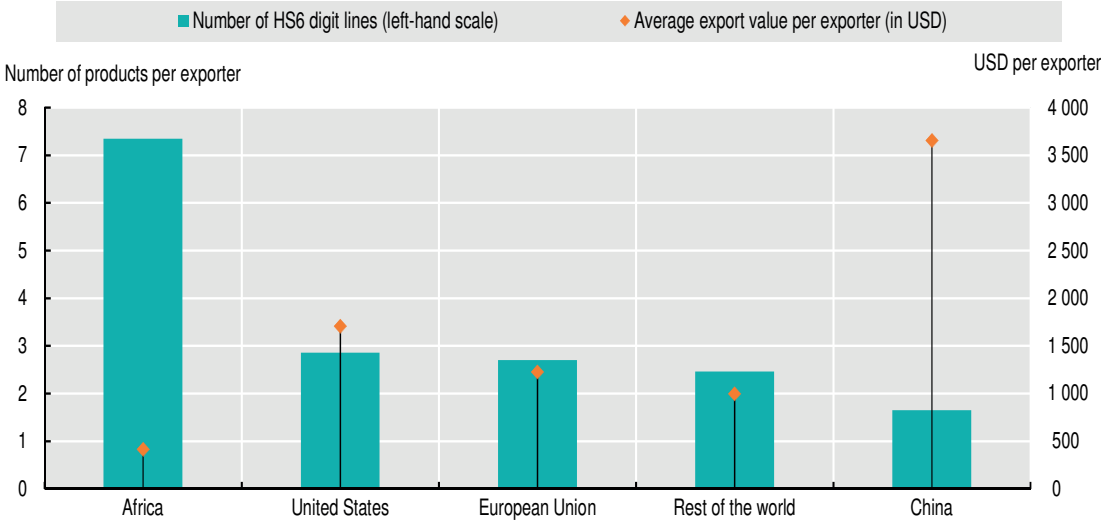
Tapping intra-African and global markets provides different outcomes for private sector development.

- **Intra-African trade is key to diversify export products and destinations and to accumulate new capabilities, particularly for SMEs.** Producing for regional markets allows SMEs to scale up their supply capacity and improve their marketing process in an environment they know better (Altenburg and Melia, 2014). Intra-African markets provide an important breeding ground for SMEs to tap the export markets and learn during the process. Trade between countries with similar productive structures can also be beneficial for clusters of firms. In particular, larger firms can benefit from larger economies of scale, while SMEs can tap new markets for their products or ideas (Parenti, 2018).
- **Global trade remains important for export growth as well as technology transfer.** It requires more fixed investment and larger scale operations and tends to remain more accessible to larger or already-established African firms. Supporting young exporting firms through targeted schemes by export promotion agencies (EPAs) could boost survival rates. In particular, EPAs could provide information on destination markets, facilitate trade financing solutions and promote SME branding (AUC/OECD, 2018).

Export promotion strategies can distinguish between intra-African and global markets. Thriving on intra-African markets is not an automatic step to transition exports to higher income markets. Our analysis of Senegalese exporters between 2000 and 2010 show that Senegalese exporters are highly specialised in either intra-African or extra-African markets (Box 1.9). Only 4% of Senegalese exporters receive comparable export sales between intra-African markets and global markets. In contrast, 96% of exporters source at least two-thirds of their export sales from either African or global markets. Few firms move across these categories. Similar analysis for exporters from Rwanda and South Africa show that the experience of regional exporting does not automatically translate into a shift to international markets (Rankin, 2013; Rwanda Ministry of Trade and Industry, 2014).

Microdata on Africa's exporting firms validate considerable differences in their profiles, sizes and business models, according to the destinations markets. Our continental analysis reveals that African exporters are segmented by destination markets. They tend to export to only one type of destination, such as intra-African markets, other emerging markets outside of Africa or OECD markets. On average, African firms export a lower value spreading across multiple products to intra-African markets than to global markets (Figure 1.15). On average, an African exporter sends 7.4 products to African markets, compared to 2.9 products to United States markets and 1.6 products to China. In contrast, intra-African exports have lower value per destination market compared to other export markets, particularly China where the average export value is over 8 times higher than for African exports. These differences show that intra-African and extra-African markets present diverse challenges and opportunities. They reflect different selection processes that attract and retain different types of firms in diverse markets. These differences call for targeted approaches to tapping exports markets, rather than a "one-size-fits-all" policy approach to exports promotion. The set of policy interventions can be different, both in scope and tools.

Figure 1.15. **Export values to African and other markets per exporters in Africa**



Note: Weighted for the number of exporters per origin country.
Source: Authors' calculations based on World Bank (2019c), *Exporter Dynamic Database*.
StatLink https://doi.org/10.1787/888933966675

Box 1.9. **Senegalese exporters' success in tapping regional markets and upgrading their product baskets**

Senegal has diversified its export basket since 2000. Indeed, its Export Diversification Index[5] decreased from 3.2 in 2000 to 3 in 2010 reaching its minimum in 2007 of only 2.7, signifying a diversification of Senegal's exports. In contrast, Africa's index did not show any improvement over the period, remaining around 4.2 between 2000 and 2010. Even when compared to Morocco, often seen as an example in Africa regarding diversification, Senegal had a more diversified export structure for half of the years between 2000 and 2010.

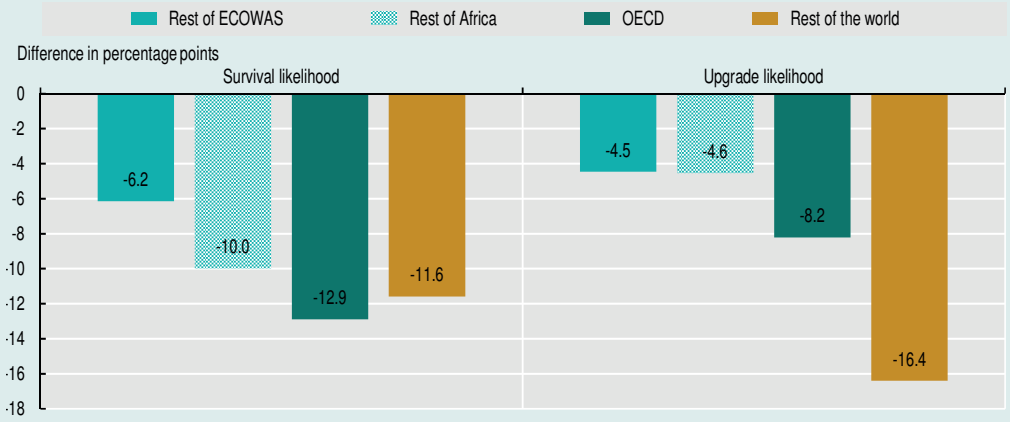
Box 1.9. **Senegalese exporters' success in tapping regional markets and upgrading their product baskets** *(cont.)*

Senegalese firms have focused on tapping regional markets, especially to the neighbouring countries before expanding to global markets. Immediate neighbours account for 7 of its top 10 export destinations. African markets account for 44% of Senegal's exports, the third highest rate on the continent, behind Togo and Zimbabwe according to BACI data (Gaulier and Zignago, 2010). Fifty-five percent of Senegalese exporters and 67% of products that Senegal exports go to African markets.

Regional markets provide a good breeding ground for Senegalese exporters where they are more likely to survive. The econometric analysis of exporters from Senegal between 2000 and 2010 shows that contracts (defined as a firm-product-destination triplet) are more likely to survive in regional markets, even after controlling for firms' export experience, the network of similar exporters, destination-specific characteristics and trade gravity variables. Compared to Senegal's exports to its 5 neighbouring countries, exports to all 15 member states of ECOWAS are 6% less likely to survive – suggesting that more can be done at ECOWAS level to help firms tap the regional markets (Figure 1.16). Furthermore, exports to other regions are much less likely to survive compared to neighbouring destinations: 10% less for the rest of Africa markets, 13% less in OECD markets and 12% less in the rest of the world.

Furthermore, Senegalese firms are more likely to upgrade to more sophisticated products when they tap regional markets. Firms' upgrading of their export basket to a specific destination is defined as introducing a new product to the same market with a higher PRODY index than the PRODY indices for any product exported in the previous year.

Figure 1.16. **Dynamics of Senegalese exports according to destination, compared to exports to Senegal's neighbour countries**



Note: Exports to Senegal's geographic neighbours are used as the comparison group given their importance in Senegal's export profiles. Following Stirbat, Record and Nghardsaysone (2015), we employed a simple ordinary least squares model with firm-level random effect and clustered standards error at the product level. This method allowed for easy reporting of the results while avoiding the pitfalls of applying Cox regression to international trade data, as identified by Hess and Persson (2012). For a robustness check, we used a probit specification (similar to Cadot et al., [2013]) and obtained similar results.

Source: Authors' calculations based on World Bank (2019c), *Exporter Dynamic Database*.

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Firms targeting local and regional markets need policy interventions to facilitate regional trade by reducing uncertainties linked to market access. The most binding constraints for them in intra-African markets are often related to the cost of moving goods, trade finance, non-tariff barriers such as administrative barriers and the uncertainty of exchange rate policies in destination countries. Policies aimed at supporting intra-African trade should focus on reducing administrative burdens and developing connective infrastructure.

In addition to improving hard infrastructure such as feeder roads, trade facilitation can contribute to reducing the costs of linking zones of production to large local consumer markets. Establishing market price information systems often benefits cross-border informal traders, small rural producers and vulnerable groups that work on small margins and have limited, if any, financial safety nets. Informal cross-border trade represents 30-40% of total trade within the SADC. Introducing Simplified Trade Regimes and raising traders' awareness of their rights to regional free-trading, as done in COMESA countries, can reduce the time and costs of compliance at borders. Such long-term support can also bring more informal enterprises into the official economy (Lesser and Moisé-Leeman, 2009). Around 70% of informal traders in Africa are women (Afrika and Ajumbo, 2012; Nimarkoh et al., 2017). In West Africa's food economy, women make up 80% of employment in the processing of agricultural products, 70% of food distribution and almost 90% of sales of ready-to-eat food (Allen, Heinrigs and Heo, 2018; OECD/SWAC, 2019).

Firms targeting global markets need policies that help them anticipate and respond to changes, particularly in market standards. Changes, such as in the stringency of sanitary and phyto-sanitary standards, may deter exporters from entering new markets and lead them to exit existing markets. These uncertainties affect the survival of smaller exporters, rather than larger ones that have better capacity to respond (Fernandes, Ferro and Wilson, 2017). Preferential access to global markets (e.g. the European Union's "Everything but Arms" initiative and the United States' Generalised System of Preferences and the African Growth and Opportunity Act) can help, but it is not sufficient to boost exports (Coulibaly, 2017; Fernandes et al., 2018). Allowing firms to source inputs at lower costs, granting them access to infrastructure and assisting them in meeting global standards are key interventions.

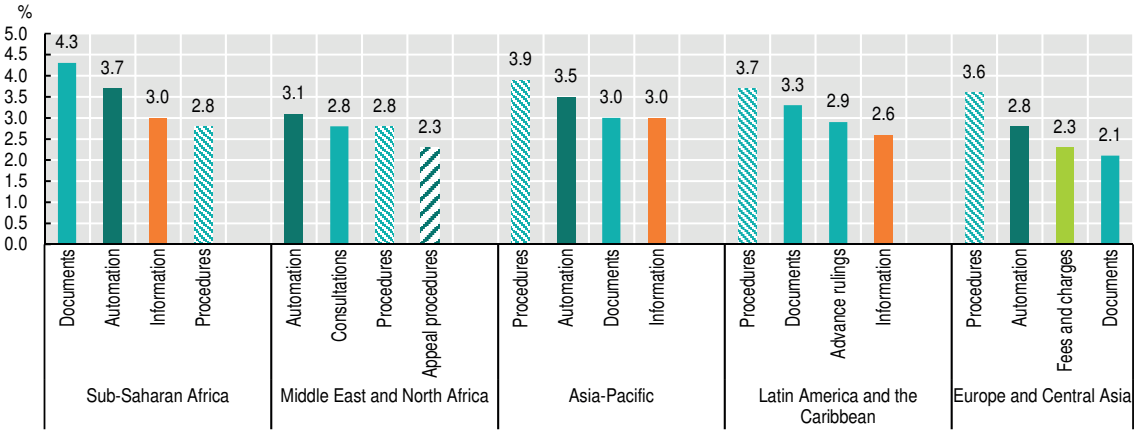
Exports to global markets and integration into global value chains require strategies to help local suppliers meet standards and navigate changes. The uncertainty in today's global trade environment calls for policies that help African exporters better predict and respond to market changes. Between October 2017 and May 2018, World Trade Organization (WTO) members applied 75 new trade-restrictive measures during the review period, including tariff increases, quantitative restrictions, imposition of import taxes and stricter customs regulations (WTO, 2018).

All African exporters can benefit from four key trade facilitation measures: simplify administrative procedures; improve connectivity services; meet international quality standards; and improve regional infrastructure

Many constraints to export growth are common to all firms, regardless of size or destination markets. African firms can benefit from trade facilitation measures to i) simplify administrative procedures, ii) improve connectivity services, iii) help meet international standards, and iv) develop physical infrastructure to reduce trade costs and time. For this reason, tackling both "soft" and "hard" constraints can improve the trading environment and export potential of African firms. Undertaking infrastructure investments and administrative reforms would offer both quick wins and long-term benefits.

Lowering trade costs in Africa allows firms and countries to become more competitive regionally and globally. Trade costs arise in getting to the border (such as transport or logistics costs), crossing the border (such as documentation and customs compliance requirements, lengthy administrative procedures and other delays) and even remaining behind the border (such as non-tariff regulatory measures and general impediments on doing business) (OECD, 2018b). Improving the quality of connective infrastructure, regulatory frameworks and logistics services can help African firms increase their exports. Research shows a strong correlation between infrastructure and trade facilitation improvements in neighbouring countries and greater domestic value chain connectivity (Shepherd, 2017). For example, implementing the WTO Trade Facilitation Agreement would reduce trade costs by more than 16% for many African economies and by more than 18% for sub-Saharan Africa on average, which would result in the highest gains of any global region (Figure 1.17) (WTO, 2015; OECD, 2018b).

Figure 1.17. **Gains from different trade facilitation measures (% reduction in trade costs), by regional grouping**



Note: Estimates are based on a scenario of full implementation of the WTO Trade Facilitation Agreement.
Source: Authors' calculations based on OECD (2018c).
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African firms need simpler administrative procedures and better connectivity services to tap a dynamic demand

Regional policies can achieve some "quick wins" by reducing administrative procedures and by promoting and streamlining logistics services. Beyond tariffs, fast and efficient customs and port procedures are essential to the smooth operation of supply chains. To compete globally, firms need to maintain lean inventories and still respond quickly to demand. This is not possible when their intermediate inputs suffer unpredictable delays at the border. Harmonising transport procedures and regulations, simplifying customs procedures and improving freight services and warehousing management could reduce transit costs and further benefit connectivity and trade (OECD, 2018b). Actions include:

Making customs administration streamline, impartial and predictable

In 2010, following the merging of three bodies to establish the Ethiopian Revenue and Customs Authority, the country's trade volumes increased by almost 200% while tax revenues increased by over 51% compared to 2006 levels (OECD/WTO, 2011).

A survey of South African firms shows that instances of corruption at the Maputo port (Mozambique) pushed South African firms to opt for longer transport import routes through the Durban port to reduce the risk of paying bribes (Sequeira and Djankov, 2014).

These less risky routes resulted in higher operating costs for firms and bottlenecks along transport routes.

With the advent of the Programme for Infrastructure Development in Africa (PIDA), regional economic communities identified 76 future one-stop border posts (OSBPs) and completed 10 of them by 2016. Development partners supported the establishment of OSBPs, which continue to be an integral component of PIDA (NEPAD Agency/AUC/AfDB, 2018). Before 2009, there were no OSBPs on the continent (PIDA, n.d.). The EAC member countries set up 13 OSBPs to streamline the clearance procedures for regional trade. Eight donor countries provided funding and bilateral technical assistance to the EAC Secretariat (OECD/WTO, 2017). Since November 2018, the EAC has fully operationalised and trained personnel at all 13 OSBPs, with reduced transit times and costs (EAC Secretariat, 2018).

Negotiating and implementing effective regional transit agreements

By regulating the access to and use of trade-related infrastructure, these agreements have a direct effect on facilitating intra-regional trade (ODI, 2016). The implementation of the EAC's Single Customs Territory significantly reduced transit times and cost for goods entering the EAC from Mombasa, by approximately 50% and 30%, respectively (NCTTCA, 2017). ECOWAS has a transit scheme (Inter-State Road Transit), which involves the private sector in its governance.

Promoting competition in regional logistics services

It is important to integrate and develop the logistics sector, particularly using multimodal solutions that incorporate air and maritime transport (ODI, 2016; Shepherd, 2017). The presence of foreign logistics firms can help boost the availability, quality and efficiency of transport and freight services. Policies to eliminate discriminatory regulations should aim in particular at removing localisation barriers such as cabotage and third country rules. However, liberalising the sector could lead to job losses and to fewer firms staying in business, posing new challenges to policy makers (Teravaninthorn and Raballand, 2009).

Governments need to harmonise and implement regional regulations affecting trade logistics services. For instance, it is necessary to accelerate efforts to standardise axle load limits across countries in the SADC countries and in West Africa for more efficient transportation of goods across borders, reduced transit times, and less damage to road and highway infrastructure (De Rochambeau, 2017; ODI, 2016). Promoting transparency and mutual recognition of standards can reduce costs for firms and the risk of arbitrary application of non-tariff barriers.

Africa also needs to boost its air shipping by reducing airport taxes and fees and by improving safety regulations and compliance monitoring. Guaranteeing air rights to regional carriers (i.e. aligning with objectives of the Single African Air Transport Market) rather than distorting markets by supporting national carriers, could promote air traffic growth. Air transport in Africa suffers from high entry and operating costs, strong global competitors, and fragmented markets, resulting in limited economies of scale:

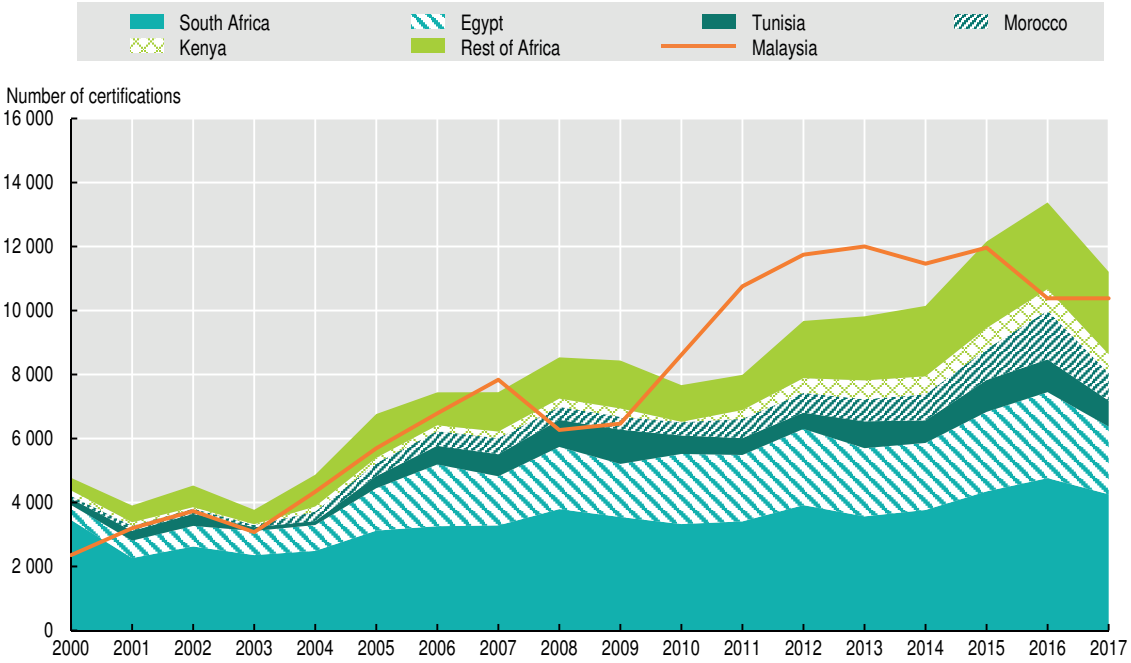
- African airlines carry less than 3% of passengers in Africa, and 80% of total traffic is flown by non-African airlines (Proparco, 2016). Liberalising routes for just 12 African countries would increase passenger traffic by 81%, creating more than 155 000 jobs and adding an extra USD 1.3 billion (0.1%) to the continent's annual GDP (InterVISTAS, 2014).

- African airport and navigational service providers are typically government-owned monopolies and contribute to higher operating costs for cargo airlines. For instance, landing a 200 tonne aircraft in Johannesburg and Nairobi costs around USD 2 500 and USD 1 500, respectively, while the cost at London's Heathrow Airport is USD 500 (Heinz and O'Connell, 2013).
- Adhering to safety standards also poses major challenges to the industry. Carriers from 13 African countries are on the European Union's blacklist due to the countries' inability to guarantee safety checks (Proparco, 2016).

Meeting international quality standards will help access markets and add value to existing exports

The number of certifications such as ISO 9001 on quality management systems and 14001 on environment sustainability has more than doubled in Africa since 2000 (Figure 1.18). However, much room for improvement exists as Africa only accounted for 1.2% of all ISO certifications in 2016, compared to 35% for developing Asia. Figure 1.18 shows that, in 2015, Malaysia filed as many ISO 9001 certifications as all African countries put together. Africa's smaller share stems from its smaller number of formal firms as well as the lower rate of adoption among existing firms. Five countries – Egypt, Kenya, Morocco, South Africa and Tunisia – accounted for 80% of ISO 9001 certifications in Africa in 2016.

Figure 1.18. **The number of ISO 9001 certifications in Africa and Malaysia, 2000-16**



Source: ISO (2018), *The ISO Survey of Management System Standard Certifications* (database).
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Governments can harmonise regional standards and accelerate the implementation of mutual recognition agreements (MRAs). MRAs help reduce or eliminate the cost of re-testing and re-certifying goods, services and labour, enabling immediate entry into markets. An evaluation of MRAs between Australia and New Zealand found increased cross-border labour mobility and goods trade (Productivity Commission, 2009). In Africa, COMESA, the EAC, ECOWAS and the SADC have MRAs in place. They are mainly included

as legal provisions for standardisation, quality assurance, metrology and testing, but in some cases they also cover services such as professional qualifications. Implementation across the continent is proceeding very slowly amid several challenges. These include concerns for national sovereignty, immigration concerns stemming from a perceived influx of nationals of other partner states, and often exorbitant work permit and residency fees (Njeru, 2016).

African policy makers can further promote the adoption of proprietary, industrial and commercial standards by local firms through stronger implementation and reforms of national and regional quality systems. Governments may need to support the development of institutions for accreditation, testing and calibration depending on the availability of existing capabilities in these domains and the projected needs of the productive system. Splitting the rule-making and verification functions across multiple agencies can reduce conflict of interest, as standards bureaus in many countries issue unnecessary regulations to benefit from lucrative inspection fees (Cadot et al., 2018).

Governments can also increase firms', especially SMEs', awareness of proprietary, industrial and commercial standards, as well as provide training and business services to guide firms through the certification process. Depending on the sector, other standards can include company standards and external standards developed by trade associations, consortia of trade unions, non-governmental organisations and enterprise associations.

Matching grants or low-cost loans that allow firms to freely choose providers has been found to be more effective than subsidising providers in general (Guasch et al., 2007). Financial support should not be exclusively limited to registration costs because these account for only a small share of total certification costs: adopting and maintaining ISO 14001 could cost between USD 7 000 and USD 16 000 for the first three years (Fikru, 2014). SMEs will require tailored interventions to promote their value chain integration depending on the sector, though common features exist, such as enabling infrastructure, skills training and technology adoption.

Achieving global quality standards as well as setting and harmonising standards at regional level can occur through a variety of approaches adapted to the local context (Box 1.10).

Box 1.10. International certifications and quality labels for traditional exports

Policy makers need the most appropriate solutions for product labelling and certification. The labelling approach can be based on the geographical origin (the geographical indication) or on the commercial origin (the trademark-based solution). A Geographical indication (GI) can be a viable option for many agricultural products. However, GI is not always a practical solution. GI labelling requires the government to oversee producers and distributors, in order to guarantee that products match specific standards or style or come from a particular region.

Grouping small producers in co-operatives with international certifications can strengthen their position in global supply and value chains. In 1995, Kuapa Kokoo, a Ghanaian co-operative of cocoa farmers became the first Fairtrade-certified smallholder farmers' organisation in West Africa. Producers received a guaranteed price, shielding them from market price volatility. Thanks to this, Kuapa Kokoo's revenues increased by USD 1.6 million between 1993 and 2001. Of the additional revenue, 25% were accrued directly by farmers. The rest was invested in trading, production companies in Ghana and in community projects, including education, health, water and mills, to diversify sources of income (Page and Slater, 2003). Additionally, Kuapa Kokoo obtained government licenses

Box 1.10. **International certifications and quality labels for traditional exports** *(cont.)*

to participate in the internal trading of cocoa, allowing its members to take part in the purchasing and marketing of their produce. The co-operative also captured additional stages of the value chain by acquiring a majority stake in the Divine Chocolate Company in the United Kingdom, which markets chocolate products made from cocoa grown by the co-operative's farmers. Since its creation, the co-operative grew from 2 000 farmers in 1993 to more than 100 000 in 2015. Annual cocoa production also increased, from 19 139 tonnes in 2000 to 48 283 tonnes in 2013.

Trademarks alone do not guarantee successful value addition unless the entire value chain adopts the required standards. In 2004, the Ethiopian government launched the Ethiopian Coffee Trademarking and Licensing Initiative to differentiate the Ethiopian coffee in the market using a range of intellectual property rights such as trademarks. The initiative successfully increased export prices of trademarked coffee. However, the income gap between farmers and retailers remains large, with only 5-10% of the retail price in the international market going back to Ethiopia (Gelaw, 2018; WIPO, 2010).

The "commoditisation" of coffee by the Ethiopian Commodity Exchange (ECX) in 2010 eroded the trademark's brand reputation. ECX interrupted the traceability along the value chain by storing coffee under the same geographic label regardless of differences in grade category and specific estate origin. As a result of coffee commoditisation, coffee farmers lost 26% of their potential income (Leung, 2014).

Branding can help innovate and diversify the consumer base for strategic export sectors. Rwanda's tourism sector is one of the most dynamic on the continent. Building on the country's notoriety for gorilla tourism and safety (Nielsen and Spenceley, 2011), Rwanda has attempted to diversify tourist flows and destinations. The joint World Bank-International Finance Corporation Governance for Competitiveness Project (G4C) supported the Government of Rwanda in its effort to promote the country as a location for regional and global business events. As a result, Rwanda experienced a significant growth in meetings, incentives, conferences and events (MICE) tourism. Visitors for conferences increased from 19 085 in 2014 to 35 100 in the first half of 2016. Rwanda's MICE tourism promotion model relies on private sector involvement and ownership and on detailed monitoring and evaluation of tourist flows (World Bank, 2016).

Improve regional connective infrastructure, particularly roads and ports, to boost trade performance and economic growth

Improving connectivity services can only go so far if the infrastructure bottlenecks are not removed. For example, the poor quality of Africa's transport infrastructure accounts for 40% of logistics costs in coastal countries and 60% in landlocked countries (UN-Habitat, 2014). Adopting a regional approach to infrastructure reform would help overcome the inefficiencies that emerge as formal trade barriers fall (e.g. tariffs and administrative procedures) (AfDB, 2019).

Improving road conditions in Africa would reduce transit time and costs, allowing firms to trade more efficiently within the continent, benefiting in particular landlocked regions and countries. Presently, Africa counts the lowest road and rail network density as well as the highest maintenance costs among all world regions (AfDB, 2018). The cost of rail freight in sub-Saharan Africa is on average 200% higher than in Southeast Asia and 150% higher than in Latin America and the Caribbean (Mwase, 2003). For example, goods between Lagos (Nigeria) and Accra (Ghana) are often transported by sea, despite the two cities being less than 500 kilometres apart (OECD, 2018c). Upgrading and maintaining the

road network connecting 83 main sub-Saharan cities could potentially increase overland trade volumes by USD 250 billion over 15 years, almost 8 times more than the total cost of the intervention (Buys, Deichmann and Wheeler, 2006). Simply upgrading existing roads in Central and West Africa would reduce transport costs by 5% (Teravaninthorn and Raballand, 2009). In the EAC, increasing investments in road infrastructure by 10% could increase exports of manufactured goods by almost 37% (Shinyekwa and Ntale, 2017). In Central Africa, the planned Kinshasa-Brazzaville Bridge road and rail project could alleviate logistic bottlenecks on the Congo River and potentially accommodate 3 million passengers and 2 million tonnes of freight annually by 2025 (NEPAD Agency/AUC/AfDB, 2018).

Adapting port infrastructure to cater to the needs of global maritime shipping can boost firms' exports and countries' competitiveness. Ports play a central role in Africa's trade – over 80% of Africa's foreign trade passes through a port (Seka Aba, 2017). Yet, Africa's ports account for 4% of global container trade volume and suffer from underdeveloped hinterlands (Ashiagbor et al., 2018). Sea shipping in Africa is characterised by underutilised capacity of vessels, small and congested ports, and inadequate governance. For example, in 2016 the port of Lomé (Togo) became the best-performing port in West Africa (the region with strongest container trade volume growth), while Lagos (Nigeria) lost 30% of its container traffic in five years due to high costs and congestion (UNCTAD, 2018; Dynamar, 2018). Port infrastructure needs also to become more environment-friendly.

Government intervention to promote maritime shipping needs to follow a dual approach. On one hand, Africa needs to develop its port infrastructure. On the other, reforming governance models is key to encourage competition between port operators and to encourage private sector participation.

Governments should consider assessing port development projects against a set of indicators or international standards (such as those elaborated by (Schipper, Vreugdenhil and de Jong, 2017) to optimise the integration of economic, environmental and social benefits of ports. Enhancing connectivity between ports and inland regions as well as implementing technological solutions to reduce inefficiencies will boost the performance of African ports (UNCTAD, 2018). However, port expansions that follow a growing market can significantly affect natural ecosystems and result in environmental degradation (Gimenez, Sierra and Rodon, 2012). Adopting a "green" approach could streamline port developments and increase the likelihood of buy-in from civil society.

Port infrastructure needs to adapt to increased vessel size. This means accommodating and processing a greater number of containers as well developing deep water harbours. For example, over a dozen West African outlets can or will be able to accept vessels larger than 10 000 20-foot equivalent units (TEU). Nigeria lags behind, peaking at ships of 4 600 TEU (Dynamar, 2018).

Foreign shipping companies are increasingly vertically integrated and dominant in the industry. Nevertheless, there is scope for national and regional policies to incentivise and support local private investors, as in the case of the AfDB/ECOWAS-backed project to establish a pan-African shipping company (Tourret and Valero, 2017). Additionally, modernising regulatory frameworks that govern port operations (including land leasing) could greatly incentivise private investment and management of ports, which are sometimes run as monopolies (Seka Aba, 2017; Meyer, 2017).

Boosting intra-African trade calls for removing non-tariff barriers on cross-border movements of goods, services, capital and people

Removing non-tariff barriers (NTBs) to intra-African trade can reduce uncertainties for exporters, boosting trade and multiplying gains. A significant share of trade costs faced by firms in Africa depends on NTBs. Projections for the whole continent show that partially lowering NTBs alongside tariff liberalisation deriving from the African Continental Free Trade Area (AfCFTA) could triple the positive effects on GDP, increasing trade flows and improving terms of trade (Table 1.8) (Afreximbank, 2018). Improving trade logistics, such as customs services, and addressing poor infrastructure could be up to four times more effective in boosting trade than tariff reductions (IMF, 2019). The experience of the West African Economic and Monetary Union countries suggests that with very significant non-tariff barriers and poor infrastructure along core transport routes (Maur and Shepherd, 2015), even a common currency may do relatively little to reduce the transaction costs of trade (World Bank, 2012).

Table 1.8. **Gains from AfCFTA with or without removing non-tariff barriers**

Policy scenarios	Welfare (USD millions)	GDP (%)	Per capita household welfare (%)	Volume of exports (%)	Volume of imports (%)	Terms of trade (%)
1. Removal of agricultural tariffs only	751.29	0.12	0.16	0.79	0.86	0.14
2. Removal of all tariffs	3 589.06	0.65	0.41	2.94	3.13	0.39
3. Removal of all tariffs and lowering of non-tariff barriers	10 445.70	1.90	1.20	3.79	4.90	0.89
4. Removal of all tariffs and removal of non-tariff barriers	17 956.90	3.15	1.94	5.23	6.59	1.35

Note: The lowering of non-tariff barriers is modelled as a 5% improvement in trading conditions for Policy scenario 3 and a 10% improvement in trading conditions for Policy scenario 4.
Source: Afreximbank (2018).

Improving the quality of connective in-land infrastructure and logistics services will help African SMEs gain competitiveness in regional markets. In Nigeria, transport comes as the most important obstacle to total factor productivity and to productivity growth for countryside enterprises in the manufacturing sector. High inland transport costs make it difficult for firms to operate efficiently from hinterland cities. Besides Kano and Kaduna states, northern cities possess a total factor productivity of approximately one-quarter that of Lagos and one-third the level of other southern states. While firm productivity in Lagos is similar to that in Addis Ababa, Abidjan or Accra, cities in Nigeria's north lag behind (Buba et al., 2016).

Liberalising the cross-border movement of Africans can drive economic activity. Promoting tourism can boost productive transformation, particularly in Small Island and Developing States (SIDS). In the Seychelles, visa-free travel boosted tourist arrivals by 7% annually during 2009-14, helping the country graduate to high-income status. In the EAC, free movement of persons increased African travel to Rwanda by 22% and grew its bilateral trade with Uganda and Kenya by 50% (AfDB/AU, 2016).

Integration of cross-border payment systems can promote innovation and competition in the financial sector while reducing costs for trading firms. Integrating payment systems and financial markets can bring a variety of benefits. For firms, it can minimise transaction costs and increase predictability of business. For governments, it can reduce illicit financial flows and help achieve the Abuja Treaty objectives of full financial integration. Progress is already underway. Payments processed within Africa have increased from 10.2% in 2013 to 12.3% in 2017 (SWIFT, 2018).

- The use of local currencies has risen in regions that have strong regional integration. The West African franc (XOF) increased for intra-African commercial (i.e. bank-to-bank) payments from 4.4% in 2013 to 7.3% in 2017. The South African rand (ZAR), which is the settlement currency of the SADC Integrated Regional Electronic Settlement System, also increased in use from 6.3% to 7.2% over the same period (SWIFT, 2018). The East African Payment System launched in 2013 introduced direct currency exchange, removing the need to convert to third-country currencies (e.g. USD).
- Regional harmonisation initiatives such as the COMESA Regional Payment and Settlement System (REPSS) can boost intra-regional trade and banking in Africa by lowering transaction costs. REPSS settles transactions in international currencies (e.g. USD and EUR) and lowers costs for trading firms by eliminating the need for letters of credit thanks to a system of central bank guarantees. Implementing the AUC-Afreximbank Pan-African Payments and Settlement System could further harmonise operations and bring down costs for firms and financial institutions (AUC, 2019).

Investing in cross-border, multimodal and holistic infrastructure can push regional trade and integration. Trade in partner countries often takes place through key corridors that cross borders and involve multiple modes of transport (OECD/WTO, 2015). Policy makers can focus on dynamic regional corridors to reduce trade costs and attract investment (AfDB/OECD/UNDP, 2015). Development corridors can incorporate investment to upgrade port infrastructure, as in the case of the LAPSSET Corridor, linking Lamu's deepwater port project in Kenya to Ethiopia. They can also link landlocked regions to key regional ports, such as the Maputo Development Corridor, which links South Africa's Gauteng province to the deepwater port in Maputo. Strategic planning tools and close co-operation among countries are essential to this process, as in the case of the Walvis Bay Corridor, which links five SADC countries to Namibia's Walvis Bay port. The governments of Namibia and South Africa jointly set up the road, rail and shipping corridor with a dedicated governance group; they decided to expand the project following initial success in facilitating trade along the route (Mulenga, 2013). Infrastructure corridors can play an important role in spatial development by enhancing the connectivity of rural areas. Only one-third of the continent's population lives within two kilometres of an all-season road (Ashiagbor et al., 2018).

Annex 1.A1. Two champion firms in Africa's productive transformation

Firm case 1: OCP in Morocco – spillover effects since its successful transformation

The phosphate industry plays a growing role in Morocco's vigorous structural change process, both by its financial impact and by its growing knock-on effect on the country's economic and social fabric. Morocco is the world's leading producer of phosphates with 32 million tonnes produced in 2016 and the leading exporter with 37% of the world market for crude phosphates, 47% for phosphoric acid and 22% for fertilisers. The country possesses 70% of the world's known reserves (AfDB/OECD, 2013). The phosphates company (*Office chérifien du phosphate*, OCP) directly employs more than 20 000 staff and represents about 10% of the government's fiscal receipts, as well as generating activities upstream and downstream of the sector thanks to a structured strategy. By 2020, the process will be powered by a series of sun-power and wind-power parks capable of producing 4 000 MW, as part of a plan to develop alternative energies. A specialised institution is being planned to train the 5 300 engineers, 17 900 technicians and 23 900 workers needed for this development.

The financial contribution made by phosphates has significantly increased in recent years. They accounted for 19.35% of the country's exports in 2017, against 16.2% in 2000, and more than 48 billion Moroccan dirhams (MAD) in foreign currency earnings.

A clear strategy for market diversification, continental expansion and value chain upgrading

The commercial and industrial strategy pursued by the OCP since 2006 has been to strengthen the country's presence in the market in large emerging countries (Brazil and India's share of Morocco's fertiliser exports rose from 22% in 2000 to nearly 52% in 2011). Following the creation of the Africa Fertilizer Complex in 2016, the OCP launched OCP AFRICA dedicated specifically to the development of the group's activities across the continent. The group already has 14 subsidiaries in Africa (located in Angola, Benin, Cameroon, the Democratic Republic of the Congo, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Senegal, Tanzania, Zambia and Zimbabwe). As a result, the group achieved a turnover of MAD 48.5 billion in 2017, of which 27% in Africa, followed by Europe (22%), North America (16%), Latin America (16%), India (9%) and the Middle East (6%). The company plans to expand its markets in Africa through joint ventures, equity and direct investments (DEPF, 2019).

Since 2010, the OCP has also reinforced its positioning on the whole phosphate value chain, from extraction to industrial transformation activities. As a result, the value added of the sector increased in 2011 by 41.3% compared with 2010. The group is seeking to improve productivity, lessen its dependence on artesian wells and reduce the costs of exploitation. To this end, it is developing new extraction techniques, new methods of manufacturing fertilisers, a seawater desalination procedure and pipeline transport. The strategy is to double its mining production and triple its fertiliser production by 2020. With this in mind, the OCP plans a large investment programme of around MAD 115 billion to open three new mines and four new washing stations. The group's Board of Directors recently launched the second phase of this investment programme for the period 2018-28, which calls for mobilising MAD 100 billion (MAD 10 billion per year).

Although the potential for job creation in the mines remains limited, the OCP plays a growing role in strengthening agricultural productivity and the chemical industry, as well as in integrating Moroccan businesses into their upstream activities and in developing local skills. The OCP puts its major investment projects out to international tender while offering opportunities to local businessmen in contracts for construction, sub-contracting

and industrial engineering. Between 2009 and 2015, MAD 10 billion were due to be reserved for small and medium-sized enterprises, including industrial enterprises, as part of the group's investment plan. Foreign enterprises, which accommodate Moroccan businesses, were given favourable treatment in the bidding process.

- With the *Plan Maroc Vert*, the OCP is publicising soil fertility testing among farmers so that fertilisers can be used accurately and effectively. In 2010, the group also launched the OCP Innovation Fund for Agriculture, with a budget of MAD 200 million aimed at fostering innovation and local entrepreneurial activity in farming and agro-industry. By 2017, six companies had already benefited from the investment fund, which resulted in the creation of 400 new direct jobs. These investments also generated 2 100 indirect jobs, including more than 1 800 jobs for farmers. These projects focused on the valorisation and marketing of products with a strong focus on innovative, inclusive and sustainable agriculture. For instance, the fund enabled Safilait to process and market dairy products supplied by a co-operative of 1 500 smallholder farmers in the Fkih Ben Salah region.
- OCP is also participating in the national strategic plan for the chemical and parachemical industries, the aim of which is to triple turnover and double the number of jobs in the sector by 2020.
- When the firm created the OCP Skills programme, it began awarding monthly scholarships of MAD 1 200 and MAD 2 000 and covered all university costs for the beneficiaries, in order to ensure the programme's success. The group also supported job-creating projects through financial and technical assistance with the help of financial institutions and business-creation support organisations. Projects selected under this component received a grant of MAD 20 000 each. In less than a year, OCP was able to offer the monthly scholarships to 10 700 young people in 285 sectors in 65 cities. The project has resulted in the OCP's recruitment of 5 800 young people and the support of 52 entrepreneurial and associative projects.

Firm case 2: The MeTL Group – an industrial conglomerate operating in East Africa

The MeTL Group (Mohammed Enterprises-Tanzania Limited) is a company that employs 24 000 people and is Tanzania's largest private sector employer. Its revenues are USD 1.3 billion, contributing 3.5% to Tanzania's GDP. The firm has a five-year plan to grow to USD 5 billion. METL is diversified and its activities include grain-milling, rice, the refining of edible oils, sisal farms, tea estates, cashew fields, logistics and warehousing, financing services, distribution, real estate, transport and logistics, energy, and petroleum. From an initial capacity of 60 tonnes, which then grew to 600 tonnes (Nsehe, 2018), MeTL now refines 2 250 tonnes of edible oils per year following an acquisition that expanded its capacity in 2013. Regarding textiles, MeTL is sub-Saharan Africa's largest entity operating along the entire value chain from ginning to spinning, weaving, knitting, processing and printing. Of the 24 000 jobs created by the group, 8 000 are in textiles. The group also exports 50 of its brands, taking advantage of the fact that Tanzania borders with eight countries, thus leveraging the country's 'land-linked' position. MeTL is now present in 11 African countries and is, arguably, the largest private company in East and Central Africa.

The firm's move from trading to industrial processing came in 1998, and then it established several businesses in agribusiness and manufacturing. Some of these were new greenfield ventures: palm oil refining, soap and candles, and cashew nut processing (Sutton and Olomi, 2010). Others involved the acquisition of an existing enterprise that was in financial distress: a sisal processor, a sugar processor, a wheat flour miller and a bicycle maker were all acquired in this period.

The firm was founded in the 1970s by Gulam Dewji during a time in which the business climate was difficult, even in areas such as trading that were not directly affected by the nationalisations of the period. Many businessmen emigrated, and this created a vacuum (in Mr. Dewji's own words) in which a new, younger generation of individuals like himself could find a niche. He set up a road haulage operation with one truck, transporting produce from one town to another, and later moved into the sale of second-hand clothing.

Today, while the group – as a diversified conglomerate – appears to be involved in seemingly disparate activities, there is a common thread. Speaking to Mohammed Dewji, the chief executive officer of the MeTL Group, it is clear that the common thread across the business is the enabling East African Community's (EAC) policy frameworks, and specifically:

- harmonisation of external tariffs across EAC countries
- harmonisation of internal tariff systems within EAC countries themselves
- rules of origin.

Notes

1. https://www.acbf-pact.org/media/news/africa-capacity-report-2019.
2. A product innovation is a new or improved good or service that differs significantly from the firm's previous goods or services and that has been introduced on the market.
3. A business process innovation is a new or improved business process for one or more business functions that differs significantly from the firm's previous business processes and that has been brought into use by the firm.
4. The Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods continues to view CAADP as the main vehicle for implementation of its commitments. It reaffirms the commitment to allocate 10% of public budgets to agriculture. It also specifies more clearly a range of commitments in agriculture, such as increased irrigation and mechanisation or curtailing post-harvest losses. For an overview of the commitments, see https://www.nepad.org/file-download/download/public/15918.
5. This indicator is computed using a Theil index: the lower the value, the less concentrated the exports. Italy and the Netherlands were the most diversified exporters in 2010, both with an index of 1.4 while Iran was the least with a value of 6.4. For methodological details, see https://www.imf.org/external/datamapper/Technical%20Appendix%20for%20Export%20Diversification%20database.pdf.

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Chapter 2

Public policies for productive transformation in Southern Africa

This chapter addresses productive transformation in Southern Africa (Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe). The first section situates the region's productive transformation in the context of the regional and country-specific trends in industrial performance. The second section presents drivers of and constraints to productive transformation in the region.

Each of the last three sections discusses public policies that are critical in promoting productive transformation in the region. The first of these considers the roles that productivity and competitiveness play in productive transformation. The next section discusses public policies that promote regional complementarities, and the final section presents policies that can enhance participation in regional and global value chains. In each of these sections, public policies and strategies are recommended.

IN BRIEF

In the past three decades, Southern African economies have witnessed a limited **productive transformation** with declining shares of manufacturing value added in total gross domestic product. The region's productive structure is characterised by resource-dependence, low value addition and few knowledge-intensive exports. The challenge facing the region is how to transition from this commodity-dependent growth path to value-adding, knowledge-intensive and industrialised economies.

Between 2000 and 2016, Southern African countries stagnated in the Competitive Industrial Performance Index, ranking on average 103 out of 138 countries. Infrastructural deficits and a dearth of skills for maintaining the competitiveness of traditional sectors and developing new industries are the leading constraints. Transforming the productive structure of the economy requires policies that increase **productivity** and **competitiveness** by addressing infrastructural deficits, especially in providing energy, building a skills base and facilitating access to finance.

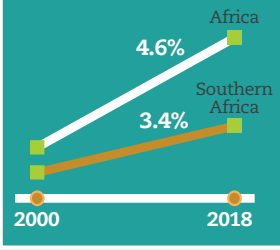
With the exception of South Africa, the countries in the region do not produce goods demanded by others in Southern Africa. This results in low intra-regional trade, a lack of linkages and a lack of **regional complementarity**. Southern Africa can promote productive transformation with public policies that strengthen regional complementarities. It can do so by creating a mechanism for financing **regional public goods** and promoting **linkage industries** that supply the mining sector to achieve industrial and technological upgrading.

Globally, countries that have most rapidly increased their industrial productivity and competitiveness are those that are integrated into **global value chains (GVCs)**. Yet Southern Africa's participation in GVCs remains peripheral. Participating in GVCs requires policies that deepen **regional integration**, create regional value chains that piggy-back on South Africa's participation in GVCs, and leverage the presence of multinational enterprises to bring small and medium-sized enterprises into GVCs.

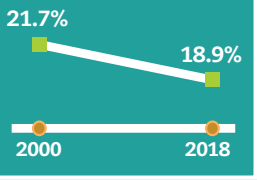
Public policies for productive transformation in Southern Africa

Growth

Southern Africa's average growth rate was lower than Africa's



The region's share of Africa's GDP decreased due to low growth in South Africa and Angola



Manufacturing

The region's capacity to produce and export has increased

Manufacturing dominates the region's exports

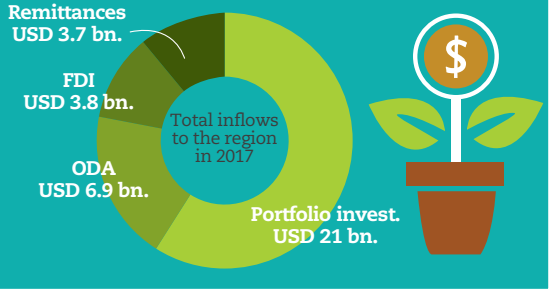
Manufactured exports produced with medium to high technology increased

Trade

15.4% of exports from Southern Africa stay in the continent, compared to a continental average of 9.6%

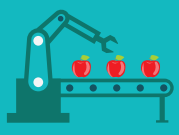
Financial inflows

Portfolio investments remained the largest financial inflow into Southern Africa



Regional strategies for productive transformation

The SADC *Industrialisation Strategy and Roadmap (2015-63)* prioritises three growth paths

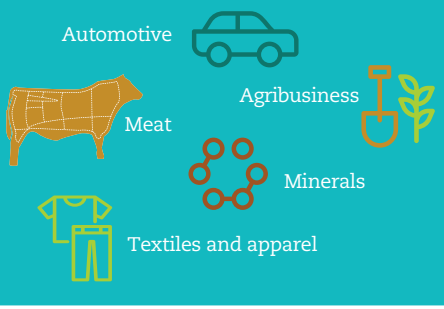


Agro processing

Natural resource industries

Global value chains

Potential value chains in the region



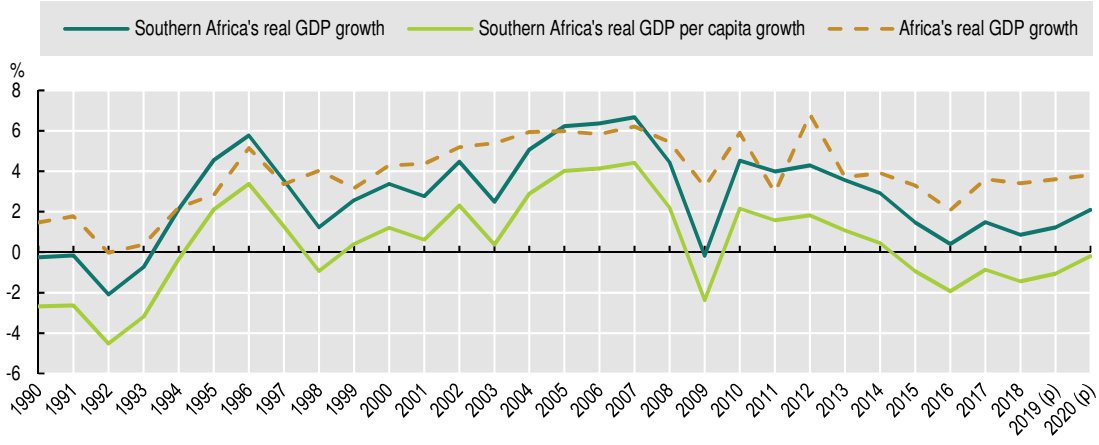
Southern Africa regional profile

Table 2.1. **Capabilities for productive transformation in Southern Africa, 2000-18**

		Source	2000	2014	2015	2016	2017	2018
Production technology	Employers and paid employees as % of total employment	ILO	47.3	45.9	45.9	45.6	45.5	45.4
	Labour productivity as % of United States productivity	CB	12.1	12.8	12.3	12.1	11.9	11.5
	Private gross fixed capital formation as % of gross domestic product (GDP)	IMF	13.8	17.6	18.6	17.5	16.2	16.6
	Capacity for innovation, 0-100 (best)	WEF	-	-	-	-	27.3	28.1
Regional network	Intra-region as % of imports in intermediate goods	Comtrade	9.9	13.8	14.2	15.4	13.8	-
	Intra-Africa as % of greenfield foreign direct investment inflows	fDi Markets	-	3.7	2.4	5.6	7.8	8.3
	Venture capital availability, 1-7 (best)	WEF	-	2.9	2.9	3.1	2.3	2.2
Capacity to meet demands	ISO9001 certification as % of Africa's total	ISO	75.0	41.1	40.2	39.1	42.0	39.9
	Fully- and semi-processed goods as % of region's total goods export	Comtrade	62.7	54.7	64.3	65.5	60.9	-
	Share of Africa's total consumption goods import (%)	Comtrade	23.1	22.2	19.7	20.0	22.9	-

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 2.1. **Growth dynamics in Southern Africa and Africa, 1990-2020**



Note: (p) = projections.
Source: Authors' calculations based on IMF (2019), *World Economic Outlook* (database).
StatLink https://doi.org/10.1787/888933967055

Table 2.2. **Financial flows and tax revenues to Southern 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	5.5	8.9	5.6	8.8	7.3	11.7	16.4	19.0	11.4	3.8
		Portfolio investments	1.5	9.1	14.9	16.4	23.2	14.5	15.1	13.1	9.8	21.0
		Remittances	1.1	2.0	3.4	4.1	4.3	3.8	3.7	3.7	3.3	3.7
	Public	Official development assistance	4.1	6.0	6.6	7.0	7.2	7.8	6.6	6.6	6.3	6.9
Total foreign inflows			**12.1**	**25.9**	**30.6**	**36.3**	**42.0**	**37.8**	**41.9**	**42.4**	**30.9**	**35.5**
Tax revenues			**44.4**	**104.4**	**135.5**	**164.0**	**164.2**	**155.8**	**148.9**	**122.8**	**106.8**	**125.6**
Private savings			**35.4**	**76.8**	**120.8**	**141.5**	**143.2**	**144.9**	**144.8**	**119.9**	**100.9**	**122.6**

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).

Productive transformation in Southern Africa has been slow

Southern Africa's major economies have experienced an economic slowdown and sluggish recovery

In the immediate aftermath of the global financial crisis, Southern Africa appeared to have weathered the storm and a recovery seemed to be underway, only to stall in 2015. Between 2000 and 2017, Southern Africa's average rate of economic growth (3%) was significantly lower than that of other African regions. This resulted in a decline in Southern Africa's share of African gross domestic product (GDP) from 21.7% to 18.9%. With growth in the region's two largest economies, Angola and South Africa, averaging below 1%, regional per capita output in 2017 was lower than in 2014. Owing to their limited integration into the international financial system, less developed members of the region were less affected by the global financial crisis. In addition, as net oil importers, most of them have benefited from low fuel prices and resurgent commodity prices.

Table 2.3. **Selected macroeconomic indicators in Southern Africa, 2000-17**

	2000-04	2005-09	2010-14	2015-17
GDP per capita (growth rate)	1.35	3.30	3.33	0.05
Government expenditure (% GDP)	30.26	29.68	33.05	33.19
Investment (% GDP)	16.61	19.74	20.34	19.85
Of which private investment	12.72	14.85	15.12	15.23
Exports (% GDP)	37.55	40.13	40.18	32.26
Imports (% GDP)	41.02	46.61	53.75	43.36
Foreign direct investment (% GDP)	4.58	3.19	5.61	5.05
Remittances (% GDP)	5.29	4.08	3.78	2.76

Note: Figures represent country-weighted averages.
Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).

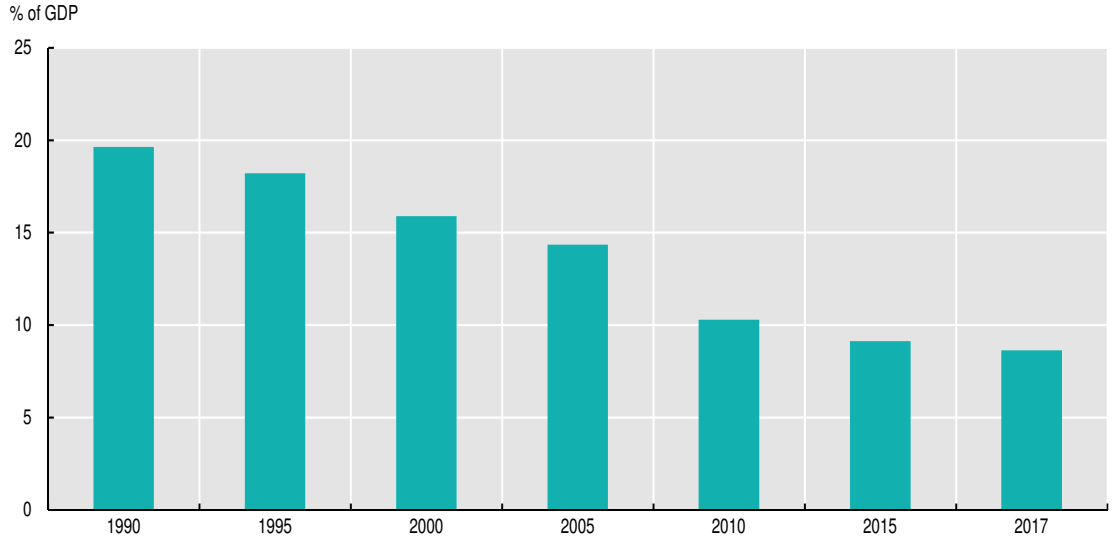
The economic slowdown is affecting other sectors of the economy in unintended ways. The share of government spending, investment and foreign direct investment have stagnated since 2010, relative to GDP. In the external sector, Southern Africa faces a growing trade deficit and mounting external debt. Between 2000 and 2017, the trade deficit grew from 3% to 11% of GDP (see Table 2.3), driven by a 30% decline in the region's exports. This was largely due to the slump in international petroleum markets, which reduced Angola's export receipts by 62%, from USD 71 billion to USD 27 billion. In addition, in the last decade, Southern Africa's need to alleviate infrastructural deficits, mismanagement of state-owned enterprises and China's less stringent debt conditionality have doubled the region's stock of external debt to USD 246 billion. This was led by South Africa and Angola, whose external debt stock rose by USD 65 billion and USD 34 billion, respectively. Relative to their capacity to pay, in 2017 Mozambique (79%), Zimbabwe (63%) and Namibia (53.8%) had the largest shares of external debt relative to GDP.

Manufacturing has lost its relative importance in Southern African GDP

Since the 1990s, Southern Africa's average share of manufacturing value added (MVA) in GDP has declined, from about 20% to below 10% in 2017 (see Figure 2.2). This is due to slower growth in regional and country-specific MVA relative to the growth rate of other sectoral outputs. Although the level of industrial output has increased fivefold since 1990, the share of manufacturing in the region's total output has declined. In the post-global crisis period, an average economic growth rate of 3% and an average growth of 1.71% in manufacturing GDP have resulted in a declining share of manufacturing in regional GDP: from 13% to about 10%.

In general, as the industrial sector has retreated in relative importance, services have been the noticeable beneficiary, rising in terms of both share in output and employment. The regional trend naturally mirrors trends in South Africa, which has witnessed a declining reliance on natural resources in both agricultural and extractive sectors. Since the 1960s, South Africa's share of mining value added decreased from 28% to 6% of GDP, while the share of business and financial services grew five-fold in value added and employment (UNCTAD, 2016). The ongoing Industrial Policy Action Plans aim to further diversify the economy beyond the mining sector by prioritising sectors that have medium to high value added and are labour-intensive, such as agro-processing, vehicles, textiles and green energy.

Figure 2.2. **Evolution of the share of manufacturing value added in Southern Africa, 1990-2017**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
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Reliance on unprocessed natural resources is eroding Southern Africa's capacity for industrial diversification and complexity. The transformation literature suggests that industrial diversity can explain cross-country differences in per capita income and economic growth (Hausmann et al., 2011). It has been shown that countries with a low ranking in the Economic Complexity Index (ECI) generally specialise in products that also have a low ranking in the Product Complexity Index (PCI). Likewise, those high in the ECI often specialise in high PCI products. Dominating the bottom of the ECI ranking, Southern Africa has some of the world's least complex economies (see Table 2.4). However, South Africa ranks high in economic complexity, because it exports many different kinds of relatively sophisticated products that are only produced by a handful of other countries with similarly diversified productive capacities. The rest of the countries export a small range of products that are also produced in many other countries (i.e. export baskets that load heavily on just a few ubiquitous products).

Table 2.4. **Economic and product complexity for Southern Africa**

	Economic Complexity Index	Leading export product	Product Complexity Index
Lesotho	-	Diamonds	-0.972
Eswatini	-	Mixtures of odoriferous substances	-0.055
Malawi	-1.380	Unmanufactured tobacco	-1.920
Zambia	-1.270	Refined copper	-1.730
Mozambique	-1.210	Wrought aluminium	-1.120
Angola	-1.130	Petroleum oils	-2.280
Zimbabwe	-1.010	Unmanufactured tobacco	-1.920
Botswana	-0.802	Diamonds	-0.972
Namibia	-0.435	Diamonds	-0.972
South Africa	-0.181	Gold	-2.080

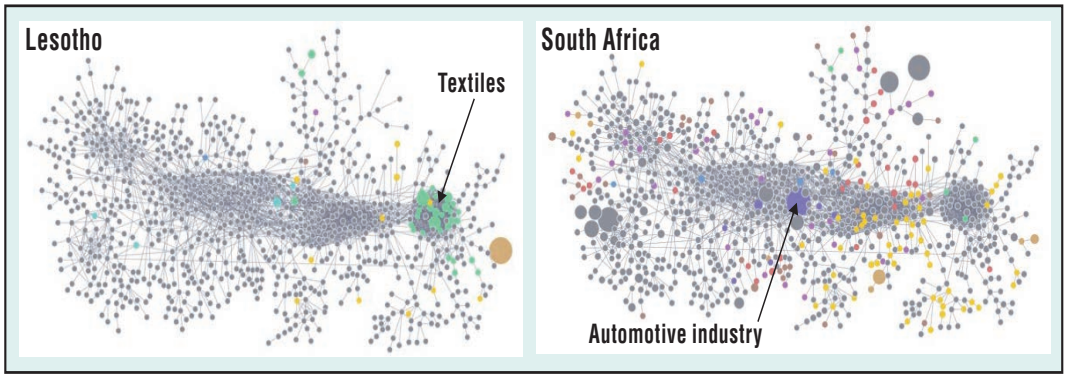
Note: The two indices take positive and negative values. A negative Economic Complexity Index implies that the country produces common products that are easy to produce. A negative Product Complexity Index implies a low level of processing or value addition.
Source: Harvard University (2019), *Atlas of Economic Complexity* (database).

Productive transformation will not be seamless

Southern Africa's set of acquired productive capacities cannot be easily redeployed into producing other goods. The region has yet to make significant leaps in the more sophisticated and intricately linked core products. This is suggested by an illustration representing the network of all globally exported goods (referred to as product space). Countries show considerable homogeneity, reflecting reliance on a few unprocessed extractive or primary products that lie at the periphery of the global product space. They are weakly connected with the rest of the products in terms of the common capability requirements.

Lesotho and South Africa are the qualified exceptions; both have developed some capabilities in products close to the core of certain global networks. In addition to increasing its range of export products with revealed comparative advantage, Lesotho has developed capacities in apparel and in wool- and cotton-related products that are close to the core of the global network (see Figure 2.3). This owes in part to Lesotho's attractiveness as a hub for exporting textiles to the United States, notably with investment from foreign companies, since Lesotho benefits from the African Growth and Opportunity Act (see Box 2.5). While four of the top five products in South Africa's export basket are from the mining industry and lie in the periphery, South Africa's emerging automotive and allied industry lies close to the core of the network. This suggests capabilities related to other sophisticated products.

Figure 2.3. **Product space for Lesotho and South Africa**



Source: Harvard University (2019), *Atlas of Economic Complexity* (database).

The region's productive capacities are less likely to support more complex products in the foreseeable future. Entering export markets for the first time is a major challenge for many firms in developing countries since it demands new skills and knowledge (Humphrey, 2004). Feasibility charts for Southern Africa are characterised by an upward slope of product distribution on the complexity-distance axis. This suggests that the more complex the products become, the further the distance that exists between current products and capacities needed to produce more complex products. The simplicity of products being produced may reflect a shallowness of the knowledge base and lack of skills and infrastructure to upgrade into producing more sophisticated products.

Harmonised industrial policies are of recent vintage

Over time, countries in Southern Africa have shifted between Structuralist and Neo-classical industrial policies. Box 2.1 highlights the evolution of industrial policy in Southern Africa and shows that a harmonised regional industrialisation policy is a fairly new approach that has yet to be tested.

Box 2.1. Industrial policy in Southern Africa

In the early post-independence period, the region's industrial policies mostly followed tenets of the Structuralist school of thought anchored on the ideal of government stewardship of the economy. Industrial policy was augmented by trade policies directed at import-substitution to stimulate domestic industry based on the infant industry argument. Governments directly participated in the economy as producers through ownership of enterprises in key sectors or activities (e.g. nationalisation of copper mining in Zambia).

With the advent of structural adjustment programmes, industrial policy in the period 1980–2000 was dominated by policies founded on neo-classical orthodoxy which espouses the virtues of freeing markets and getting prices right. But liberalisation of market entry, foreign exchange and financial markets precipitated a spate of de-industrialisation across the region, as local industry could not compete with the influx of cheap imports.

Since the 1990s, industrial policy is approached in the context of regional integration. A number of protocols and instruments intimate the need for regional integration and industrialisation in Southern Africa, including the Southern African Development Community (SADC) Treaty, the Regional Indicative Strategic Development Plan (RISDP) and the SADC Protocol on Trade. The RISDP also calls for deliberate policies for industrialisation with a focus on promoting industrial linkages and utilising regional resources efficiently through increased value addition. In 2008 as part of the African Union, SADC member states adopted the Action Plan for Accelerated Industrial Development of Africa.

The recent adoption of the *SADC Industrialization Strategy and Roadmap (2015-63)* (SADC, 2015) has repositioned industrialisation as the fulcrum of the region's development efforts. The Strategy "is anchored on three [supposedly] interdependent and mutually supportive strategic pillars – industrialization as champion of economic transformation; enhancing competitiveness; and deeper regional integration. The Strategy sets out three potential growth paths – agro-processing; mineral beneficiation and downstream processing and industry, and service-driven value chains" (Tralac, 2017). Implementing this strategy requires addressing some challenges including:

Box 2.1. **Industrial policy in Southern Africa** *(cont.)*

- **Financing** – how to mobilise resources in light of projections that for the period 2015-30 investment will need to rise substantially to 41.3% of GDP, from 23% in 2014. At current savings rates, there will be a financing gap of 18.2% of GDP.
- **Industry discovery process** - how to identify, work with and support industry players and investors to diversify into higher value-adding activities.
- **Value chain analysis** – how corporate and government policy makers can identify and prioritise entry points into value chains and how they might be shared within value chains in the region. This also includes how to build consensus among member states to determine which policy functions to prioritise and to what extent.
- **Institutional framework** – how to co-ordinate public and private sector efforts to remove infrastructural, institutional and financial constraints to value chain development.

Southern Africa should increase its productivity and competitiveness

Manufactures dominate Southern Africa's exports, averaging about 40% of the region's export bundle (UNCTAD, 2018). Yet between 2000 and 2016, Southern African countries stagnated in the Competitive Industrial Performance (CIP) Index, averaging 102 to 104 out of 138 countries. A decomposition of the CIP reveals a complex and countervailing interplay among three drivers: productivity, structural change and competitiveness. Since 2000, the region's capacity to produce and export has increased, as evidenced by growth in per capita MVA and manufacturing exports. In 2016, the share of Southern Africa's commodities produced with medium to high technology (MHT) accounted for just 11.96% of the region's MVA and 25.90% of exports of manufactures (UNIDO, 2018) (see Table 2.5).

Southern Africa's industry has become less globally competitive. This is due to a decline in the region's impact on world production and trade, implying faster growth in industrial output of other regions globally The region's leading economy, South Africa, stagnated with an upper middle CIP ranking owing to the de-industrialisation that swept through the Vaal region. The only three countries that improved their ranking (Angola, Malawi and Mozambique) remained in the bottom quintile.

Table 2.5. **Competitive Industrial Performance in Southern Africa, 2000-16**

Dimension	Indicator	2000	2016
Capacity to produce and export	Manufacturing value added (MVA) per capita (USD)	323.88	431.29
	Manufacturing export per capita	367.37	639.13
Technological upgrading and deepening	Share of medium to high technology (MHT) values in regional MVA (%)	9.90	11.96
	Share of MHT MVA in Southern Africa's export	15.07	25.90
	Share of MVA in region's total production	12.68	11.89
	Region's share in world manufacturing trade (%)	0.49	0.55
Impact on world production and trade	Southern Africa's share in world MVA (%)	0.60	0.56
	Manufacturing export share (%)	48.10	45.73

Source: UNIDO (2018), *Competitive Industrial Performance Index* (database).

Increasing access to infrastructure is critical

Southern Africa needs to improve development corridors and use them to open up rural areas. Although Southern African countries rank outside the top 75 in the quality of infrastructure that forms the backbone of low-cost logistics, the region does better than its peers in the quality of road infrastructure (see Table 2.6). Southern Africa boasts a number of cross-regional infrastructural investments including the Trans-Kalahari Corridor linking Walvis Bay and Windhoek in central Namibia through Botswana to Johannesburg and Pretoria. Smaller countries have taken advantage of their strategic geographical position to structure their main economic activities along major corridors, such as the Mbabane-Manzini Corridor in Eswatini. Assuring rural-urban connectivity and multimodal service is equally paramount. The Maputo Development Corridor, linking South Africa's Gauteng region to Mozambique's deep-water port in Maputo, is an example of integrated infrastructure that promotes the connectivity of rural areas. It is also multimodal, integrating road, rail and sea.

The information and communications technology (ICT) industry and e-governments in Southern Africa are growing slowly relative to the region's capacity and income levels. The region's relatively high tariffs, low broadband penetration and slow Internet speed directly constrain the growth of the ICT industry. In addition, they contribute to the slow development of e-government applications, making it more difficult and costlier for citizens to access government services. Mobile broadband penetration varies from a low of 13.8 per 100 people in Zambia to a high of 62 per 100 people in Namibia. Connectivity in the region is also low, given that Internet bandwidth in South Africa (147kb/s/user) is at least 30 times that of Lesotho, Malawi and Zambia, which average less than (5 kb/s/user) (WEF, 2018).

Table 2.6. **Ranking of infrastructural quality in Southern Africa, 2018**

	Overall infrastructure	Transport infrastructure			Energy and telephone infrastructure	
		Road	Rail	Airport	Electricity	Mobile telephony
Namibia	45	23	50	57	46	97
South Africa	59	29	40	10	112	15
Botswana	77	62	51	89	108	9
Eswatini	81	39	n/a	n/a	98	122
Lesotho	97	99	n/a	138	105	90
Zambia	100	85	74	107	120	125
Zimbabwe	111	101	84	107	124	115
Mozambique	123	133	78	118	118	126
Malawi	125	112	94	136	125	138

Note: N/A = not applicable. Data not available for Angola.
Source: WEF (2018), *Global Competitiveness Report 2018*.

Inadequate energy is a major contributor to Southern Africa's slow productivity growth and low competitiveness. The region suffers from insufficient energy supply to serve increased industrial production and provide access for its growing population. Although electricity production has expanded overall, it is still at the same per capita level as it was in 2007 due to population growth. South Africa, which accounts for over 80% of Southern Africa's electricity generation capacity (67 GW), ranks 112th globally in the quality of electricity supply (WEF/WB/AfDB, 2017). In recent years, the country has faced scheduled blackouts, or load shedding. Its state-owned power utility, Eskom, battles to meet growing energy demand and faces difficulties in servicing its debt, with coal prices having soared by about 50% in the past ten years (BBC, 2019). Box 2.2 presents regional efforts to deal with power shortages.

Box 2.2. **Southern Africa Power Pool**

Following the adoption of the SADC Protocol on Energy, in 1996 SADC countries created the Southern Africa Power Pool (SAPP) to facilitate the establishment and development of an interconnected electrical system, power pooling and trading in electricity. As of 2018, SAPP had 17 members: 12 national power utilities, 2 independent transmission companies and 3 independent power producers.

Apart from facilitating interconnection among its members, much effort has gone into developing competitive power markets. A short-term energy market was established in 2001, followed by the development of a competitive electricity market in 2004. Recently, SAPP introduced a day-ahead market, live power trading in an intra-day market, and forward physical markets both weekly and monthly.

While these developments have moved the power market towards an instantaneous energy exchange, uptake in trading has been slow, and significant trading still occurs outside the competitive market platform based on pre-existing bilateral agreements. In 2018, in a region with an installed capacity of 67 GW, the 2.15 GW traded on the competitive market was only 9% of power offered (24.13 GW), 47% of power requested from the market (4.53 GW) and 23% of SAPP's overall power trades. As with the case in merchandise trade, South Africa (Eskom) dominates power trading, accounting for 88% of electricity exports. Namibia, Zimbabwe and Eswatini are the main net importers, accounting for 37%, 25% and 18% of SAPP power imports, respectively.

The region is placing its hope for power generation on the Grand Inga project on the Congo River in the western part of the Democratic Republic of the Congo. When finalised, it will be the world's biggest hydro-electric dam. Currently, SAPP has over ten interconnection projects; they seek to connect non-operating members as well as interconnect with the Eastern Africa Power Pool through Tanzania but targeting Kenya.

Source: SAPP (2018), *Annual Report*, 2018.

Proposed policy actions to address Southern Africa's infrastructural deficits

Addressing infrastructural deficits will be critical to raising productivity and making Southern Africa's industry globally competitive. This requires the following:

- Encourage the SADC Infrastructure Fund to prioritise investments in infrastructure especially electricity, emphasising generation capacity and interconnectors to the remaining non-operating countries. The Development Bank of Southern Africa needs to be supported in its role as the seed financial institution pending the Fund becoming fully operational.
- Undertake reforms to increase investments in mobile and fixed broadband infrastructure, strengthen competition among Internet service providers, and improve the quality and reduce the price of ICT services. The reforms should encourage competition by liberalising entry into the sector and reining in collusive pricing among telephony service providers through regulation.
- Through SAPP, address soft barriers to entry in both the generation and trading of power. This includes cost reflective tariffs to sustain current generation levels and routine maintenance. Building capacity to negotiate power purchase agreements can help independent power producers enter the energy sector.

Building skills is necessary to enhance productivity and competitiveness

Southern Africa lacks the skilled labour to maintain the competitiveness of traditional sectors and to develop new industries. The availability of skilled workers and management capacity are critical determinants of domestic productivity, competitiveness and company location decisions for foreign companies. The region's countries on average rank outside the global top 100 in quality of higher education and technological readiness and outside the global top 90 in capacity for innovation (Table 2.7). This reflects a dearth of scientific and technical capacity to adopt or adapt technology at a level and standard required by multinational enterprises. The exception is South Africa. It ranks 77th in access to higher education with universities that top African university rankings. Four of its universities (University of Cape Town, Wits University, Stellenbosch and University of KwaZulu-Natal) rank among the world's top 500 universities. In South Africa, government policies and investment in promoting innovation have created a better environment for technological readiness and innovation. South Africa has a high number of incubators for local start-ups, which include Jozihub, Cape Town Garage, Black Girls Code, Shanduka Black Umbrellas, Raizcorp and The Innovation Hub (AfDB/OECD/UNDP, 2017).

Table 2.7. **Higher education, technological readiness and innovation in Southern Africa**

	Higher education	Technological readiness	Capacity for innovation
South Africa	77	49	35
Botswana	88	86	84
Namibia	110	87	74
Zambia	120	115	66
Lesotho	119	123	111
Zimbabwe	115	120	129
Mozambique	135	127	117
Malawi	131	135	120
Southern Africa	**112**	**105**	**92**

Source: WEF (2018), *Global Competitiveness Report 2018*.

Southern Africa needs to expand and improve technical vocational education and training (TVET) programmes to fill its skills gap. Investments in TVET can go a long way to augment the skills base needed for industrialisation. The World Bank (2018a) estimates that growth in demand for skilled workers and managers will likely outpace supply in many parts of the world in the near future. Yet trends are going in the wrong direction: between 2008 and 2016, the availability of scientists and engineers declined in many African countries (WEF, 2018).

Enrolment rates in TVET programmes in Africa are not only below the world average, but they also fell between 2000 and 2014 (World Bank, 2018a). This was in part due to cultural attitudes that view TVET as offering lower prestige and social status than other higher education options. However, it also results from underfunding of TVET due to low prioritisation. In South Africa, 7.3% of students in secondary school are enrolled in vocational programmes compared to 21% in Egypt.

Proposed policy actions to build the skills base

Developing capabilities and capacities requires massive investments especially in education, innovation, institution building and physical assets to create strong knowledge economies. Building the region's skills base necessitates public policies that:

- Create financial and non-financial instruments to support private innovation, promote technology transfer, facilitate collaboration between public research and development institutions and industry, and encourage entrepreneurship.

- Promote the development of regional centres of excellence (taking into account existing pockets of excellence) to promote innovation, technology development and transfer within the region.

The region needs to facilitate access to financing

A substantial portion of industrial activity in Southern Africa occurs among small and medium-sized manufacturing enterprises (SMEs). Across Africa, SMEs are the backbone of the economy, representing more than 95% of all firms and being responsible for two-thirds of all formal full-time employment (SADC/OECD, 2017). Yet they face serious market and non-market constraints, including business finance from formal financial institutions. Access rates in many Southern African countries are low and below the sub-Saharan average (22.6%). Finance is rated as one of the top three constraints to doing business in all countries of the region, except Botswana – rated first in Lesotho, Malawi, Namibia and Zambia (WEF, 2018, based on World Bank Doing Business survey). South Africa has a well-developed and sophisticated financial system, but less than 5% of its small businesses rely on formal financial institutions for funding. Their access to credit is constrained by lack of suitable financial products offered by banks and inadequate capacity of small business founders to present their funding needs to financial institutions (World Bank, 2018b).

Risk aversion to and shallowness of financial systems have resulted in financial exclusion for SMEs, limiting their capacity to diversify. In the smaller economies, shallowness of financial systems means that banks prefer to fund commerce or trade with a quick turnover. As Box 2.3 shows, in Malawi, banks favour large and export-oriented enterprises. Recent evidence also suggests that due to a lack of project preparatory finance, even when funding for project implementation is available, countries in the region lack a pipeline of projects that have reached bankable feasibility (Markowitz et al., 2018). Countries need cross-regional interventions on industrial financing, especially those biased towards promoting cross-border industrial linkages as well as accommodating the needs of the SME sector.

Lessons can be learnt from Namibia's SME post-loan mentorship programme, which has expanded SMEs' financial access while mitigating risk through business development services. Namibia's two major commercial banks, the Development Bank of Namibia and Bank Windhoek, provide financial access to SMEs with generous terms. The financing is linked to a mentorship and post-loan assistance programme to improve entrepreneurs' business management skills in order to lower the risk of loan default (AfDB/OECD/UNDP, 2017).

Proposed policy actions for facilitating access to finance

Facilitating access to finance requires public policies that:

- Provide integrated access to financial services that combine financial access with business advisory and management services. The evidence from Namibia shows that access to funding is necessary but not sufficient to sustain business, absent other managerial competences.
- Unfetter national development finance institutions to broaden their remit to include regional capacity-building initiatives that support greater regional infrastructural development and regional ownership and participation.
- Implement innovative private sector-led programmes to obviate bottlenecks to financial access. A case in point is the Johannesburg Stock Exchange's (JSE) initiative establishing the first SME-tailored trading platform, in 2003. It has since seen over 120 firms listed, a quarter of which graduated to the JSE Main Board. Other stock exchanges in the region have adopted the initiative (AfDB/OECD/UNDP, 2017).

- Create regional interventions on industrial financing that promote cross-border linkages and accommodate the SME sector. This would also include project preparation financing mechanisms to generate and sustain a pipeline of bankable projects.

Box 2.3. **Access to finance for small and medium-sized enterprises in Malawi**

In Malawi, access to credit is ranked first among obstacles to doing business. Access to credit is not only low (26.7%), but lenders favour large-scale enterprises over SMEs and foreign-owned firms or firms engaged in exports over those with a domestic orientation. Access to finance is further constrained by more onerous collateral requirements. About 93% of loans in Malawi require collateral, and the value of collateral needed for a loan was three times the value of a loan. Indeed very little, if any, relationship exists between the value of loan requirements and non-performing loans.

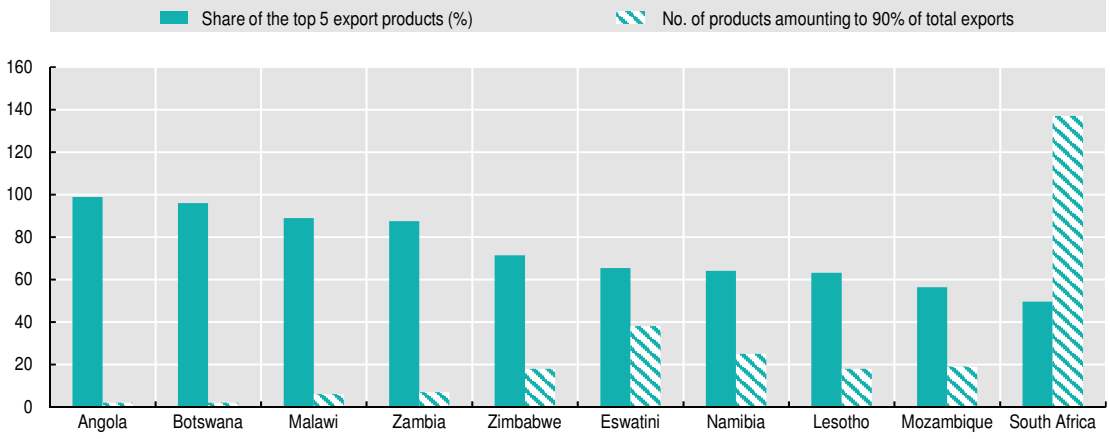
A consequence of the structure of finance is that SMEs in Malawi depend heavily on funding investment from their own funds. About 66% of total investment are financed internally, 33% by banks and 1% by supplier credit, equity or stock sales.

Source: World Bank (2017), *Malawi Investment Climate Assessment (ICA): A Review of Challenges Faced by the Private Sector.*

Regional complementarities need strengthening

Southern Africa exhibits limited diversity and high levels of concentration in international trade. The low level of export diversification in the region reflects high levels of commodity dependence, which the commodity super-cycle of the 2000s has intensified in many countries. South Africa is the region's most diversified country with an export basket of more than 100 products. Angola and Botswana, the region's second and fourth largest economies, have the least diversified economies with top two export products, oil and diamonds, respectively, accounting for more than 95% of their exports (see Figure 2.4). The majority of the smaller economies have comparatively more diversified export baskets (e.g. Lesotho and Namibia). The economies with lower income levels depend on one or two agricultural products. Malawi, for instance, continues to rely on unprocessed tobacco and tea as its main exports, while Zambia remains dependent on copper exports.

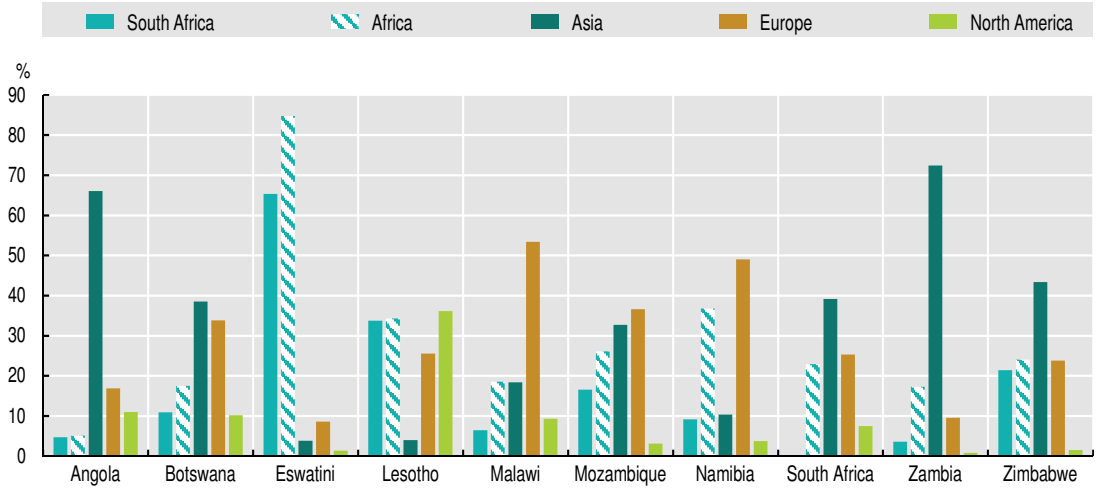
Figure 2.4. **Export concentration in Southern Africa, 2016**



Source: AUC/OECD (2018), "Statistical annex", in *Africa's Development Dynamics 2018*.
StatLink https://doi.org/10.1787/888933967093

With the exception of South Africa, the countries in the region do not manufacture goods demanded by others in Southern Africa, leading to little regional complementarity. Although South Africa accounts for over 80% of the region's intra-African trade, the latter represents a minor share of South Africa's foreign trade (11%). The region's trade surplus of USD 30.1 billion against the world is almost wholly attributable to South Africa and Angola, which accounted for USD 21.1 billion and USD 15.3 billion, respectively. In the past decade, Asia has overtaken Europe and North America as the major source of imports and destination of exports for the region. China recently emerged as the leading destination for exports from Angola (66%) and Zambia (72%) and accounts for upwards of 35% of imports for Angola, Malawi, Mozambique and Zimbabwe (see Figure 2.5). In the end, low intra-regional trade has translated into a lack of linkages and low stimulus for industrialisation based on regional complementarity.

Figure 2.5. **Export destinations for Southern Africa, 2016**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
StatLink https://doi.org/10.1787/888933966713

Transforming Southern Africa's industry requires strengthening regional complementarities by creating a financing mechanism for regional public goods and for the development of linkage industries from the mineral sector.

Southern Africa should create a mechanism for financing regional public goods

Southern Africa incurs high overland transport costs to regional trade largely due to competition and structural constraints. An imbalance in production and trade flows between countries in the region results in poor vehicle utilisation and increases costs. For instance, on the Lusaka-Johannesburg route, the import rate is around double the rate for the corresponding outgoing leg, mainly because of the lack of return loads for trucks once goods have been delivered (Vilakazi, 2018). In addition, regular truckers cannot compete with large integrated logistics firms that have exclusive access to large producers and clients. These firms have capacity in terms of fleet, storage, warehousing, refrigeration units and supply chain management technology, effectively dominating some segments of the market and limiting competition. For instance, South Africa's largest retailer, Shoprite, internalises the logistics functions through a related firm, Freshmark. It mostly uses a set of preferred transporters from South Africa to export goods, effectively restricting access for other transport operators (Vilakazi, 2018).

Table 2.8. **Ranking of quality of customs, logistic and timeliness in Southern Africa**

	Customs procedures	Logistics quality and competence	Timeliness
South Africa	18	22	24
Botswana	48	75	43
Namibia	73	86	85
Mozambique	88	109	97
Zambia	119	114	124
Angola	157	128	141
Zimbabwe	144	141	158
Lesotho	151	138	150

Note: Ranking based on 160 countries.
Source: World Bank (2019b), *Logistics Performance Index* (database).

Regulatory and administrative bottlenecks impose additional costs on regional trade and transportation. Southern African countries rank outside the top 100 in efficiency of customs services. These services affect logistics quality and competence, and even timeliness (see Table 2.8). For countries outside of the Southern African Customs Union, Southern Africa lacks a common platform for across-the-board pre-clearance of goods. Limited interoperability and connectivity in the clearance systems between countries are further aggravated by border gates that do not operate on a 24-hour basis, leading to increases in queues and transit times for goods. In 2015, delays at the border between South Africa and Zimbabwe were estimated by transporters to cost truck operators at least USD 400 a day in additional driver time, petty cash, parking fees and the opportunities lost for servicing fewer clients due to longer roundtrips (Vilakazi, 2018).

Proposed policy actions for financing regional public goods

Southern Africa stands to benefit from public policies that reduce the amount of time it takes to transport and clear goods across borders as well as to settle invoices for international trade. To these ends, the region should consider these actions:

- Prioritise investments in improving the efficiency of border procedures, alleviating regulatory bottlenecks and enhancing the efficacy of administrative systems. This would include streamlining border processes by creating one-stop border posts and by standardising, automating and linking customs and immigration paperwork that would obviate the inordinate amounts of time that cross-border traders and travellers spend at the border. SADC can build on South Africa's e-filing system for taxes and learn from East African countries' experiences with the electronic single window systems.
- Explore measures that increase competition, improve vehicle utilisation and reduce price alignment or protection of domestic transport markets through administered prices. Enabling entry, licensing and passage of transporters, as well as harmonising rules for trade and transit across countries, can enhance competition.

Developing linkage industries from the mineral sector is necessary

Regional integration has an important role to play to develop industrial linkages in the mining business. The majority of Southern African countries are mineral-based economies. However, they have enclave policies for linking the mining industry to upstream and downstream services. While this suggests significant regional integration across the mineral and mineral processing value chains, policies pursued by individual countries for linkage industries have largely failed to take into account these regional dynamics (Fessehaie and Rustomjee, 2018). Public ownership of mineral-linked supply industries has meant that their remit is limited to satisfying the demand of local miners. South Africa has

well-developed mining sector linkage industries, dominating the regional mining capital equipment market (see Table 2.9). Learning from the example of South African companies, instead of tying their fortunes to the health of mining in their domestic markets, upstream mining industries ought to consider Southern Africa as one market.

Table 2.9. **Mining equipment sales by South African companies within SADC, 2012-14**

	Average USD million	South African % of mining equipment purchases
Zambia	589.5	37
Namibia	494.7	63
Botswana	452.6	73
Mozambique	431.6	42
DR Congo	368.4	48
Zimbabwe	357.9	57
Angola	105.3	13
Tanzania	94.7	9
Eswatini	84.2	83
Malawi	63.2	25

Source: Based on Table 2 of Fessehaie and Rustomjee (2018), "Resource-based industrialisation in Southern Africa: Domestic policies, corporate strategies and regional dynamics".

Structural hindrances stymie the development of linkage industries in Southern Africa. Recent research has identified four barriers to mineral-based linkage industries in Southern Africa:

- "Mining firms' procurement strategies, including practices of outsourcing procurement of an entire category of supplies (e.g. health and safety equipment) to solution providers who procure directly from global suppliers.
- Information asymmetry: [mismatch between] mining house procurement knowledge of what is locally available" and domestic manufacturers' knowledge of how to access procurement opportunities in the mining sector.
- "High cost of finance for working and investment capital" for local suppliers.
- "Low technological capabilities and weak quality assurance mechanisms". (Fessehaie and Rustomjee, 2018)

Box 2.4 shows the role of government in developing linkage industries. This includes support from education systems that produce most of the technical, engineering and managerial skills required by the mining and manufacturing sectors.

Box 2.4. **Efforts to establish mineral sector linkages in Zambia and Zimbabwe**

Southern Africa has the latent potential to expand mining linkage industries upstream, e.g. by supplying equipment, off-road vehicles, and pumps and valves. Upstream goods and services require low levels of skills, technology and capital and can be supplied locally at competitive prices. This contrasts with downstream goods and services, e.g. "mineral beneficiation requires large lump-sum investments, foreign technologies and highly skilled personnel" (Fessehaie and Rustomjee, 2018).

Following the nationalisation of its mineral sector in the late 1960s, Zambia developed linkage industries through import substitution policies. These policies were complemented by a battery of others that promoted upstream and downstream mining

Box 2.4. **Efforts to establish mineral sector linkages in Zambia and Zimbabwe** *(cont.)*

linkages as part of the country's industrialisation strategy. The policies were supported by a skilled workforce produced by an extensive technical and vocational education system sponsored by the mining sector.

Zambia's recent efforts emphasise downstream processing. Non-Ferrous China Africa is investing USD 800 million in Chambishi for a copper smelter, acid plants and a copper semi-fabricates manufacturing plant (Fessehaie and Rustomjee, 2018).

Until the late 1990s, Zimbabwe had a well-linked and diversified economy, with industrial development evolving around its mining sector. "The manufacturing sector produced ball mills, conveyors, rail and rolling stock, pumps, headgear, ventilation ducting, electrical equipment mining chemicals and explosives" (Jourdan et al., 2012). The sector was supported by an education system that produced most of the technical, engineering and managerial skills required by the mining and manufacturing sectors. However, due to economic crises of the 2000s, the mineral linkage industries in Zimbabwe collapsed and all these capabilities were eroded. Large segments of foundry, metal fabrication and heavy machinery sectors closed down and have yet to fully recover.

Proposed policy actions for linkage industries from mineral sector

The region should consider the following actions:

- Create Southern African business programmes that include a financing mechanism and information platform linking mining procurement demands with supplier capabilities in the region. This would require reviewing procurement policies to provide preferential procurement to local suppliers as part of a comprehensive approach to industrial policy. The move by the Zambian Association of Manufacturers to screen local suppliers in favour of those that intend to provide business development services is one such positive initiative.
- Develop comprehensive curricula geared at capacitating and supporting industries linked to mineral sector development through science, technology and engineering as well technical and vocational training. This can be complemented by targeted industry-specific management training, such as the Zambia Mining Skills and Education Trust that the Chamber of Mines set up in 2014. The region can also learn from Chile's Framework for Mining Qualifications, a private sector initiative which informs training institutions of the skills that should be offered and advises workers on the skills they should build (OECD/CAF/ECLAC, 2014).

The region should enhance participation in global value chains

Participation in global value chains (GVCs) has upsides and downside that need to be carefully balanced. The transformation literature suggests that countries that have most rapidly increased in industrial productivity and competitiveness are those that are integrated into global value chains (Foster-McGregor, Kaulich and Stehrer, 2015). To the extent that developing countries' participation in GVCs involves net inflows of foreign direct investment (FDI), GVCs can:

- facilitate technological upgrading and spill-overs
- increase productivity levels, allow developing countries to develop advantages in a range of small, narrowly defined items without having all the upstream capabilities in place

- improve quality due to standards set by lead firms for their suppliers. (Humphrey, 2004)

On the downside, as multinational enterprises (MNEs) which control most GVCs are expanding, they are consolidating their power, appropriating increasing shares of profit and crowding out local firms (ECA, 2015). Some estimates point to the top 500 MNEs driving much of the growth in GVCs and comprising up to three-quarters of total international trade (Ahmad and Ribarsky, 2014). More importantly, MNEs are growing their profit shares from intangible activities that are increasingly knowledge- and skill-based, which tacitly bar many Southern African firms from participating in GVCs.

Participation in value chains can start at the regional level and evolve to the global level. The issue for Southern Africa is not whether to participate but how to upgrade regional value chains and where to enter GVCs.

It is imperative to deepen regional integration

The Tripartite Free Trade Area (TFTA) and the Continental Free Trade Area (AfCFTA) could greatly increase regional trade and value chain participation for Southern Africa. Southern African countries have long committed themselves to investment-led trade and regional economic and industrial integration, but these two recent initiatives promise to actualise this commitment. The TFTA, launched in 2013, seeks to link three existing regional economic communities: SADC, the Common Market for Eastern and Southern Africa, and the East African Community. It has prioritised regional integration, especially the removal of trade barriers and the free movement of business people. The TFTA has been positioned as a building block of the AfCFTA. The latter initiative was launched in 2015 to link the whole continent in free trade, inspired by the African Union's Agenda 2063. The TFTA covers 26 countries, approximately 632 million people and a GDP of USD 1.7 trillion, while the AfCFTA unlocks a potential market of over 1 billion people worth USD 3.4 trillion.

Deepening regional integration requires addressing the many physical and soft barriers to investment-led trade. Strengthening regional value chains can increase firms' opportunities to participate in GVCs (ECA, 2015). Many African countries only participate in lower value-added segments of GVCs that have higher integration rates often driven by one or two firms which are poorly linked to the rest of the economy. MNEs control their value chains by setting product standards and rules.

To deepen regional integration, Southern Africa needs to:

- Fast-track the negotiation and implementation of free trade agreements which are ambitious enough to include services. Services have been growing significantly in the region and are essential for attracting private investors and for driving growth in the manufacturing sector.
- Within the SADC development fund, finance integrated regional transport and logistics infrastructure. These include transport corridors that link sea and inland ports especially for landlocked countries and that promote more integration and harmonisation of financial and payment systems to facilitate the seamless settlement of international trade invoices.

South Africa is the region's natural gateway into global value chains

Southern Africa is highly under-represented and asymmetrically integrated into GVCs. The region's participation in GVCs has significantly increased over the course

of the last decade and is greater than that of the rest of the continent (UNCTAD, 2017). But, except for South Africa, the countries most involved are resource-poor economies with small populations, like Eswatini and Lesotho (see Box 2.5) whose participation is mainly attributed to their proximity to the regional hub, South Africa. Much of this GVC involvement is in upstream production to supply the primary goods needed to produce final goods in other regions and countries and to supply apparel and fabrics to United States markets (World Bank, 2016; UNCTAD, 2017). The region's manufacturing and high-tech sectors more generally have not been a major contributor to GVC participation, limiting possibilities for technology upgrading and spill-overs.

South Africa has long acted as a gateway for foreign investors to access the Southern African market and workforce. Southern African countries can accelerate productive transformation by creating regional value chains which leverage South Africa's current participation in GVCs. Given individual countries' market sizes and lack of capacity to directly integrate into GVCs, an initial first step is to participate in supplying the established industries in South Africa.

- Although small by global standards, South Africa is the most integrated into GVCs of any African country, with deep roots in agro-processing, the automotive industry, fabrics and textiles, and pharmaceuticals. South Africa dominates the African landscape, hosting seven of Africa's ten largest non-extractive companies with retail chains (e.g. Shoprite and Pick n Pay).
- Southern African countries are a major destination for South African exports and FDI. South Africa's presence in the region is also felt through investment in service sectors such as banking, with the likes of Standard Bank and NedBank expanding into the region.
- Foreign supplier networks dominate MNE production networks in South Africa. In agro-processing, top European, American and Asian MNEs that are active in the region include Nestlé, Unilever and Cargill, albeit with a limited footprint relative to their global investments.

Box 2.5. **Development of the manufacturing sector in Lesotho**

Lesotho stands out as a beneficiary of South African de-industrialisation. Until the end of apartheid in South Africa in the early 1990s, thousands of Basothos worked in South Africa, and remittances from South Africa accounted for as much as 90% of Lesotho's GDP (GoL, 2007). Beginning in the late 1980s as apartheid was coming to an end, Basotho employment by the South African mining industry started declining. It dropped from 127 000 workers in 1990 to 65 000 in 2000 and subsequently to fewer than 50 000 in 2005. With it, the share of remittances to GDP fell to 50% in 2000 and then 23% in 2005.

Fortuitously, at the same time, a number of South African companies began relocating their plants to Lesotho to avoid sanctions that had been imposed on South Africa due to apartheid. By 2001, some 59 companies had established themselves in Lesotho.

Lesotho's qualification for the African Growth and Opportunity Act (AGOA) in 2003, coupled with the availability of incentives aimed at promoting FDI under the Agro-Industrial Project (1991-96), attracted 23 new Asian manufacturers. This cemented Lesotho's position as a major sub-Saharan African beneficiary of the AGOA and exporter of clothes and apparel. Unfortunately, Lesotho's fabrics and textile industry has not managed to develop solid upstream and downstream linkages because almost all exporters are foreign-owned and most manufacturers rely on imported raw materials.

Proposed policy actions for leveraging South Africa in global value chains

The relative importance of strategies for leveraging South Africa naturally varies according to the stage of a country's development, its resource endowments, its macroeconomic challenges and the sophistication of the private sector. Proposed policy actions include:

- Remove infrastructural, institutional and financial constraints that discourage private investment and value chain development. In South Africa, both the central and sub-national governments (such as eThekwini) have been involved in GVC development by funding private business networks of industry associations in the apparel and automotive sectors that were precursors to fully developed clusters (AfDB/OECD/UNDP, 2017).
- Participate in supplying the established industries in South Africa. Given individual countries' market sizes and lack of capacity to directly participate in GVCs, this is an initial step. There is a critical need to create and sustain both industrial clusters and regional value chains and to integrate them into GVCs, including upgrading and deepening existing value chains.

The region should use multinationals to bring small and medium-sized enterprises into value chains

Southern African SMEs' participation in regional and global value chains has been peripheral, and SMEs face constraints at all levels of value chains. SMEs struggle to integrate into GVCs as large MNEs control up to 80% of global trade. The literature suggests that SMEs face unfair domestic competition from large MNEs and that cheap imports hinder their chances of survival and growth. Constraints to expanding their supply-side base – e.g. access to finance, skills, knowledge networks and other business-related support – are compounded by low-quality public services, regulatory bottlenecks and private quality standards imposed by MNEs.

For instance, Zambia has recently scaled-up its production of soya and positioned itself for participating in South Africa's poultry value chain. Yet high overland transport costs preclude Zambian soya producers from supplying South African poultry producers because soya imports from Argentina are cheaper (USD 490/tonne versus USD 500/tonne from Zambia) (SADC/OECD, 2017).

MNE-SME linkage can obviate the structural problems faced by SMEs and increase their integration into GVCs. Anecdotal evidence from Doing Business surveys (World Bank, 2019c) suggests that adopting technologies from foreign multinationals should be a strategic priority for local SMEs that wish to gain access to regional and global value chains. Southern African countries lead other regions in using technologies licenced by foreign companies. On average, 16% of local SMEs in Southern Africa use foreign-owned technologies (see Figure 2.6). These SMEs appear to enjoy a considerably higher level of participation in GVCs than those that do not use them. For SMEs that use technologies licensed by foreign companies, the average shares of imported inputs, direct exports and indirect exports are close to double those for SADC (SADC/OECD, 2017).

Figure 2.6. **Share of Southern African small and medium-sized enterprises using foreign-owned technology**

Source: Authors' calculations based on World Bank (2019c), *World Bank Enterprise Surveys*.
StatLink https://doi.org/10.1787/888933967112

The scope for SME participation in GVCs varies across Southern Africa given that the landscape for entrepreneurship differs greatly between South Africa and the other countries. South Africa has few entrepreneurs and a small informal sector. The region's other countries have many entrepreneurs and much larger informal sectors. Therefore, it is difficult to recommend the same policies for all countries, as countries with many entrepreneurs who are own-account workers have limited formal employment opportunities (AfDB/OECD/UNDP, 2017).

Proposed policy actions for linking small and medium-sized enterprises and multinationals

Southern African countries should seek greater linkages between SMEs and MNEs. The region needs public policies that:

- Facilitate creation of business linkage programmes that offer a platform for SME incubation by i) enhancing SME access to markets and industrial information, and ii) supporting participation in joint investment and export promotion initiatives.
- Attach strategic priority to adopting technologies from foreign multinationals for local SMEs that wish to gain access to regional and global value chains. The region needs to formulate regulations for joint ventures between foreign original equipment manufacturers and local companies.
- Collect micro-level business information on how lead firms are adapting their investment and trade decisions in shifting regional and global value chains. Developing adequate policy implications for SADC requires such business information and a new methodology to collect it.

Conclusion

Although Southern Africa appeared to have weathered the brunt of the global financial crisis and a recovery seemed to be underway, since 2013 the region's two largest economies have stagnated, thereby depressing the regional GDP. In addition, as a region, Southern Africa apparently experienced a limited structural transformation that has resulted in loss of industrial and international competitiveness. Due to a restricted reallocation of resources from lower-productivity to higher-productivity sectors, the region

has not witnessed a shift in factors related to and resources needed for transforming and processing raw materials.

That notwithstanding, there is considerable scope for Southern Africa to formulate public policies and engage in productive transformation. A productive transformation and industrialisation requires addressing three domains:

1. The region needs to improve productivity and competitiveness of firms which have long been hampered by inadequate infrastructure and high-cost services. It should increase access to energy and to finance and encourage entrepreneurship, especially initiatives that help SMEs.
2. Southern Africa should support initiatives that enhance regional complementarity by promoting regional public goods, including by harmonising customs procedures and payments systems.
3. The region must create conditions for better integration into GVCs by developing regional value chains that leverage South Africa's participation in GVCs. This requires loosening constraints imposed by access and by technological capability which are critical for participation. Southern Africa needs to facilitate public-private collaboration for deepening regional integration and develop technological capabilities through centres of excellence.

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Chapter 3

Public policies for productive transformation in Central Africa

This chapter analyses the public policies needed for productive transformation in Central African countries (Burundi, Cameroon, Central African Republic, Chad, Republic of the Congo, DR Congo, Equatorial Guinea, Gabon, and São Tomé and Príncipe). These countries face structural constraints that hinder their integration into the global economy and hamper inclusive growth. The chapter opens with the analysis of productive structures by reviewing trends in several macroeconomic aggregates as well as Central Africa's achievements in integrating into the global economy. It then identifies the sectors in which these countries have a revealed or latent specialisation advantage and identifies opportunities for trade growth. It goes on to examine the obstacles the private sector and foreign investors face due to low regional integration. Finally, the chapter proposes public policies to achieve productive transformation in the region.

IN BRIEF

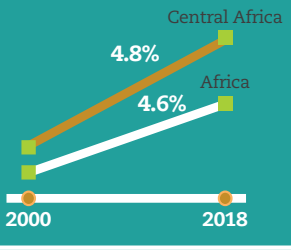
Central Africa is highly dependent on raw materials which represented 85% of its total exports in 2017, compared with an average of 51% for Africa. Oil alone accounts for almost half of all foreign receipts. In addition, the region has a much higher level of **export concentration** than the rest of the continent, both in terms of the number of products and the number of trading partners. Five countries (China, the United States, Spain, France and Italy) receive more than 60% of all exports, representing approximately 38% of GDP. Exposed to external shocks, the region's growth is much more volatile than that of the rest of Africa. Likewise, economic extraversion and low trade integration have hindered inclusive growth.

The level of **complexity of the economy** (its ability to create high value-added goods and services) is lower than in the rest of Africa. The quality of governance is half that of the African average, while poor infrastructure hinders productive transformation. In order to end erratic economic growth, commodities with a revealed comparative advantage (RCA), such as wood, stone and glass should be processed. Three main actions are recommended: strengthening r**egional integration** and synergies; promoting sectoral business groupings in special economic zones (SEZs); and making diversification strategies work.

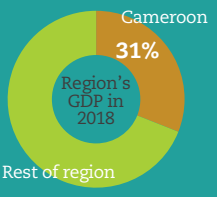
Public policies for productive transformation in Central Africa

Growth

Central Africa's growth rate was above the continent's average

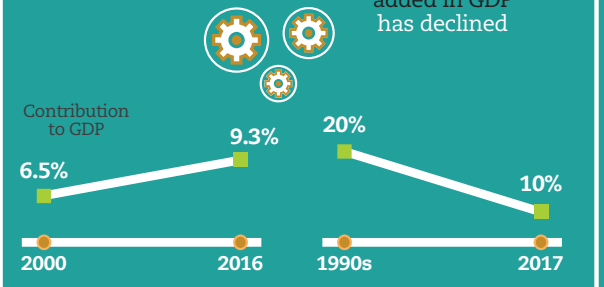


The largest economy in purchasing power parity value is Cameroon



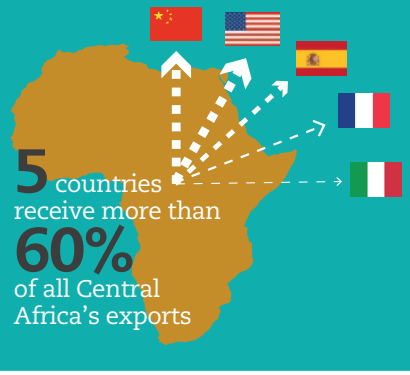
Structure of the economy

The manufacturing sector remains weak



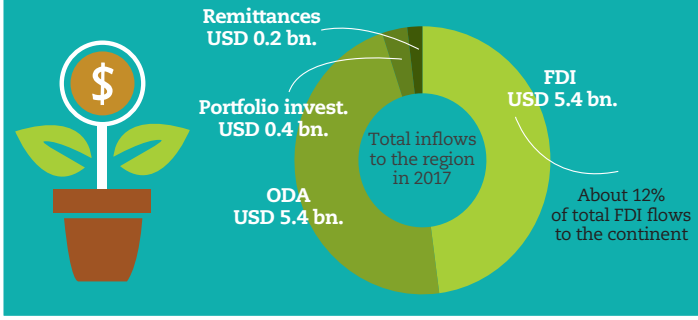
The average share of manufacturing value added in GDP has declined

Trade



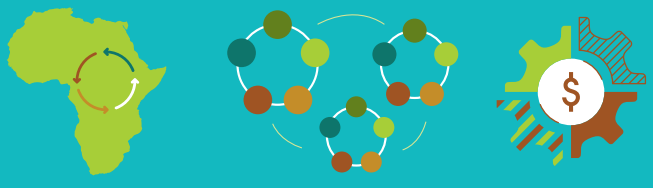
Financial inflows

The region received the least FDI in Africa



Regional strategies for productive transformation

Three main recommended actions

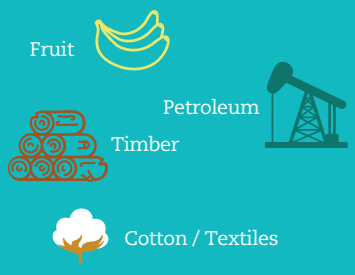


Strengthening regional integration

Promoting business clusters and special economic zones

Facilitating access to financing

Potential value chains in the region



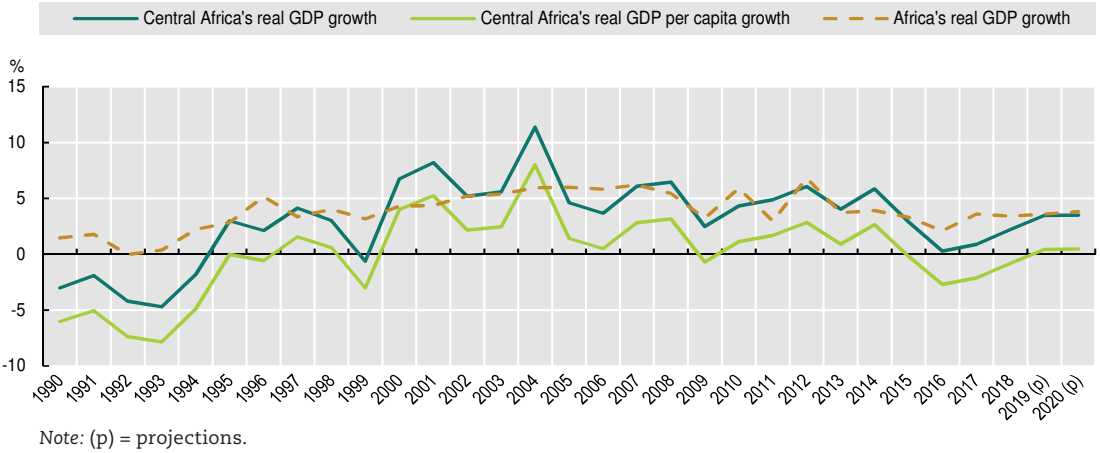
Central Africa regional profile

Table 3.1. **Capabilities for productive transformation in Central Africa, 2000-18**

		Source	2000	2014	2015	2016	2017	2018
Production technology	Employers and paid employees as % of total employment	ILO	13.1	18.8	18.8	18.9	19.0	19.1
	Labour productivity as % of United States productivity	CB	5.2	3.5	3.5	3.5	3.5	3.5
	Private gross fixed capital formation as % of gross domestic product (GDP)	IMF	17.7	18.9	19.6	17.3	16.3	17.4
	Capacity for innovation, 0-100 (best)	WEF	-	-	-	-	23.2	23.3
Regional network	Intra-region as % of imports in intermediate goods	Comtrade	3	2.6	1.8	0.1	2.4	-
	Intra-Africa as % of greenfield foreign direct investment inflows	fDi markets	-	0.0	0.0	0.9	0.4	0.0
	Venture capital availability, 1-7 (best)	WEF	-	2.6	2.7	2.7	2.4	2.3
Capacity to meet demands	ISO9001 certification as % of Africa's total	ISO	0.3	1.2	1.1	0.9	1.3	-
	Fully- and semi-processed goods as % of region's total goods export	Comtrade	21.9	26	30.5	36.1	40.2	-
	Share of Africa's total consumption goods import (%)	Comtrade	5.1	6.0	6.3	5.7	5.8	-

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 3.1. **Growth dynamics in Central Africa and Africa, 1990-2020**



Note: (p) = projections.
Source: Authors' calculations based on IMF (2019), *World Economic Outlook* (database).
StatLink https://doi.org/10.1787/888933967131

Table 3.2. **Financial flows and tax revenues to Central 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	1.7	3.7	7.5	5.4	5.2	5.2	4.8	7.9	7.0	5.4
		Portfolio investments	0.1	0.2	0.3	-2.2	-3.5	1.3	0.0	0.0	-0.3	0.2
		Remittances	0.1	0.2	0.2	0.4	0.3	0.4	0.4	0.5	0.4	0.4
	Public	Official development assistance	3.1	4.7	7.0	7.9	4.9	4.9	5.0	5.0	4.9	5.4
Total foreign inflows			**5.0**	**8.7**	**15.0**	**11.5**	**6.9**	**11.7**	**10.3**	**13.4**	**12.0**	**11.3**
Tax revenues			**4.3**	**10.7**	**13.9**	**17.4**	**18.5**	**20.0**	**21.5**	**15.4**	**12.7**	**12.9**
Private savings			**5.5**	**9.3**	**15.7**	**19.1**	**22.8**	**24.6**	**29.8**	**18.8**	**15.2**	**21.6**

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 (2018a), *World Development Indicators* (database).

Dynamics of production structures in Central Africa

Growth is vulnerable to external shocks and remains weak and unstable

Growth in Central Africa is more unstable and volatile than in the rest of Africa and it is highly dependent on the global economy. Growth peaked at 12% in 2004 and in the course of two years collapsed to 3.8% in 2006. Since then, growth has remained volatile, and has mirrored rises and falls across Africa. Exposure to external shocks led to a sharp decrease in economic activity during the international financial crisis in 2008 and 2009, and again in 2013 with the drop in oil prices.

Central Africa has enormous potential. Its equatorial rainforest is one of the lungs of the planet, and the region has unexploited deposits of more than one thousand minerals, including oil. The region accounted for 11.5% of the African population with 144.6 million people in 2017 (AUC/OECD, 2018). Its GDP oscillates between 0.28% and 11.37% of the continent's total GDP, depending on world oil prices. The profiles of its nine countries are heterogeneous. They range from small coastal countries, such as Equatorial Guinea and São Tomé and Príncipe, to landlocked countries such as Chad and Central African Republic. The heavyweight of the region is the vast DR Congo which has 78.7 million inhabitants and enormous economic potential.

Strong economic performance in Central Africa does not have a positive effect on standards of living

Central Africa scores better than the African average for some indicators such as private investment, exports and foreign direct investment (FDI). Private investment amounted to 18.7% of GDP between 2000 and 2004. This was due to diversification efforts and the slow but steady realisation of public-private partnerships (PPPs), as well as a gradual improvement in the business climate. This trend has been maintained over various periods. However, performance was poorer in terms of GDP per capita and public investment (Table 3.3). As for exports, they remain higher than those of Africa as a whole. Since 2010, Central Africa has received more FDI than the rest of Africa due to high oil prices between 2013 and 2016, greater presence of multinational firms, and incentives for private investment.

Table 3.3. **Central Africa's performance, 2000-16 (percentage of GDP)**

	2000-04		2005-09		2010-14		2015-16	
	Central Africa	Africa	Central Africa	Africa	Central Africa	Africa	Central Africa	Africa
GDP per capita (growth rate)	7.47	5.06	4.63	5.35	5.03	4.61	1.61	2.74
Government spending	21.64	24.42	22.82	24.83	27.97	27.84	26.22	30.45
Public investment	4.71	6.05	6.78	7.11	10.62	6.56	6.67	6.59
Private investment	18.71	11.75	15.21	13.43	15.94	15.32	17.62	15.51
Exports	28.85	22.03	37.69	27.01	36.35	23.64	22.19	15.95
Imports	7.44	16.62	9.48	19.48	9.93	19.45	4.97	15.96
Foreign direct investment	6.80	2.22	2.45	3.09	6.06	2.42	4.96	2.40
Remittances	0.23	1.19	0.41	1.92	0.57	3.26	0.52	3.13

Source: Authors' calculations based on World Bank (2018a), *World Development Indicators* (database).

These positive developments have not led to inclusive growth. Some countries remain at the bottom of the list of the Human Development Index (HDI), with the Central African Republic ranking 188th out of 189 countries. Chad ranks 186th, Burundi 185th and DR Congo 176th (UNDP, 2018). Cameroon, São Tomé and Príncipe, Equatorial Guinea and Republic of the Congo rank 158th, 143rd, 141st and 137th respectively, amongst countries with medium human development levels. Gabon (110th) is the only country in the region

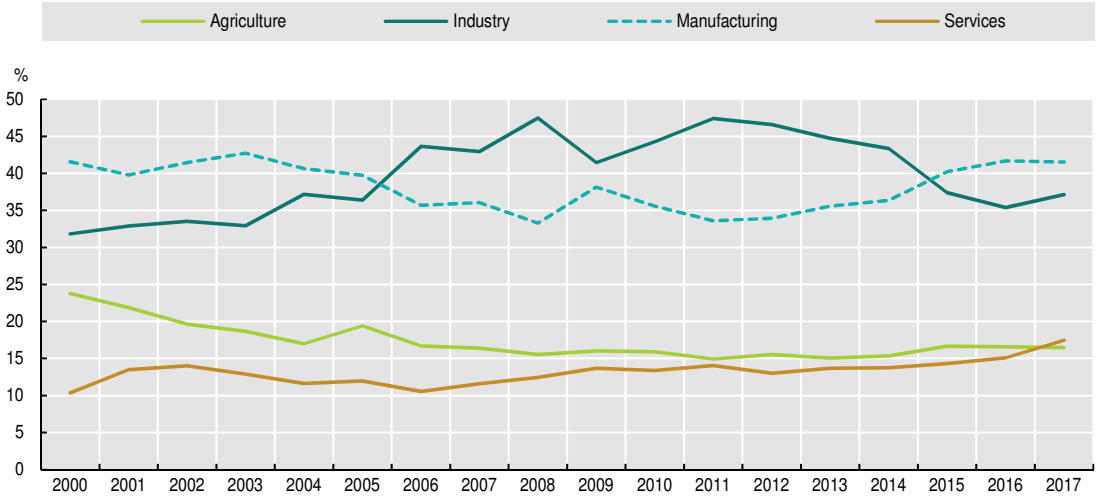
that ranks in the high human development category. Central Africa has a low level of bank penetration, a large informal sector and high national poverty rates: 47% in Chad in 2011, and 64% in DR Congo in 2012 (World Bank, 2018a).

The manufacturing sector in Central Africa remains underdeveloped, but encouraging trends exist

The extractive industry depends on raw materials, and the region lags behind in manufacturing and agricultural development. Natural resources in the region have contributed to better performance in the industrial sector, particularly between 2000 and 2012. In 2011, industry represented 45% of GDP and has since stabilised to around 40%. The majority of operators in the industrial sector are foreign and these include the Chinese National Petroleum Company (CNPC) in Chad, the Anglo-Swiss copper-mining company Glencore in DR Congo, and the American multinational Exxon Mobil in Cameroon. The manufacturing sector remains weak, representing 6.5% of GDP in 2000 and 9.3% in 2016. At the end of 2016, only four countries had manufacturing sectors which contributed more than 10% to GDP: Equatorial Guinea, DR Congo, and Gabon (contributing 18%) and Cameroon (15%).

The contribution of the service sector to GDP is increasing, while that of agriculture is decreasing. The tertiary sector accounted for 36% to 37% of GDP in 2000-13, then 42.5% in 2016 (compared with an average of 52% in Africa), exceeding the industrial sector. These services are mainly in retail trade, with tariffs falling on some products. In addition, since 2014, cross-border trade has increased despite security issues. Agriculture's contribution to total production has declined since 2000. Despite an increase between 2013 and 2016, agricultural production remains below the African average, even though the region has enormous agricultural potential, a favourable climate, and a large amount of arable land (80 million hectares in DR Congo alone).

Figure 3.2. **Share of GDP by sector in Central Africa, 2000-17**



Source: Authors' calculations based on World Bank (2018a), *World Development Indicators* (database).
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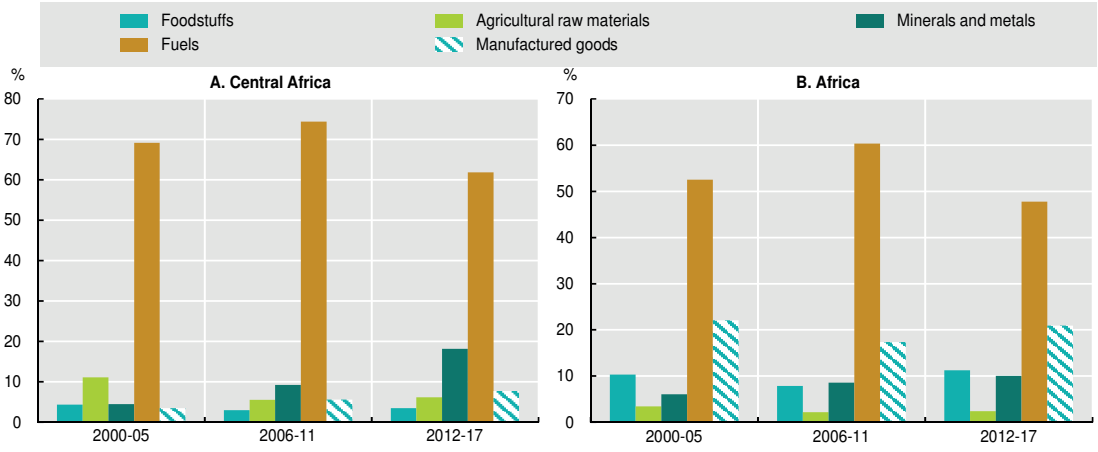
Exports in Central Africa remain dominated by raw materials

Exports are dominated by fuels (oil, gas, coal) followed by minerals and metals, rather than manufactured goods and food products. Although the share of fuels in exports fell from 74% during 2006-11 to 62% during 2012-17, it remains, on average, 15 percentage points

higher than that of the rest of Africa, whose fuel exports represented 60% to 46% over the same periods (Figure 3.3). A strong performance in minerals and metals has offset the relative decline in fuel exports. The percentage of raw materials is higher for oil-producing countries. Raw materials represent 90% of exports for Chad and Equatorial Guinea, compared to 60% for Burundi and Central African Republic. The share of raw materials in total exports has been declining for the past two decades in Cameroon, Republic of the Congo and DR Congo. The share of manufactured and food products is three times lower than the African average. From 2012 to 2017, manufactured products accounted for just 8% of Central African exports compared to 21% for the continent as a whole.

Figure 3.3. **Evolution of selected export products in Central Africa and Africa**



Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).
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Analysis of productive transformation in Central Africa

A high dependence on commodities (crude oil, cotton, coffee, cocoa, wood), particularly in Cameroon, Chad, Equatorial Guinea and Gabon, has limited trade between countries in the region, as well as with the rest of Africa.

Trade is concentrated on a limited number of products and destinations

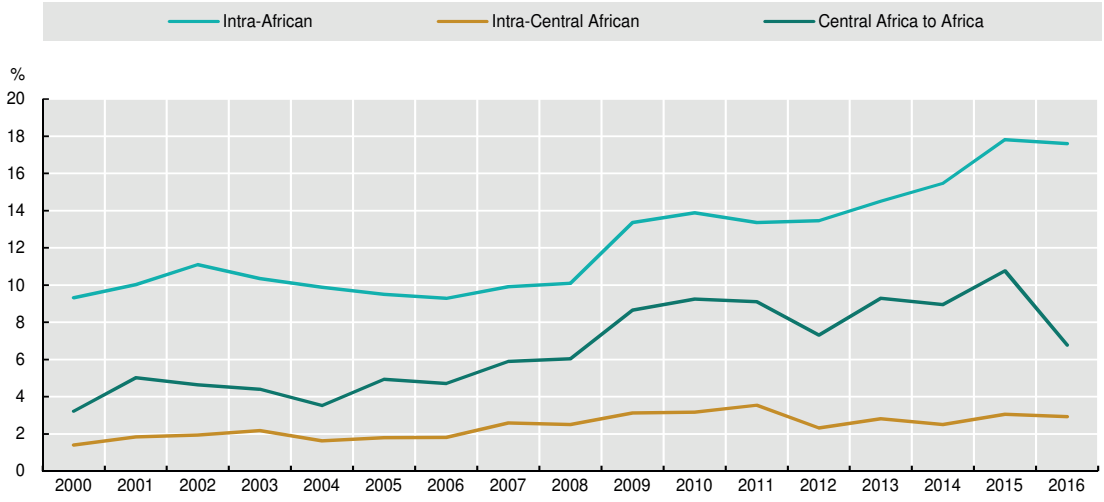
Intra-regional trade remains limited

The "resource curse" theory, according to which countries with an abundance of raw materials have lower economic growth, appears to apply. Export diversification is presented as an appropriate policy to stimulate growth and economic development. However, it is effective only when it is carried out in so-called "high potential" sectors (Hausmann, Hwang and Rodrik, 2007, Hidalgo et al., 2007). Gabon, for example, has undertaken to process wood locally, ending exports of rough timber (AfDB, 2018). However, DR Congo is more characteristic of the region. The growth of its industrial sector since 2000 has been driven by mining. This makes the country increasingly dependent on raw materials. Despite its potential, DR Congo is one of the poorest countries in Africa, with a per capita real income five times lower than the African average over 2000-17.

Regional trade in Central Africa represents less than 3% of total trade. All countries in the region are members of the Economic Community of Central African States (ECCAS), a free-trade area created in 1983. Six of the nine countries are also members of the Central

African Economic and Monetary Community (CEMAC), which, since 1994, has included Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, and Republic of the Congo. While exports between Central African countries account for just over 3% of the total, exports between African countries increased from 10% to 18% between 2000 and 2016 (Figure 3.4). In addition to structural problems common to all African regions (lack of infrastructure, high tariffs, low diversification), the weakness of regional trade in Central Africa can be explained by the region's high dependence on raw materials. Raw materials are not processed, and therefore integration into the global economy occurs at the lowest level of the value chain. Productive transformation begins with the identification of comparative advantages, as well as greater integration into regional and global value chains (RVCs and GVCs).

Figure 3.4. **Level of trade integration in Central Africa (percentage of total trade), 2000-16**



Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).
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Exports are highly concentrated and differ according to each country

Five products represent more than 75% of total exports in the region. Oil dominated exports (47.7%), followed by refined copper and copper alloys (16.4%) (Table 3.4). With the exception of Cameroon and the Central African Republic, the main exported product accounts for more than half of all exports (Table 3.A1.1).

Table 3.4. **Main exports in Central Africa, 2016**

Main exports in Central Africa in 2016	Share
1. Petroleum oils and oils obtained from bituminous minerals, crude	47.7
2. Copper, refined and copper alloys, unwrought	16.4
3. Wood sawn or chipped lengthwise, sliced, peeled, whether or not planed, sanded or finger jointed, of a thickness exceeding 6mm	4.0
4. Wood; rough, whether or not stripped of bark or sapwood, or roughly squared	3.8
5. Petroleum gases and other gaseous hydrocarbons	3.7
Total	75.6

Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).

The share of each country's top five products varies between countries. The top five exports represent 73% of Cameroon's foreign sales as opposed to 99.1% for Equatorial Guinea (Table 3.5). The number of products representing 75% of total exports ranges

from one in Chad to six in Cameroon. The Herfindahl-Hirschman Export Concentration Index ranks Chad as having the most concentrated export basket, followed by São Tomé and Príncipe, Burundi and Cameroon. Gabon is at the bottom of the list, as it has more diversified foreign exports. Finally, the share of exports in GDP differs greatly from one country to another: 5.5% in Burundi compared to 59.1% in Republic of the Congo.

Table 3.5. **Share of main products and concentration of exports in Central African countries, 2016**

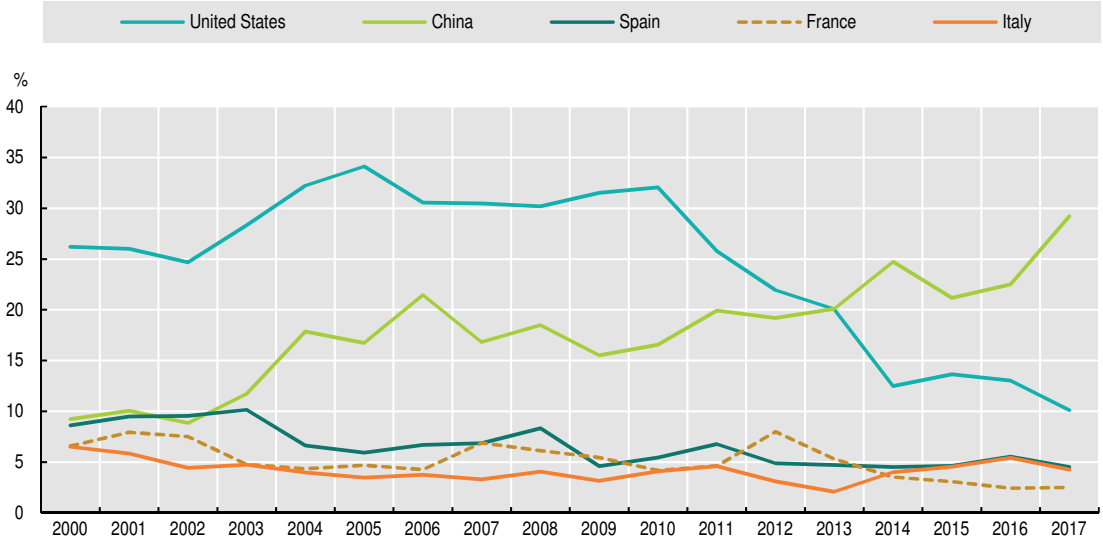
Indicators/country	Burundi	Cameroun	Central African Rep.	Chad	Congo	DR Congo	Equatorial Guinea	Gabon	São Tomé and Príncipe	Central Africa
Share of five main exports (percentage of total exports)	92.2	73	83.1	98.2	92.6	85.7	99.1	94.4	81.7	75.6
Number of products representing 75% of total exports	2	6	4	1	2	3	2	2	2	5
Number of products representing 90% of total exports	3	10	9	2	4	7	3	4	17	12
Herfindahl-Hirschman Index for export concentration	0.49	0.33	0.16	0.86	0.13	0.13	0.14	0.07	0.84	0.35
Total exports as percentage of GDP	5.5	19.2	18.7	24.4	56.5	25.5	39.4	36.2	27.3	29.0

Source: Authors' calculations based on UNSD (2018), *UN Comtrade* (database).

The region has a limited number of trade partners

A major portion of exports are destined for the United States, China and Europe. Over the 2000-17 period, exports went to the United States (24.1%), China (19.3%), Spain (6%), France (5%) and Italy (3.9%). Europe, a traditional trading partner, has seen its share decline since the early 2000s, as has the United States (26% in 2000, 10% in 2017), while China's demand has grown (9% to 29%). Five recipients receive 44.3% of Cameroon's total exports (Table 3.6), compared with 83% for Chad. Aside from Cameroon, more than 60% of the region's total exports go to five countries. Similarly, 75% of Chad's exports go to four countries, compared with 10% for Republic of the Congo, and 11% for Cameroon.

Figure 3.5. **Destinations of Central African exports**



Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).
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Exports to the 12 leading destinations account for 75% of total exports and 90% go to just 24 countries, half the African average (48 countries). According to the Herfindahl-Hirschman Index, the concentration of exports is highest in Chad (7 countries) and lowest in the Republic of the Congo (21 countries). The region is thus highly exposed to variations in the economies of its trading partners.

Table 3.6. **Main destinations of Central African exports, 2016**

Indicators/country	Burundi	Cameroon	Central African Republic	Chad	Congo	DR Congo	Equatorial Guinea	Gabon	São Tomé and Príncipe	Central Africa
Share of five main export destinations (percentage of total exports)	68.7	44.3	73.1	83.8	63.5	73.4	64	65.6	74	54.4
Number of destinations representing 75% of total exports	7	11	6	4	10	6	8	7	6	12
Number of destinations representing 90% of total exports	15	19	14	7	21	12	14	13	13	24
Herfindahl-Hirschman Index for concentration of export destinations	0.18	0.06	0.12	0.30	0.16	0.22	0.10	0.15	0.13	0.09

Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).

The product space shows limited economic complexity

According to the concept of product space developed by Hausmann and Klinger (2006), economies move from current goods to new goods based on their proximity in terms of production. The product space method analyses revealed comparative advantages (RCA) as well as the degree of complexity of an economy. The level of export sophistication is examined through the PRODY and EXPY indexes.

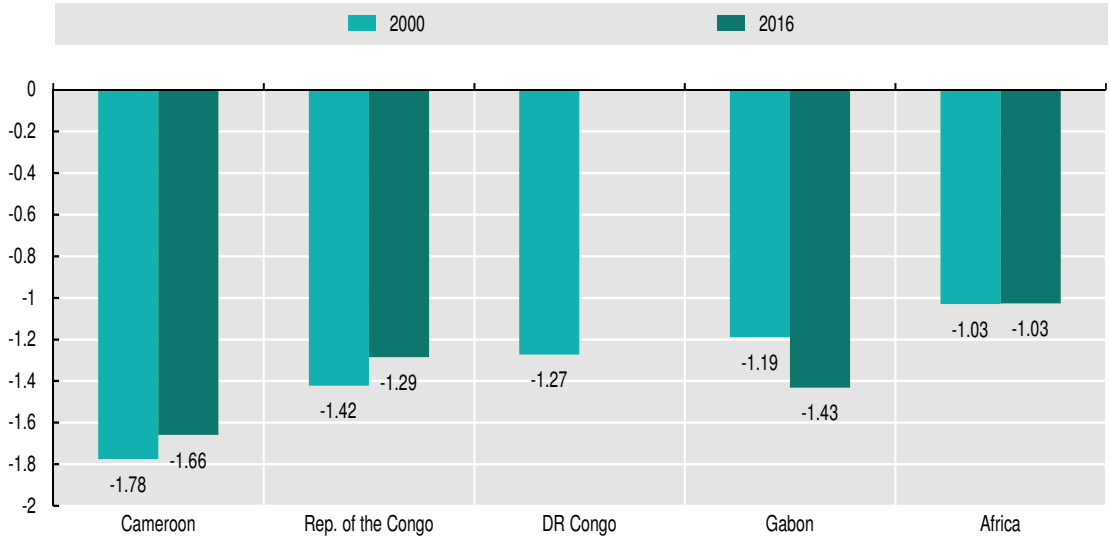
The absence of revealed comparative advantage (RCA) in manufactured goods has hindered diversification

Central African countries do not have strong RCAs in manufactured goods, machinery and transportation equipment and chemicals. Three countries, Burundi, Cameroon and the Central African Republic, however, have RCA in vegetables. Cameroon, Republic of the Congo, and Gabon have RCA in fuels. However, most RCAs in the region are in lumber, gold, diamonds, precious stones and glass (Table 3.A1.3). With regard to product processing, all Central African countries have RCA in raw materials, two in intermediate goods and only one (São Tomé and Príncipe) in consumer goods – notably watchmaking. This sector played an important role from 2009 to 2012, representing more than 15% of total exports each year, peaking at 28% in 2011. However, the RCA in this sector does not appear stable, as exports have decreased drastically to almost zero since 2013.

The level of complexity in CEMAC economies remains limited

In both 2000 and 2016, no country in Central Africa exceeded Africa's average in terms of economic complexity (Figure 3.6). However, Cameroon and Republic of the Congo improved their performance. This could lead to more sustained growth in Cameroon and more resilience in Republic of the Congo. On the other hand, Gabon's level decreased during this period. At the global level, Japan, Switzerland and Germany topped the list in 2016 with respective rankings of 2.23, 2.05, and 1.96, while the African average and that of Central African countries was below zero.

Figure 3.6. **Economic Complexity Index in 2000 and 2016**



Source: Authors' calculations based on Center for International Development (2019), *The Atlas of Economic Complexity* (database).

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Central African countries rank amongst the lowest in global economic complexity rankings (Table 3.7). In 1980, they were already in the bottom 15, and have made little progress since. This is because of the high concentration of exports in unprocessed raw materials, as well as the absence of value chains.

Table 3.7. **Position in World Economic Complexity Rankings**

Country	1980	1990	2000	2010	2016
	Out of 99	Out of 100	Out of 120	Out of 121	Out of 126
Cameroon	90	99	119	115	124
Congo	86	96	114	116	113
Gabon	92	94	109	106	116
DR Congo	95	90	111	103	ND

Source: Center for International Development (2019), *The Atlas of Economic Complexity* (database).

However, the export baskets have the potential to contribute more to countries' GDP in Central Africa. Equatorial Guinea had the highest EXPY in 2016 (Table 3.8) due to a various number of strategic products: crude petroleum oils or bituminous minerals, natural gas, alcohols, phenols, halogenated and sulfonated derivatives, liquid propane and butane, ships, boats and floating craft, and petroleum and other gaseous hydrocarbons. In São Tomé and Príncipe, export products have a relatively high level of sophistication, compared to this country's percapita GDP level. This is due to the watch industry's good performance between 2009 and 2012. The country also produces heating and refrigeration equipment and spare parts for handling equipment. Among the countries with exports with high growth potential, Republic of the Congo, Gabon, Chad, Cameroon and the Central African Republic follow. Cameroon has a larger export mix, but it contributes little to productivity. Products exported with comparative avatange (RCA) by Cameroon are less sophisticated (for example fruit, lumber, cocoa, and cotton), however, the country has the largest number of exports products.

Table 3.8. **EXPY index in Central Africa (USD thousands)**

Country	EXPY in 2016	Real GDP per capita in 2016
Burundi	6 626.08	218.28
Cameroon	9 124.77	1 495.44
Central African Republic	8 312.36	325.72
Chad	10 809.32	874.77
Republic of the Congo	12 650.80	2 771.40
DR Congo	6 972,.72	407.56
Equatorial Guinea	13 845.31	12 317.71
Gabon	11 692.80	9 552.78
São Tomé and Príncipe	5 223.84	1 284.69

Source: Authors' calculations based on World Bank (2018a), *World Development Indicators* (database) and UNCTAD (2019), *UNCTADStat* (database).

Strategies for productive transformation

The productive structure is very rudimentary and needs to significantly change in order to create a favourable climate for sustainable and inclusive economic growth. In order to rise to the challenge of numerous structural constraints, governments could start by investing in infrastructure and making the business climate conducive to private investment. In the short and medium terms, public policies should focus on infrastructure, without which industry cannot flourish, and the development of agriculture and agrifood sectors to reduce poverty. At the same time, reforming skills training could increase worker productivity. Finally, medium and long-term strategies should aim to create competitive clusters in renewable energy, biochemistry and agribusiness. This can lead to higher human capital levels and provide jobs for the most qualified unemployed.

A number of industrialisation strategies have been implemented in the region

Countries have launched many initiatives to promote productive transformation, particularly in agriculture. In the 1960s following independence, several countries adopted industrialisation strategies based on substituting imports with locally manufactured products. However, the crisis of the 1980s and Structural Adjustment Programs (SAPs) hindered countries from reaping the benefits of these initiatives. Since the 2000s, countries have implemented several policies to develop agrifood chains (Table 3.9).

Table 3.9. **Strategies and initiatives for the development of the agribusiness sector in Central Africa**

Policies	Dates	Objectives
Regional Food Security Programme	2004	• Feed the population within a context of strong demographic growth and urbanisation. • Increase agricultural productivity in a sustainable way and promote trade competitiveness
Common Agricultural Policy (CAP)	2004	• Provide for the food and nutritional needs of the population in a sustainable way • Increase exports • Reduce poverty in rural populations in member states.
Cotton-Textile and Garment Development Strategy	2011	• Increase cotton production (seed cotton and fibre) while improving productivity and profitability. • Improve and guarantee cotton quality. • Support and develop the transformation of fibre. • Improve promotion and marketing of cotton and textiles. • Development and improvement of cotton seed by-products

Table 3.9. **Strategies and initiatives for the development of the agribusiness sector in Central Africa** *(cont.)*

Regional Special Development Fund for Agricultural Development (FSRDA)	2013	• Produce environmental and hydrology studies on irrigation systems for small landowners • Devise a marketing plan for an agrifood processing plant connected to a farm unit, working with small farms, herders, local fisherman, in order to integrate them further into the economy. • Provide assistance and know-how for the construction of a soybean extraction and refinement processing plant, which can also train small landowners so that they can integrate the supply chain.
Comprehensive Africa Agriculture Development Programme (CAADP)		• Ensure sustainable land management. • Improve rural infrastructure. • Increase food supply • Promote agricultural research.
Regional Strategy for the Conservation and Sustainable Management of Forest Ecosystems in Central Africa (COMIFAC)	1999	• Harmonise fiscal and forestry regulation • Improve resources knowledge • Improve ecosystems management and reforestation nationally and regionally. • Sustainable valorisation of forest resources
Initiatives by the Regional Commission of Fisheries of the Gulf of Guinea (Corep) founded in 1984 and the Economic Commission for Livestock, Fish and Meat Resources (Cebevirha)	1984	• Help member states protect and develop fishing resources in a sustainable way and promote aquaculture development. • Maximise the potential of aquatic resources and guarantee the well-being of the population
CEMAC Strategy for Agricultural Development		• Increase the productivity of agriculture, stock-breeding and fishing through technical progress, the rational development of production and an optimum use of factors of production, especially labour. • Increase profitability of different sectors • Stabilise markets. • Improve supply structures. • Ensure reasonable prices for deliveries of products to consumers.

Source: Authors' compilation.

Weak institutions and infrastructure hinder productive transformation in Central Africa

The socio-political context is not conducive to economic growth, due to conflicts in part fuelled by the struggle for financial control of natural resources. The problem of poor governance is compounded by conflict. Only São Tomé and Príncipe, recognised for its political stability and freedom of expression, and to a lesser extent Gabon and Cameroon, show above-average performance in the region (Table 3.10).

Table 3.10. **Governance indicators**

Country/region	Control of corruption	Government effectiveness	Political stability	Rule of law	Regulatory quality	Voice and accountability
Burundi	-1.18	-1.40	-2.08	-1.39	-0.83	-1.51
Cameroon	-1.14	-0.76	-0.95	-1.02	-0.79	-1.03
Central African Republic	-1.28	-1.77	-1.74	-1.84	-1.43	-1.13
Chad	-1.45	-1.49	-1.21	-1.43	-1.18	-1.34
Rep. of the Congo	-1.21	-1.10	-0.57	-1.04	-1.17	-1.16
DR Congo	-1.33	-1.51	-2.20	-1.61	-1.32	-1.39
Equatorial Guinea	-1.81	-1.41	-0.19	-1.44	-1.38	-1.93
Gabon	-0.75	-0.79	-0.07	-0.58	-0.80	-0.96
São Tomé and Príncipe	-0.06	-0.68	0.23	-0.69	-0.81	0.45
Central Africa	-1.13	-1.21	-0.97	-1.23	-1.08	-1.11
Africa	**-0.66**	**-0.81**	**-0.67**	**-0.72**	**-0.77**	**-0.58**

Note: Indicators vary between -2.5 (poor governance performance) and 2.5 (strong governance performance).
Source: World Bank (2018a), *World Development Indicators* (database).

Central Africa lacks basic infrastructure the most on the continent, especially in electricity and transportation, and this represents a major obstacle for businesses. The region has a score of 2.19 in overall infrastructure quality, one point below Africa's average, which is already low (Table 3.11). This is the case for all infrastructure (electricity, air transport, port, rail, road). Only Gabon is close to the African average. Air traffic is one quarter that of the African average. Only one person in 100 has a landline compared to an average of three in the rest of Africa.

Box 3.1. Importance of infrastructure and explanation of indicators

Weak infrastructure has reduced the productivity of businesses by more than 40% in Africa. Road infrastructure in sub-Saharan Africa was 204 km per 1 000 km^2 (approximately 3.6 km of road per 1 000 inhabitants) while the world average is 944 km per 1 000 km^2, equivalent to 7 km per 1 000 inhabitants (AfDB/World Bank, 2011). Sub-Saharan Africa had 69 000 km of railroad tracks in 2007, of which 55 000 km were operational. Thirteen countries do not have a functioning rail network.

Measurement indicators. The source used to assess infrastructure in Central Africa is the World Bank's Enterprise Surveys (World Bank, 2019) which measures the percentage of companies that report infrastructure quality as a barrier to development. The score ranges from 0 (poor infrastructure quality) to 7 (best infrastructure quality). The survey collects data from more than 135 000 countries in 139 countries.

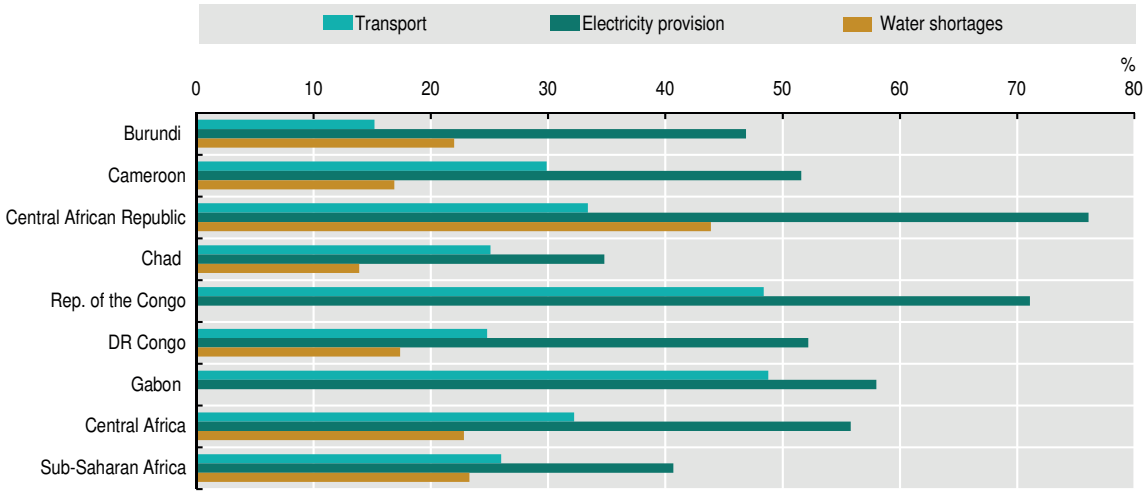
Table 3.11. **Level and quality of infrastructure, 2017**

Country/region	Infrastructure quality						Fixed tel lines/100 hab.	Mobile tel/100 hab.
	Overall	Electricity	Air	Port	Rail	Roads		
Burundi	2.22	2.12	2.59	2.33	--	2.87	0.20	46.22
Cameroon	2.20	2.13	2.66	2.96	2.36	2.50	4.51	71.85
Chad	1.73	1.85	2.95	2.04	--	2.62	0.13	40.17
DR Congo	1.89	1.63	2.78	2.27	1.54	2.14	0.00	52.99
Gabon	2.92	2.88	3.62	3.23	2.80	2.80	1.07	168.92
Central Africa	2.19	2.12	2.92	2.56	2.23	2.58	1.18	76.03
Africa	**3.18**	**3.08**	**3.61**	**3.41**	**2.49**	**3.44**	**3.47**	**95.64**

Source: Authors' calculations based on WEF (2018), *Global Competitiveness Report*.

Energy deficiency is a major obstacle, even though, paradoxically, the region has enormous potential despite its low level of development, particularly in hydropower (Figure 3.7). Central Africa also has oil reserves estimated at 31.3 billion barrels. Energy consumption per capita per month is equal to 109 kWh, compared to 840 kWh in North Africa, and 1 600 kWh in Southern Africa (ECA, 2012). A significant gap exists between the energy supply of 10 537 MW and the projected demand of 13 052 GWh. Similarly, companies are faced with contraints related to water provision, although again, the region has enormous water resources: approximately 26 355 m^3 per year per inhabitant, while the African average is 5 730 m^3 and the world average 7 600 m^3. The hydroelectric potential is estimated at 653 361 GWh, representing 58% of the total for the continent. However, in 2009 electricity production did not exceed 3-4% of the estimated potential (ECA, 2012).

Figure 3.7. **Major constraints for firms in Central Africa**



Note: Data show percentage of firms identifying transportation, electricity provision and water shortages as major constraints to business.

Source: Authors' calculations based on World Bank (2019), *World Bank Enterprise Surveys* (database).

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Productive transformation in Central Africa requires adapted policies

Strengthening regional integration and complementarities

The countries of Central Africa have very similar domestic production structures (Table 3.12). This reduces their commercial potential and increases their dependence on exports of raw materials. The similarity coefficients are high and range from 0.23 to 0.83. When paired together, most countries in the region have a similarity coefficient in exports of over 0.50. There is hence a clear opportunity for the development of value chains.

Table 3.12. **Measure of export similarity**

Country	Burundi	Cameroon	Central African Republic	Chad	DR Congo.	Rep. of the Congo	Equatorial Guinea	Gabon	São Tomé and Príncipe
Burundi	1.00								
Cameroon	0.34	1.00							
Central African Republic	0.23	0.40	1.00						
Chad	0.41	0.50	0.64	1.00					
DR Congo	0.24	0.29	0.57	0.49	1.00				
Rep. of the Congo	0.45	0.52	0.49	0.80	0.24	1.00			
Equatorial Guinea	0.64	0.49	0.70	0.76	0.51	0.83	1.00		
Gabon	0.43	0.52	0.57	0.69	0.32	0.83	0.81	1.00	
São Tomé and Príncipe	0.41	0.49	0.46	0.74	0.41	0.50	0.56	0.49	1.00

Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).

Regional integration has been hampered by inadequate and poor infrastructure and the coexistence of two free trade areas, CEMAC and ECCAS. An urgent need to rationalise the economies exists. This can be accomplished by harmonising rules of origin and preferential tariffs, including regulatory regimes and approval procedures (AfDB, 2018).

Developing regional value chains

Opportunities to develop value chains in Central Africa are abundant, particularly in renewable energy, cotton and fruit. These concern four major sectors: manufacturing and distribution of equipment, project development, construction and installation, and operations and maintenance. All of these sectors can create added value and jobs in various fields (wind, solar, hydro, and geothermal).

A cotton value chain can develop if accompanied by the development of the textile industry in Central Africa. The region could benefit from the relocation of major clothing brands in search of cheap labour and better quality raw materials. Central Africa should promote this value chain. Of the 14 countries identified as cotton producers in sub-Saharan Africa, Cameroon has nine factories and Chad ten (ECOWAS-SWAC/OECD, 2006). Nevertheless, their ginning capabilities are limited, and Chad's textile factory is closed. The development of a fruit value chain could focus on three end products: natural beverages, dried fruit, and the recycling of waste products for organic and natural fertilisers.

Petroleum processing offers many opportunities in textiles, packaging, construction materials, and road tarring. This value chain can promote integration, as it can positively affect the development of the transportation infrastructure. Several refineries already exist (Table 3.13) but very few countries offer quality training in petrochemicals. A larger value chain could extend to other regions and integrate Nigeria, a neighbouring producer. This could entail the construction of several refineries. A first unit in Cameroon, bordering the CEMAC countries, could, for example, deal with crude oil from Nigeria. Another refinery in DR Congo could provide supplies to neighbouring countries, such as Republic of the Congo, Burundi and Central Africa, hence extending outside the region to Angola and South Sudan.

Table 3.13. **Refineries and daily production capacity in Central Africa**

Country	Refinery	Production capacity (barrels per day, 2016 estimate)	Operator
Cameroon	Limbe Refinery	42 000	Sonara
Central African Republic		Not exploited	
Chad	N'Djamena Refinery	20 000	CNPC and State of Chad
Rep. of the Congo	Pointe-Noire Refinery	21 000	CORAF
DR Congo			Refineries closed
Equatorial Guinea		244 000	No refinery
Gabon	Sogara Refinery	21 000	Société gabonaise de raffinage

Source: Authors' compilation.

Wood processing is another key area for diversification in Central Africa. The region has an enormous comparative advantage in forest products and can hence create an industrial processing chain. The sector has a multitude of rare forest species (including ayous, okoumé and sapelli), as well as artisanal producers, small and large companies, all of which are capable of selling logs, sawn timber, and plywood. These products are

in demand on domestic, regional, continental and international markets. Possibilities exist in construction, paper pulp, furniture and energy. Opportunities should be seized and developed in accordance with sustainable development goals (SDGs), including the protection of the equatorial forest which is central to combating climate change. Despite several countries' willingness to process wood (with a minimum transformation rate of 100% for Gabon and Equatorial Guinea, 85% for Republic of the Congo, 70% for Central African Republic and DR Congo), it is still limited to primary processing (sawing, debarking, cutting for plywood and veneer) by predominantly informal sector businesses (AfDB, 2018).

Promoting special economic zones

Each country's industrial and mining potential should be mapped in order to promote competitive production clusters. These clusters could be put in place by regional institutions such as the CEMAC Commission and the Bank of Central African States (BEAC). A partnership is possible between the African Union Regional Agricultural Development Fund and the African Development Bank (AfDB). For example, Cameroon could specialise in the wood processing industry, Equatorial Guinea, DR Congo and Chad in refineries, and Chad in seed production. Such a strategy can reduce dependence on exports from outside the region and promote trade complementarity. An acceleration of different development programmes is necessary. An "African Rice Initiative", such as that managed by the Association for the Development of Rice Growing in West Africa (ADRAO), could further develop the production of cereals in the Sudano-Sahelian region (CEMAC, 2002; Table 3.8).

The creation of clusters for skills, technology and innovation requires major investments in training and research and development (R&D). Inter-state universities between Cameroon, Republic of the Congo and the Pan-African Institute are examples of this type of co-operation. Other initiatives should be encouraged in key areas, such as next-generation agriculture, computer science, software programming and development, and biological and medical sciences. Although costly, R&D needs to be a priority because of its importance for the future.

Speeding up financial integration

Financial integration in Central Africa remains weak, due to the absence of a single currency in ECCAS and the coexistence of several stock markets. Financial integration lags behind West Africa, where a gradual harmonisation of the monetary system is taking place with a view to the introduction of a single currency in 2020. Central Africa does not have such a project. The existence of two financial centres in CEMAC (the Douala Stock Exchange in Douala, Cameroon and the Bourse des valeurs mobilières de l'Afrique centrale in Libreville, Gabon) strongly impedes integration. There is, however, the prospect of a single financial centre in Douala (Cameroon). According to the Central African Financial Market Oversight Commission (COSUMAF, 2016), among the many weaknesses are low-levels of primary market activity, an almost non-existent secondary market, higher rates than in comparable financial centres, a non-harmonised tax framework, and tax rules that are disregarded by lenders. The consolidation of the two markets, as instructed by the Conference of Heads of States of the CEMAC in 2019, will allow states to issue bonds to raise new financing, and will also give momentum to the new common market.

Developing business pools by sector

Improving competitiveness requires a strategy that can identify young innovative entrepreneurs and provide them with substantive and financial support. Young people living in urban areas are creating businesses in the informal sector in the areas of ICTs,

sustainable innovation and services (food services). Timely initiatives to build skills in management, law and human capital are necessary.

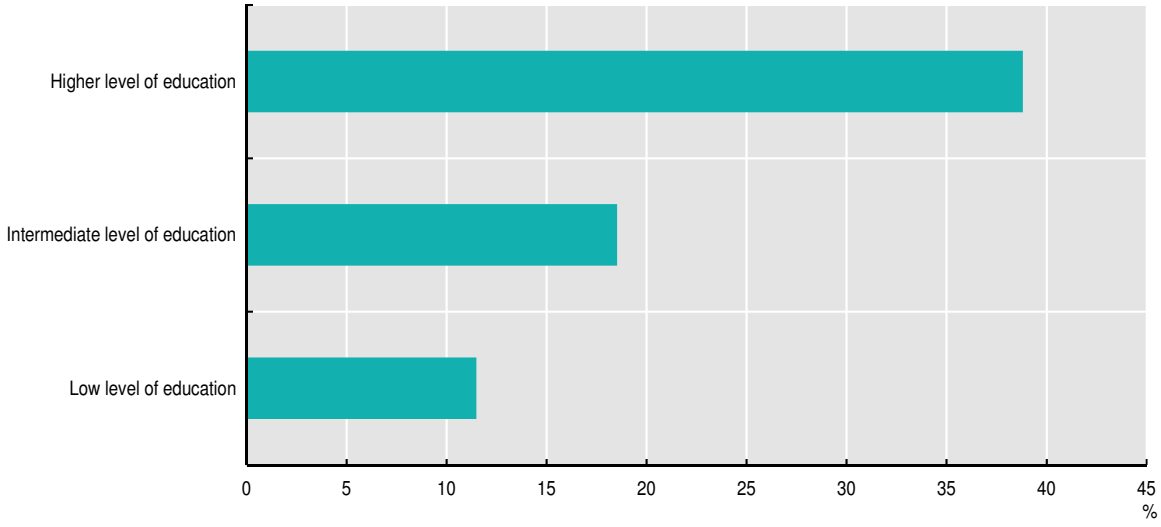
Improving access to energy

Limited access to electricity has hampered the development of the private sector. Countries in the region have unequal rates of electrification. Rates range from 83% for Gabon to only 5.6% in Chad. Yet the energy potential is vast. The region can learn from the proposed extension of the Inga III dam in DR Congo, or the "Noor" solar power plant in Ouarzazate, Morocco. Political instability in some countries hinders better access to electricity. As investment in infrastructure is costly, lenders need political guarantees so that they can see returns on their investments in the long term.

Strengthening human capital, tailoring training to the job market

The gap between supply and demand in the labour market has caused extremely varied rates of unemployment depending on an individual's level of studies. Unemployment rates are 11.5% for those with a basic level of education, 18.5% for those with an intermediate level, and 38.8% for higher education graduates (Figure 3.8). Policies need to promote training programmes that can meet company demands. A platform could enable private sector operators to state the skills they need and these could subsequently be taken into account as programmes are developed. This could be accomplished within the framework of the AU, either through its Science, Technology and Innovation Strategy for Africa 2024, or the Continental Strategy for Technical and Vocational Education and Training (TVET) to Foster Youth Employment (AUC, 2014; 2004). Strengthening human capital also rests on the free movement of persons. In March 2019, the six member countries of the CEMAC adopted a common emigration, immigration and border protection policy, aimed in particular at speeding up the abolition of visas for all citizens circulating in the bloc.

Figure 3.8. **Average unemployment rate in Cameroon, Rep. of the Congo and DR Congo by education level (share of the active population), 2003-17**

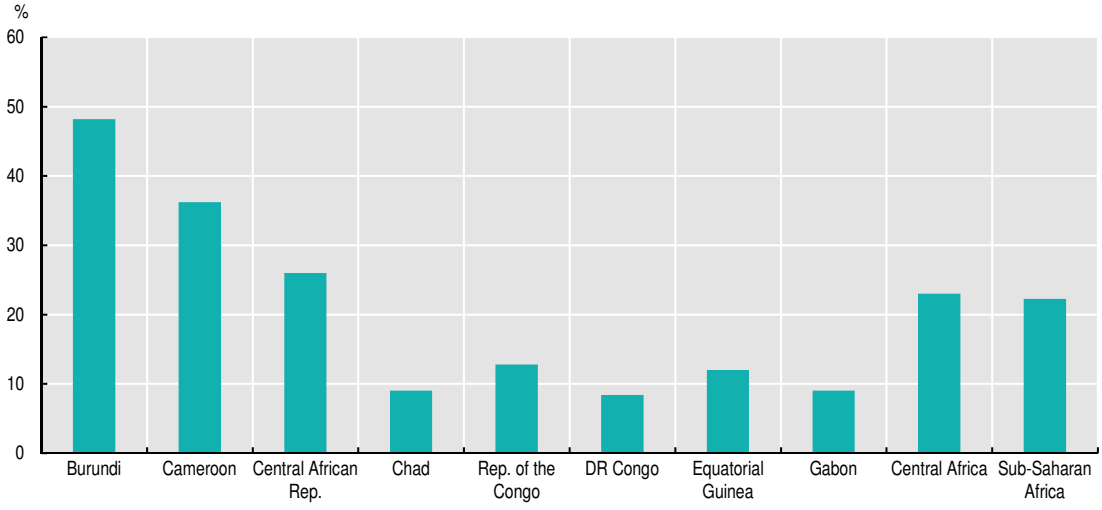


Note: Data lacking for other countries for the whole period.
Source: Authors' calculations based on World Bank (2018a), *World Development Indicators* (database).
StatLink https://doi.org/10.1787/888933967245

Facilitating access to financing

Access to banking for businesses should be improved. None of the countries have reached the 50% threshold of companies possessing a bank loan. The average is closer to 23%, similar to the sub-Saharan average of 22.2%. The highest rates are in Burundi (48.2%), Cameroon (32.2%) and the Central African Republic (26%), compared to a mere 9% in Gabon and Chad, 12% in Equatorial Guinea, 12.8% in Republic of the Congo, and 8.3% in DR Congo.

Figure 3.9. **Companies possessing a bank loan or a line of credit**



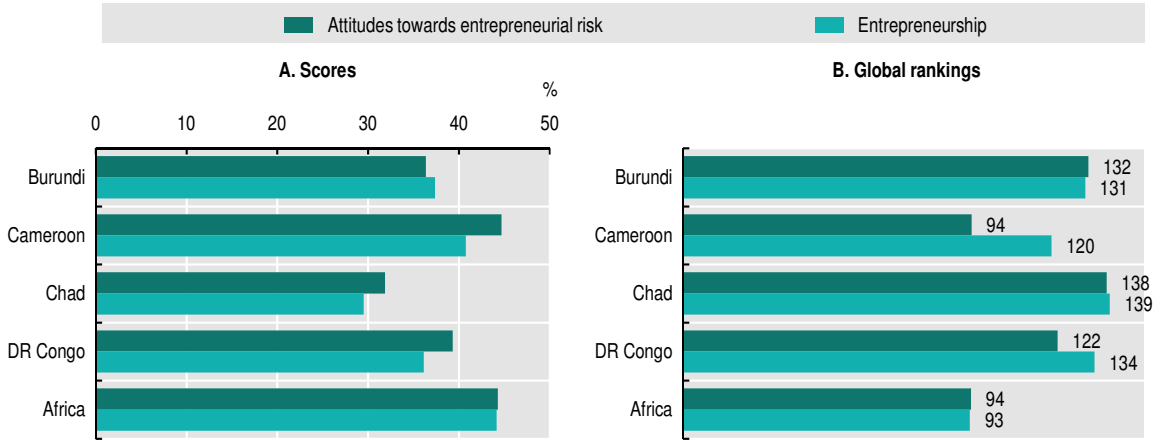
Source: Authors' calculations based on World Bank (2018b), *Global Findex database.*
StatLink https://doi.org/10.1787/888933967264

Supporting entrepreneurship through risk management

Entrepreneurship in Central African countries needs strengthening. According to available data on entrepreneurial ability in four countries, scores are below the African average (44.1%) Chad (31.8%), DR Congo (39.3%), and Burundi (36.3%), with the exception of Cameroon (44.7%). This data comes from the Global Competitiveness Index 2018. Scores for entrepreneurship and attitudes towards entrepreneurial risk range from 0 to 100 in 143 countries.

Improving the perception of entrepreneurial risk by creating a public guarantee fund for young entrepreneurs would reverse this trend. On a world ranking of 140 countries, Cameroon (94th) has the best performance of the region and Chad the worst (138th). States could support young entrepreneurs through the creation of a community-financed public fund which can guarantee loans from commercial banks.

Figure 3.10. **Entrepreneurship scores and attitudes towards entrepreneurial risk in selected Central African countries**



Source: Authors' calculations based on WEF (2018), *Global Competitiveness Report*.
StatLink https://doi.org/10.1787/888933967283

Accessing domestic, regional and continental markets

Developing physical infrastructure

Investing massively in infrastructure would allow the private sector to flourish. Cameroon, Central African Republic, Gabon, and Republic of the Congo face major transport constraints (Table 3.11). The Programme for Infrastructure Development in Africa (PIDA), implemented by the AfDB and run by the African Union Commission (AUC) and the Secretariat of New Partnerships for Africa's Development (NEPAD), should be sped up. Acknowledging the importance of energy for development, countries of the region have taken initiatives to facilitate access to electricity. First set out in the founding treaties of CEMAC and ECCAS, energy co-operation has continued through CEMAC's Regional Economic Programme (PER), the inter-governmental framework agreement establishing the Central African Power Pool (PEAC), and the Central African Electricity Market Code. The establishment of the PEAC has also facilitated the development of Priority Integration Projects (PIPs) and the Pilot Cross-border Electrification Programme (PPET), which aim to build electricity networks and a future regional energy exchange.

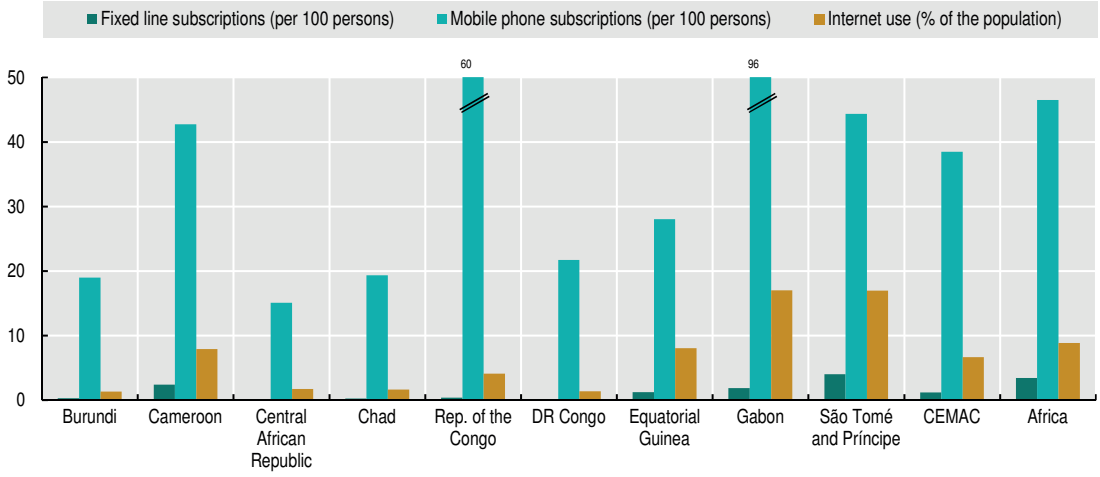
Lifting tax burdens in exchange for smart taxes can encourage local production. Involving the private sector in the financing and management of infrastructure and public services can be a solution. The public sector is often faced with weak and unstable resources when it comes to financing infrastructure. The introduction of smart taxes could ease funding constraints without compromising economic activity. For example, a special tax on imports of automobiles, beverages and tobacco is a good way of contributing to a Regional Fund for Transport Infrastructure.

Speeding up digitalisation and accessing information and networks

Internet use remains low, as well as access to the broadband network. Access to digitalisation is also minimal in the majority of African countries. Only 6.7% of the population of Central Africa has internet access compared to 8.9% in Africa (World Bank, 2018a). Subscription to broadband networks is insignificant in Central African countries with less than 1% of the population accessing it. The same applies to fixed telephone line

subscriptions. On the other hand, access to mobile phones is higher, with 76% of people using mobile phones compared to 95.6% for Africa (Table 3.11).

Figure 3.11. **Digitalisation and access to ICT in Central Africa, 2000-17 average**



Source: Authors' calculations based on World Bank (2018a), *World Development Indicators* (database).
StatLink https://doi.org/10.1787/888933967302

These factors affect the industrial performance of companies, the adoption of new technology necessary for the diversification of the economy, as well as the improvement of the business climate, governance, transport systems, and communication. Peace, security, and national political development also play an important role. A direct impact from new economic activities is greatly needed to reduce poverty, hunger and malnutrition, while at the same time modernising agriculture and increasing productivity in the agrofood sector.

Annex 3.A1. Central Africa trade statistics

Table 3.A1.1. **Primary exports of Central African countries**

Primary exports of Burundi	Share	Primary exports of Cameroon	Share
1. Gold (including gold-plated with platinum (unwrought or in semi-manufactured forms) or in powder form.	59.1	1. Petroleum oils and oils obtained from bituminous minerals; crude.	29.8
2. Coffeee, whether or not roasted or decaffeinated; husks and skins; coffee substitutes containing coffee in any proportion.	23.7	2. Cocoa beans; whole or broken, raw or roasted.	13.7
3. Tea, flavoured or not.	7.7	3. Wood sawn or chipped lengthwise, sliced, peeled, whether or not planed, sanded or finger jointed, of a thickness exceeding 6mm.	12.2
4. Soap; organic surface-active products and preparations for use as soap, paper, wadding, felt and nonwovens.	0.9	4. Gold (including gold-plated with platinum (unwrought or in semi-manufactured forms) or in powder form.	8.8
5. Niobium, tantalum, vanadium or zirconium ores and concentrates.	0.7	5. Bananas, including plantains; fresh or dried.	8.5
Total	**92.1**	**Total**	**73.0**
Primary exports of Central African Republic		**Primary exports of Chad**	
1. Wood; in the rough, whether or not stripped of bark or sapwood, or roughly squared.	49.8	1. Petroleum oils and oils obtained from bituminous minerals; crude.	83.6
2. Wood sawn or chipped lengthwise, sliced, peeled, whether or not planed, sanded or finger jointed, of a thickness exceeding 6mm.	13.9	2. Gold (including gold-plated with platinum (unwrought or in semi-manufactured forms) or in powder form.	9.9
3. Apricots, cherries, peaches (including nectarines), plums and sloes, fresh.	11.9	3. Cotton, not carded or combed.	1.9
4. Apples, pears and quinces, fresh.	5	4. Miscellaneous grains and oleaginous fruits; ground.	1.4
5. Cotton, not carded or combed.	3.5	5. Natural gums, resins, gum-resins and oleoresins (for example, balsams).	1.4
Total	**84.1**	**Total**	**98.2**
Primary exports of Republic of the Congo		**Primary exports of DR Congo**	
1. Petroleum oils and oils obtained from bituminous minerals; crude.	55	1. Copper, refined and copper alloys, unwrought.	51.9
2. Copper, refined and copper alloys, unwrought.	29.4	2. Cobalt; mattes and other intermediate products of cobalt metallurgy, cobalt and articles thereof, including waste and scrap.	16.1
3. Wood; in the rough, whether or not stripped of bark or sapwood, or roughly squared.	4.2	3. Diamonds, whether or not worked, but not mounted or set.	8.0
4. Wood sawn or chipped lengthwise, sliced, peeled, whether or not planed, sanded or finger jointed, of a thickness exceeding 6mm.	2.3	4. Petroleum oils and oils obtained from bituminous minerals; crude.	5.6
5. Petroleum oils, oils from bituminous minerals, not crude; preparations n.e.s. containing less than 70% petroleum oils, oils from butiminous minerals; these being the basic constituents of the preparations.	1.8	5. Cobalt ores and concentrates.	4.1
Total	**92.7**	**Total**	**85.7**
Primary exports of Equatorial Guinea	**Share**	**Primary exports of Gabon**	**Share**
1. Petroleum oils and oils obtained from bituminous minerals; crude.	68.8	1. Petroleum oils and oils obtained from bituminous minerals; crude.	69.6
2. Petroleum gases and other gaseous hydrocarbons.	18.7	2. Manganese ores and concentrates, including manganiferous iron ores and concentrates with a manganese content of 20% or more, calculated on the dry weight.	12.1
3. Wood; in the rough, whether or not stripped of bark or sapwood, or roughly squared.	5.8	3. Wood sawn or chipped lengthwise, sliced, peeled, whether or not planed, sanded or finger jointed, of a thickness exceeding 6mm.	8.0
4. Acylic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives.	5.4	4. Veneer sheets and sheets of plywood (spliced or not) and other wood sawn lengthwise, sliced or peeled, whether or not planed, sanded or finger-jointed, of a thickness not exceeding 6mm.	2.8
5. Ships, boats and floating structures	0.3	5. Petroleum oils, oils from bituminous minerals, not crude; preparations n.e.s. containing less than 70% petroleum oils, oils from butiminous minerals; these being the basic constituents of the preparations.	1.9
Total	**99.0**	**Total**	**94.4**
Primary exports of São Tomé and Príncipe	**Share**	**Primary exports of Central Africa**	**Share**
1. Cocoa beans; whole or broken, raw or roasted.	71	1. Petroleum oils and oils obtained from bituminous minerals; crude.	47.7
2. Iron or steel articles.	6.6	2. Copper, refined and copper alloys, unwrought.	16.4
3. Pepper of the genus piper, dried or crushed or ground fruits of the genus capsicum or of the genus pimenta.	1.6	3. Wood sawn or chipped lengthwise, sliced, peeled, whether or not planed, sanded or finger jointed, of a thickness exceeding 6mm.	4.0
4. Engineering structures (excluding prefabricated buildings of heading no. 94.06) and parts (eg bridges, gates, towers, lattice masts, roof structures, doors)	1.5	4. Wood; in the rough, whether or not stripped of bark or sapwood, or roughly squared.	3.8
5. Chocolate and other food preparations containing cocoa.	1.0	5. Petroleum gases and other gaseous hydrocarbons.	3.7
Total	**81.7**	**Total**	**75.6**

Source: Authors' calculations based on UNSD (2018), *UN Comtrade* (database).

Table 3.A1.2. **Primary destinations of exports from Central Africa**

Country	Average 2000-17										Total
Burundi	UAE	Germany	Switzerland	DR Congo	Pakistan	Belgium	Rwanda	United Kingdom	United States	Sweden	
	26.6	9.8	7.2	6.2	5.9	5.5	3.5	3.2	3.0	2.9	**73.8**
Cameroon	Spain	Italy	Netherlands	France	China	United States	Chad	Belgium	India	Portugal	
	13.6	11.3	9.3	8.6	8.2	5.4	4.4	4.1	4.0	3.8	**72.7**
CAR	Belgium	China	France	Indonesia	Spain	Morocco	Italy	Turkey	Germany	Cameroon	
	31.4	11.3	8.7	6.3	3.5	3.2	3.0	2.7	2.7	2.4	**75.2**
Chad	United States	China	Japan	Chinese Taipei	UAE	India	France	United Kingdom	Portugal	Germany	
	72.0	6.9	2.8	2.3	2.3	2.0	1.9	1.5	1.5	1.1	**94.3**
Rep. of the Congo	China	United States	Chinese Taipei	France	Italy	Korea	Australia	Angola	Spain	Netherlands	
	33.3	17.0	6.1	5.0	3.3	3.1	3.1	2.9	2.4	2.3	**78.5**
DR Congo	China	Zambia	Belgium	United States	Saudi Arabia	Finland	Korea	Italy	UAE	India	
	35.1	15.3	12.6	5.7	4.7	3.4	3.1	2.8	2.3	1.3	**86.3**
Eq. Guinea	China	United States	Spain	Japan	France	Chinese Taipei	Netherlands	Italy	United Kingdom	Korea	
	17.0	15.3	11.5	7.7	6.5	5.3	4.4	4.3	3.9	3.8	**79.7**
Gabon	United States	China	France	Spain	Korea	Japan	Australia	Nether lands	Malaysia	Ireland	
	45.8	10.0	5.0	3.9	3.7	3.2	2.9	2.6	2.5	2.3	**81.9**
STP	Netherlands	Belgium	Aruba	Spain	Portugal	France	Angola	Poland	Turkey	Germany	
	19.2	12.6	9.6	6.7	6.4	6.2	4.5	3.5	3.4	2.7	**74.8**
Central Africa	**United States**	**China**	**Spain**	**France**	**Italy**	**Nether lands**	**Korea**	**Chinese Taipei**	**Japan**	**Belgium**	
	24.1	**19.3**	**6.0**	**5.0**	**3.9**	**3.4**	**3.0**	**3.0**	**3.0**	**2.5**	**73.2**

Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).

Table 3.A1.3. RCAs in Central Africa, 2010-15

Product classification	Description	Burundi	Cameroon	Central African Rep.	Chad	Republic of Congo	DR Congo	Equatorial Guinea	Gabon	São Tomé and Príncipe	Central Africa
		Revealed comparative advantage 2010-15									
Sectors	Animals	No	No	No	n/a	No	n/a	n/a	No	No	0
	Vegetables	Yes	Yes	Yes	n/a	No	n/a	n/a	No	No	3
	Foodstuffs	Yes	No	No	n/a	No	n/a	n/a	No	Yes	2
	Minerals	Yes	No	No	n/a	No	n/a	n/a	Yes	No	2
	Fuels	No	Yes	No	n/a	Yes	n/a	n/a	Yes	No	3
	Chemical products	No	No	No	n/a	No	n/a	n/a	No	No	
	Plastics or rubber	No	No	No	n/a	No	n/a	n/a	No	No	0
	Leather and skins	Yes	No	No	n/a	No	n/a	n/a	No	No	1
	Wood	No	Yes	Yes	n/a	Yes	n/a	n/a	Yes	No	4
	Textiles and clothing	No	No	Yes	n/a	No	n/a	n/a	No	No	1
	Shoes	No	No	No	n/a	No	n/a	n/a	No	No	0
	Stones and glass	Yes	Yes	Yes	n/a	No	n/a	n/a	No	Yes	4
	Metals	No	No	No	n/a	Yes	n/a	n/a	No	No	1
	Machines and electronics	No	No	No	n/a	No	n/a	n/a	No	No	0
	Transportation	No	No	No	n/a	No	n/a	n/a	No	No	0
	Other	No	No	No	n/a	No	n/a	n/a	No	Yes	1
	Number of RCA sectors	**5**	**4**	**4**	**n/a**	**3**	**n/a**	**n/a**	**3**	**3**	
Product groups	Agricultural raw materials	No	Yes	Yes	n/a	Yes	n/a	n/a	Yes	No	4
	Chemical products	No	No	No	n/a	No	n/a	n/a	No	No	0
	Foodstuffs	Yes	No	No	n/a	No	n/a	n/a	No	Yes	2
	Fuels	No	Yes	No	n/a	Yes	n/a	n/a	Yes	No	3
	Manufacturing	No	No	No	n/a	No	n/a	n/a	No	No	0
	Minerals and metals	Yes	No	No	n/a	Yes	n/a	n/a	Yes	No	3
	Textiles	No	No	Yes	n/a	No	n/a	n/a	No	No	1
	Machines and transport materials	No	No	No	n/a	No	n/a	n/a	No	No	0
Stage of processing	Raw materials	Yes	Yes	Yes	n/a	Yes	n/a	n/a	Yes	Yes	6
	Intermediate goods	Yes	Yes	No	n/a	No	n/a	n/a	No	No	2
	Consumer goods	No	No	No	n/a	No	n/a	n/a	No	Yes	1
	Capital goods	No	No	No	n/a	No	n/a	n/a	No	No	0

Note: The results are calculated following Balassa's (1965) methodology.
Source: Authors' calculations based on UNSD (2018), *UN Comtrade* (database), accessed via the World Integrated Trade Solution portal, https://wits.worldbank.org/.

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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.

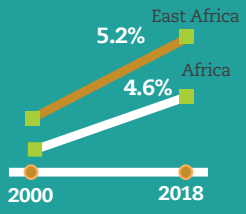
Most East African countries have high levels of export concentration and their levels of economic complexity lag behind comparator countries. **Competitiveness** indicators show progress but remain below global averages. While there are signs of growth in higher productivity sectors, countries in the 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

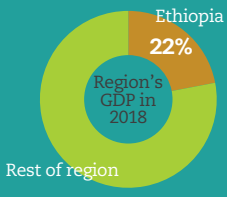
East Africa is the second-fastest growing region in Africa



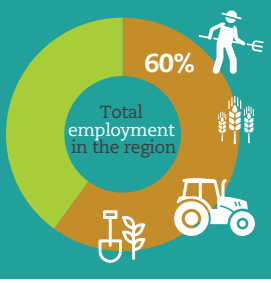
The 14 economies of the region represent about 15.2% of Africa's GDP

Structure of the economy

The largest economy in purchasing power parity value is Ethiopia



Most jobs remain in agriculture



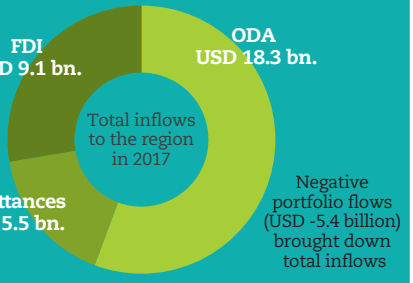
Trade

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

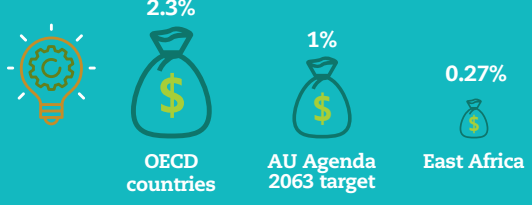
ODA is the largest financial inflow in East Africa



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

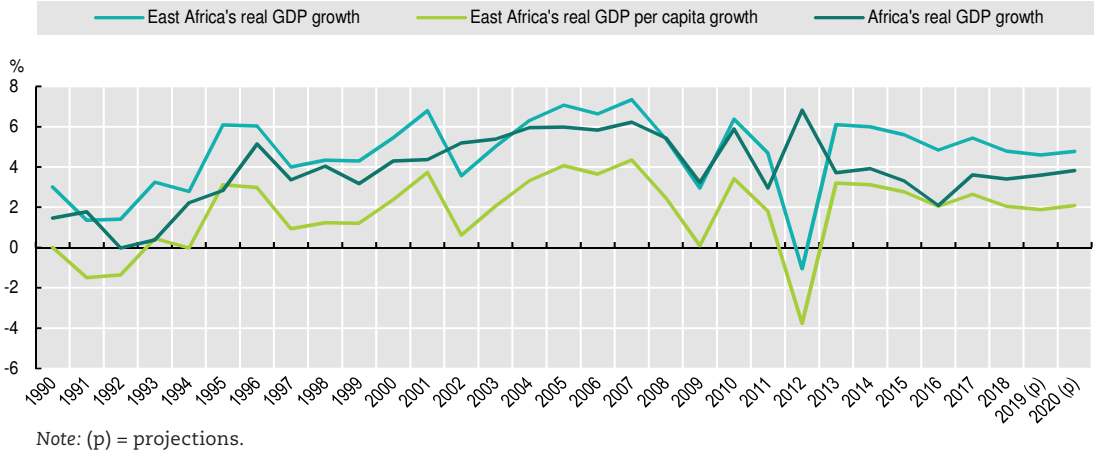
East Africa regional profile

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**

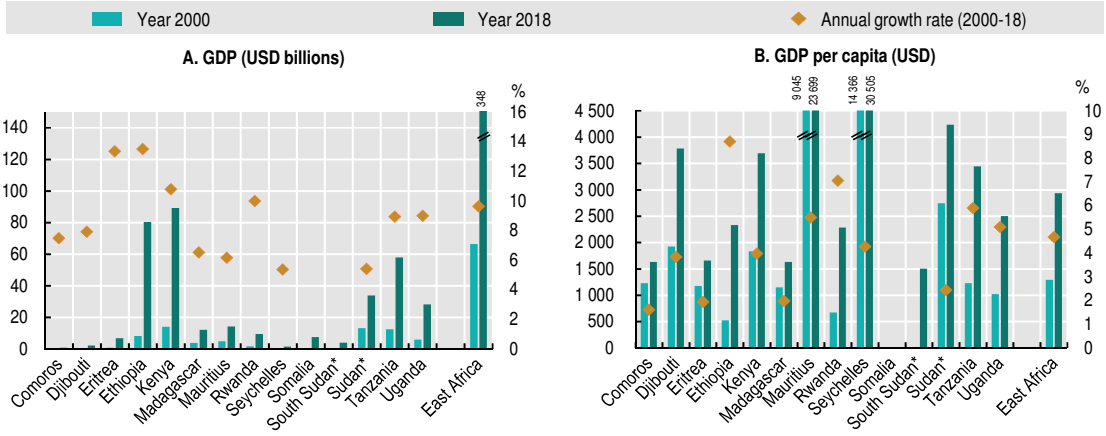
Sources: Authors' calculations based on IMF (2019), *World Economic Outlook* (database), OECD-DAC (2018a), *International Development Statistics* (database), OECD-DAC (2018b) *Country Programmable Aid*, and World Bank (2019a), *World Development Indicators* (database).

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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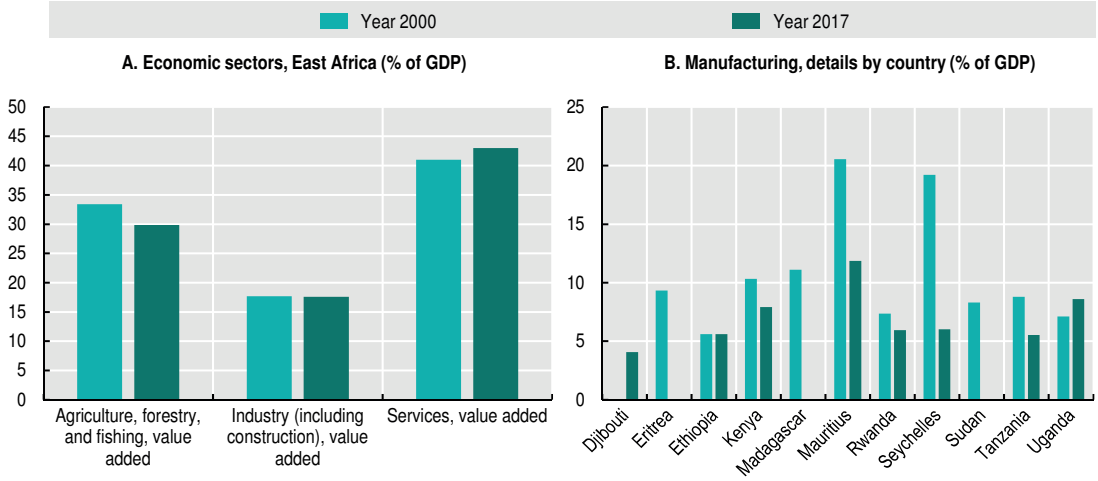
Income growth is falling behind GDP growth. Per capita income growth in the region has averaged 3% per year since 2000 (with a population growth of 2.9% over the same period). However, per capita income growth performance is mixed across countries, with low-income countries like Ethiopia and Rwanda performing 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.

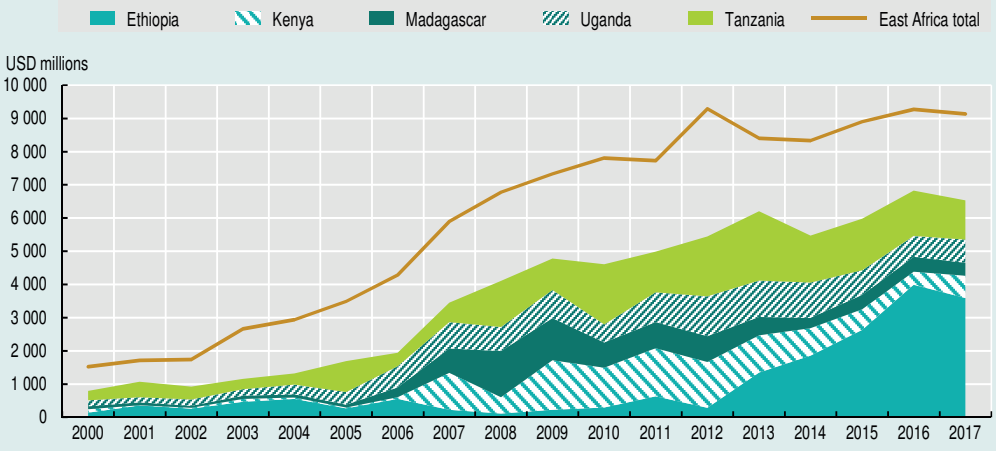
Box 4.2. **Ethiopia's pursuit of export-oriented industrial growth**

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.)*

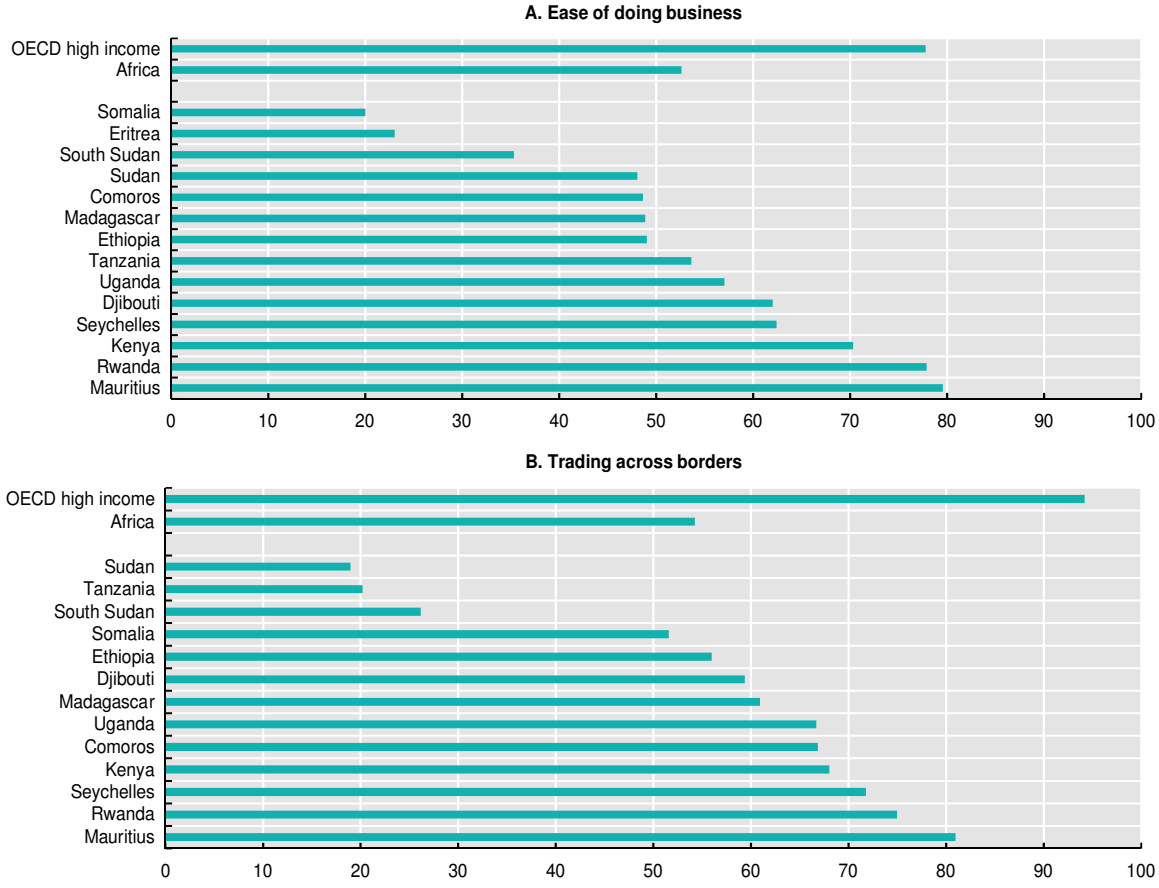
Governments are committed to expand air transport to improve regional connectivity. East Africa has emerged as a major travel hub for Africa following unprecedented investments by airlines. The region now boasts three airlines with networks across the continent: Ethiopian Airlines, Kenya Airways and 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).

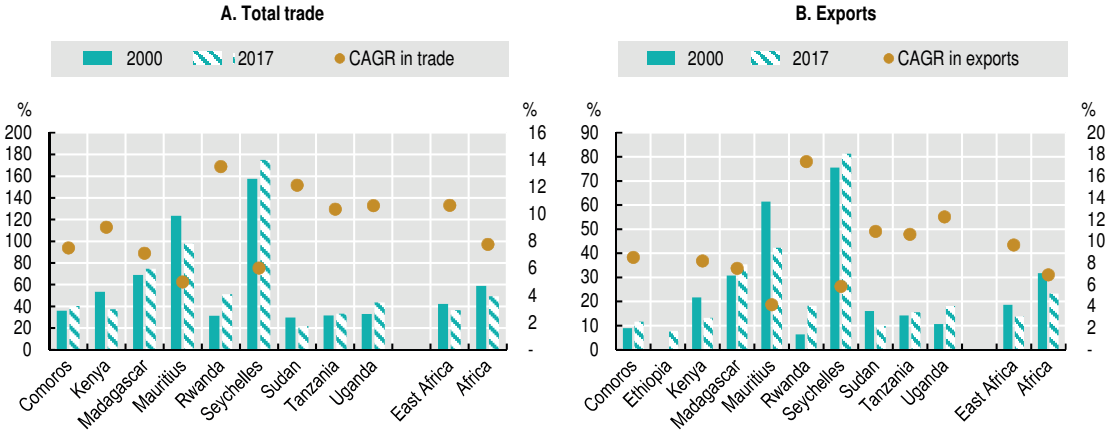
Individual countries' overlapping membership in RECs further complicates national trade regimes and prevents deeper integration into one group (WTO, 2019). A tripartite free trade agreement in goods, negotiated between COMESA, the EAC and the Southern African Development Community in June 2015, provided 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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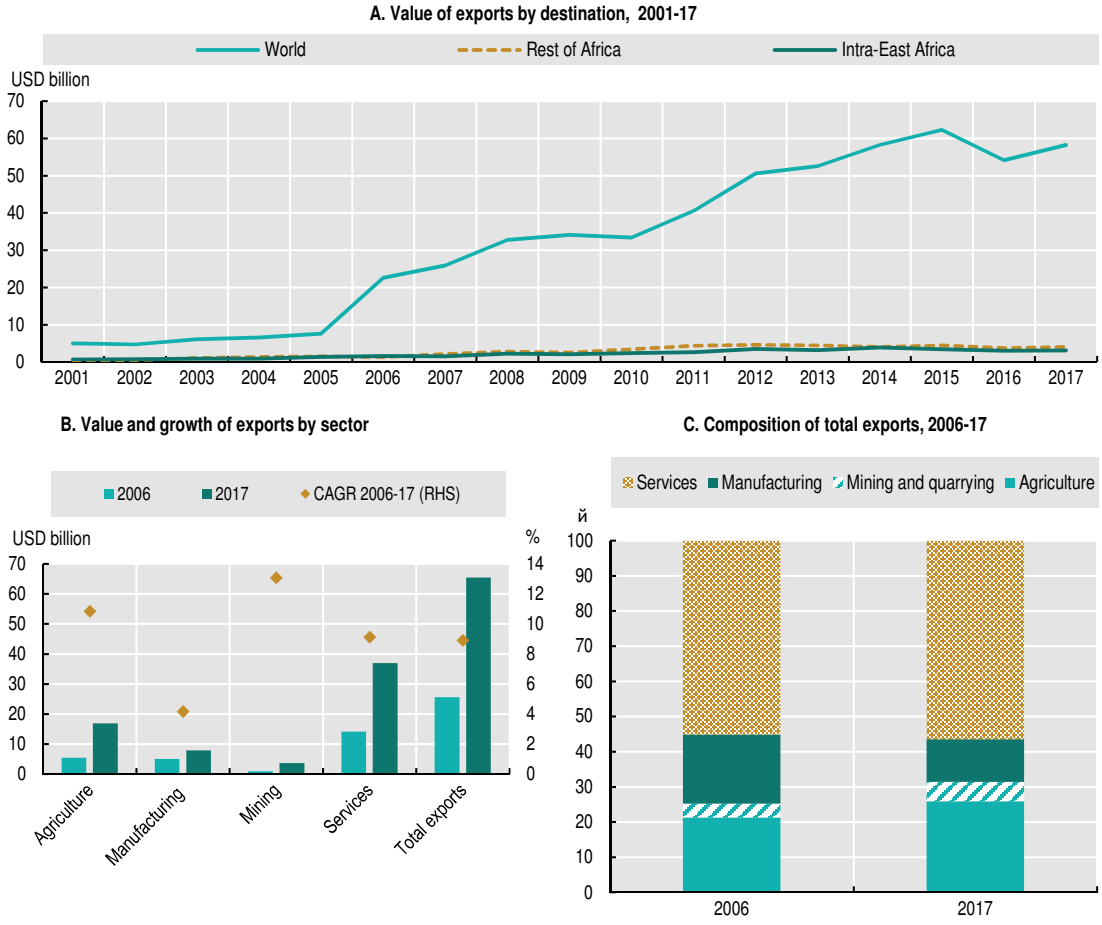
The region constitutes of services-exporting economies. Services accounted for 57% of exports from East Africa in 2017 and have remained above 50% for the past decade (Figure 4.7). Major export sectors for services in the region include tourism, transport, ICT and finance. Services exports have grown 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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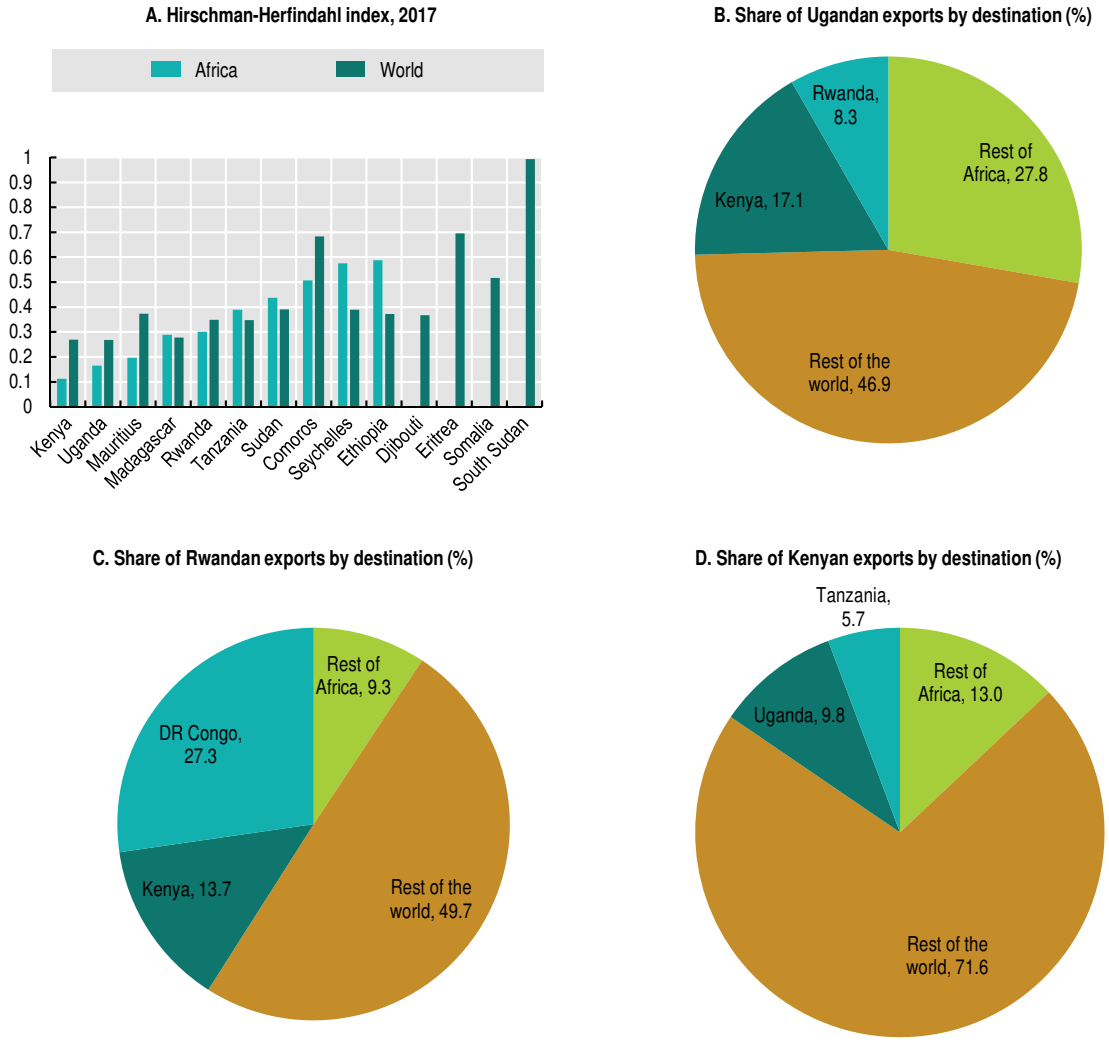
Exports from agriculture and mineral sectors are growing strongly. The shares of exports from agriculture and minerals have increased over time, accounting for 26% and 6%, respectively, in 2017. The positive growth in agriculture is a result of investments to improve productivity in key agricultural 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).
StatLink https://doi.org/10.1787/888933967435

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.

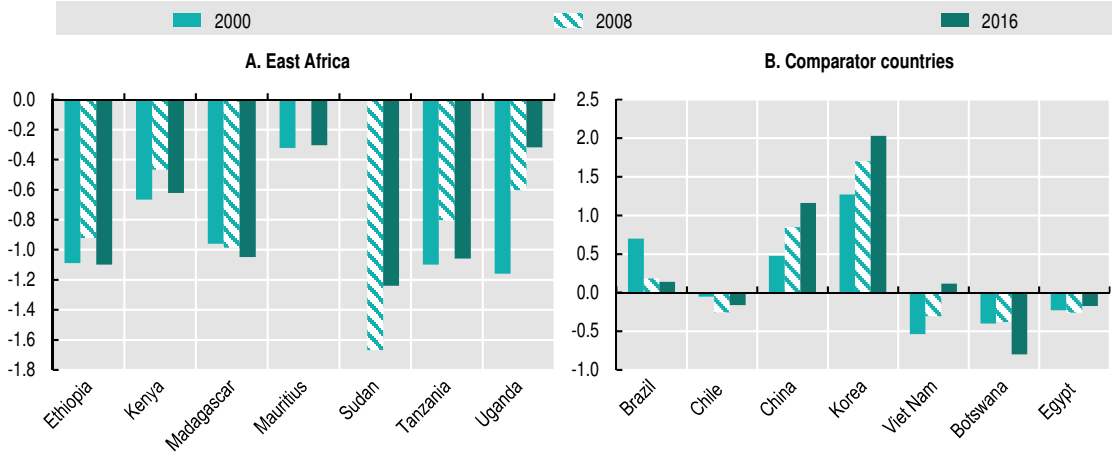
While Madagascar, Mauritius, Tanzania and Uganda have emerged as relatively competitive countries, they have strong similarities in the sectors in which they are gaining advantages. These countries have an increasing RCA for intermediate goods (stones, glass, minerals and metal), while the RCAs of raw 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).

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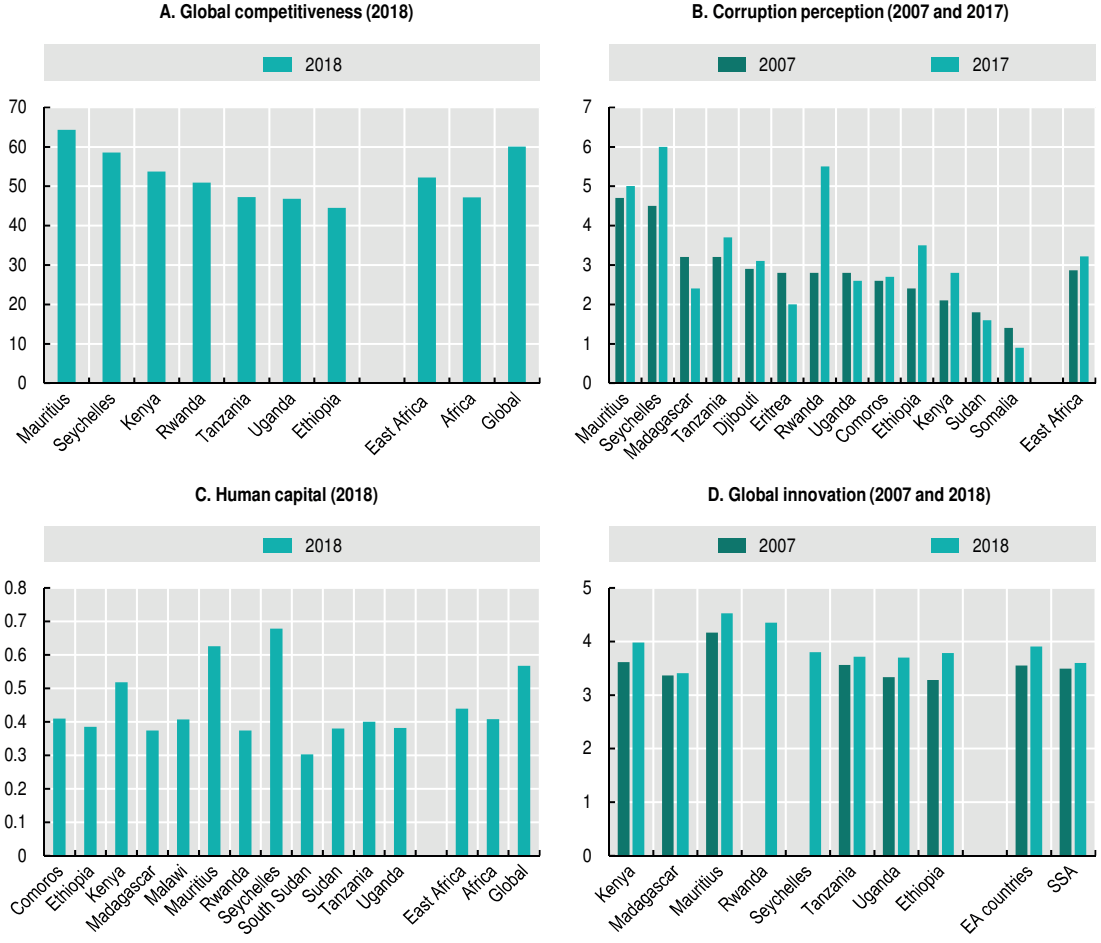
Few countries in the region are advancing on competitiveness, innovation and human capital accumulation

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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Chapter 5

Public policies for productive transformation in North Africa

This chapter examines government policies required for productive transformation in the countries of North Africa. These countries face structural constraints, which hinder international trade and the creation of quality jobs, both of which are necessary to reduce inequality. These challenges require changes to production and trade structures.

The chapter begins with an analysis of production structures through an examination of macroeconomic aggregates and North Africa's place in international trade. It then goes on to indicate sectors in which countries have specialisation advantages and identifies both the opportunities for trade expansion and the obstacles faced by both the private sector and foreign investors within a context of weak regional integration. Finally, this chapter proposes government policies to realise successful productive transformation in the region.

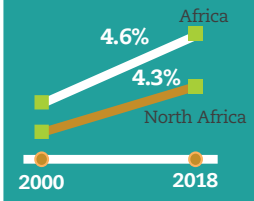
IN BRIEF

Productive transformation in North Africa has been hindered by a large **concentration of exports** in oil and gas, as well as low value-added products. Other obstacles play a role, including a lag in **innovation and technology**, weak regional integration and insufficient logistics infrastructures, an unattractive business climate, and financing difficulties. In the area of human capital, government policy can support research and development (R&D), as well as innovation, through financing and technology transfer. Furthermore, measures to encourage **intra-regional trade** are essential. These include harmonising technical standards and lifting barriers for the free circulation of goods and services (especially non-tariff barriers). Finally, North Africa can make improvements to security and the business environment by reforming investment codes, as well as tax incentives for public-private partnerships (PPPs).

Public policies for productive transformation in North Africa

Growth

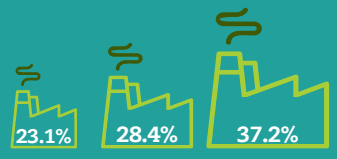
North Africa's growth rate was just below Africa's



Egypt represents 52% of the regional GDP

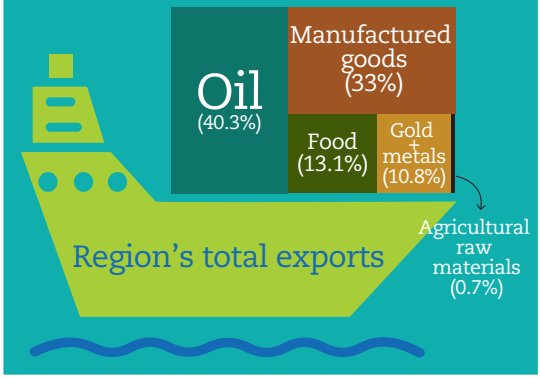
Structure of the economy

The size of industry varies across the region

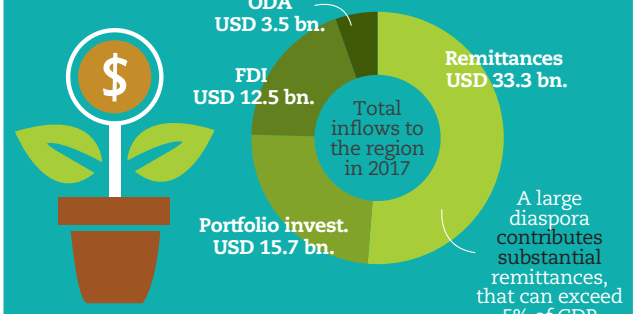


Manufacturing is the main sector in non-oil exporting countries

Trade



Financial inflows



Regional strategies for productive transformation

The region should step up its investment in human capital and innovation

Average annual spending on R&D as % of GDP, 2000-15

Researchers per million inhabitants, 2000-15

Potential value chains in the region

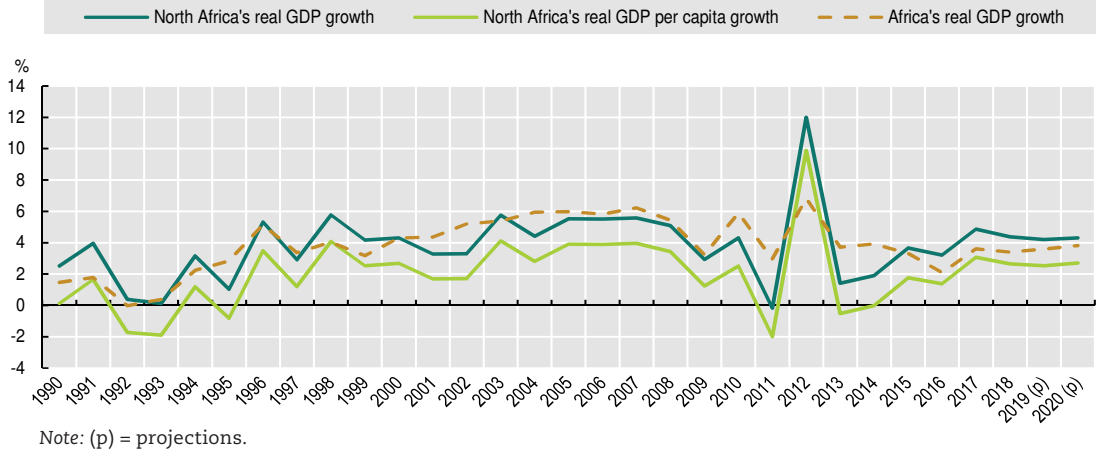
North Africa regional profile

Table 5.1. **Capabilities for productive transformation in North Africa, 2000-18**

		Source	2000	2014	2015	2016	2017	2018
Production technology	Employers and paid employees as % of total employment	ILO	68.0	69.8	69.9	72.5	72.1	72.3
	Labour productivity as % of United States productivity	CB	36.6	32.5	32.5	32.7	33.2	33.4
	Private gross fixed capital formation as % of gross domestic product (GDP)	IMF	14.6	16.0	16.6	18.1	17.6	17.4
	Capacity for innovation, 0-100 (best)	WEF	-	-	-	-	31.5	32.0
Regional network	Intra-region as % of imports in intermediate goods	Comtrade	3.1	5.4	4.1	3.0	2.9	-
	Intra-Africa as % of greenfield foreign direct investment inflows	fDi markets	-	0.2	0.2	0.3	0.2	0.8
	Venture capital availability, 1-7 (best)	WEF	-	2.6	2.6	2.7	2.6	2.7
Capacity to meet demands	ISO9001 certification as % of Africa's total	ISO	15.9	40.1	41.8	43.8	38.2	-
	Fully- and semi-processed goods as % of region's total goods export	Comtrade	44.9	51.7	57.7	61.7	54.5	-
	Share of Africa's total consumption goods import (%)	Comtrade	35.9	33.1	33.1	33.2	31.2	-

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); DESA/UNSD (2019), *UN Comtrade* (database); and WEF (2018), *Global Competitiveness Report*.

Figure 5.1. **Growth dynamics in North Africa and Africa, 1990-2020**



Note: (p) = projections.
Source: Authors' calculations based on IMF (2019), *World Economic Outlook* (database).
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Table 5.2. **Financial flows and tax revenues to North 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	4.1	18.0	13.8	6.4	14.7	12.2	11.2	11.1	13.1	12.5
		Portfolio investments	0.1	-0.7	9.1	-3.1	-3.4	2.6	4.3	0.6	-1.4	15.7
		Remittances	8.7	16.5	23.0	25.5	30.0	29.0	31.7	29.2	29.6	33.3
	Public	Official development assistance	2.6	3.3	2.7	4.0	5.0	8.9	7.3	5.0	5.4	3.5
Total foreign inflows			**15.5**	**37.1**	**48.6**	**32.8**	**46.2**	**52.7**	**54.6**	**46.0**	**46.6**	**64.9**
Tax revenues			**47.7**	**99.9**	**117.9**	**140.9**	**145.3**	**145.6**	**141.5**	**119.2**	**112.9**	**108.0**
Private savings			**58.5**	**127.4**	**164.0**	**169.3**	**189.6**	**188.9**	**184.5**	**154.6**	**155.7**	**132.8**

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).

Production structure in North Africa

The macroeconomic situation remains weak

The average growth of GDP per capita in North African countries was 2% during the period 1990-2017, and was hence too limited to reduce inequalities, poverty and unemployment. Between 2010 and 2014, growth was at 2.2%, before falling to 1.5% (Table 5.3) between 2015 and 2017. The weak performance at the end of the 2000s and the beginning of the 2010s can be explained by the international financial crisis and the Arab Spring. North Africa, which extends from the coast of Morocco and Mauritania on the Atlantic to the Red Sea in Egypt, has not yet succeeded in maintaining strong and stable growth because of a number of obstacles: unstable oil prices, low rainfall levels, political tensions, and terrorist attacks (Egypt, Libya, and Tunisia). Morocco (1.9%) and Egypt (2.2%) have shown better performance since 2015, as opposed to Mauritania (0.5%) and Tunisia (0.25%).

All six countries share a number of characteristics: little trade between each country, minimal processing of raw materials, and high unemployment rates amongst young people in urban centres (approximately 30% in Algeria, Morocco and Tunisia). In addition, there are important disparities in development and income between regions within each country. Apart from these points in common, their profiles are very different. Algeria and Libya are first and foremost oil producers. The economies of Morocco, Tunisia and Egypt are more diversified, due to dynamic manufacturing sectors and a more diversified industrial sector (textiles, automotive, agribusiness). With a population of 97.6 million in 2017, according to the World Bank, Egypt stands out as one of the major economic drivers in Africa, far ahead of Algeria (41.3 million), Morocco (35.7), Tunisia (11.5), Libya (6.4), and Mauritania (4.4).

Poverty levels and rankings on the Human Development Index (2017 HDI report updated in 2018) vary. Algeria, which had a 5.5% poverty rate in 2011 (the latest official numbers according to the national definition of the poverty threshold), is ranked 85th out of 189 countries, between Thailand and China, in the high human development category. Tunisia (95th, 15.2% poverty rate in 2015) and Libya (108th with more than a quarter of the population in need of humanitarian aid according to the United Nations) follow. Egypt (115th, between South Africa and Indonesia, with a 25.2% poverty level in 2010) and Morocco (123rd, with a 4.2% poverty level in 2014), belong to the medium development category. Mauritania is ranked in the low human development category (159th between Lesotho and Madagascar, with a poverty level of 31% in 2014).

According to 2018 World Development Indicators (WDI), the percentage of industry (including construction) in the GDP of these countries ranges from 37.2% in Algeria to 33.8% in Egypt, 28.4% in Mauritania, 26.1% in Morocco, and 23.1% in Tunisia.

Table 5.3. **Some macroeconomic aggregates in North Africa (as a percentage of GDP)**

	1990-94	1995-99	2000-04	2005-09	2010-14	2015-17
GDP per capita (growth rate)	0.3	2.3	2.3	3.3	2.2	1.5
Government spending	16.8	16.2	16.9	15.7	17.6	18.2
Investment	22.9	20.0	21.1	26.9	29.9	32.6
Private investment	14.5	12.0	12.0	17.3	23.7	25.9
Exports	30.4	29.2	33.3	44.4	41.3	30.9
Imports	33.4	30.5	33.3	41.4	47.2	46.3
Remittances	4.4	2.7	3.8	5.4	5.6	5.0
FDI	0.7	0.6	2.8	4.8	4.6	4.3

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

Capital accumulation and increased public spending have driven growth since the middle of the 2000s. Between 1990 and 2017, domestic demand could have driven growth, but was impeded by institutional constraints. Domestic investment has remained relatively high (29.9% of GDP over the period 2010-14 and 32.6% over 2015-17) and has even overtaken OECD ratios (20.9% in 2016; World Bank, 2019a). Overall investment has progressed despite public investment remaining stable, thanks to private investment (close to 80% in total). Despite the fact that government spending has increased only slightly (16.8% of GDP from 1990-94 and 18.2% from 2015-17), it remains steady and is consistent with that of OECD countries (17.8% in 2016: World Bank, 2019a).

Egypt had the lowest ratio of public expenditure between 2015 and 2017 (11.1% of GDP), in contrast to Mauritania, which had the highest, at 21.7%. Public spending is mainly financed by raw material exports, and by oil in particular. This exposes the country to international market pressures. Consequently, an increase in government spending has not supported public investment enough to boost growth.

Trade flows remain unbalanced. Aside from the period from 2005-09, North Africa imported more than it exported. After an increase in the 1990s and 2000s, there was a sharp decrease in exports, returning to levels of the early 1990s. This trend has accentuated the imbalance in trade, whereby imports have continued to rise. The trade balance of North African countries remains heterogeneous. The downturn in the international economy, marked by a fall in oil prices, has affected the oil producing countries. Exports in Algeria fell from 45.3% of GDP from 2005-09 to 35.5% from 2010-14, and then down to 22.7% from 2015-17. Libya has experienced a similar situation, with its exports falling from 68.3% to 62.5% to 38% over the same period. In short, Algeria and Libya have seen their share of exports in GDP decrease by over 20% in twelve years, with the price of crude oil ranging from a high of over USD 160 to a low of nearly USD 36 per barrel. Egypt also experienced a decline in exports, from 29.7% of GDP between 2005-09, to 13.3% between 2015 and 2017. However, the decline remains limited in Tunisia (48.8% to 41.6% over the same period) and Mauritania (41.8% to 39.1%). Only Morocco saw the share of its exports increase (32.4% to 35.4% of GDP). Oil resources provide comfortable incomes for some countries, but increase their vulnerability to external shocks.

External resources (remittances and foreign direct investment, FDI) increased, although they showed a slight decline in 2015-17. A large diaspora from the region contribute substantial remittances that sometimes exceeds 5% of GDP, with a peak of 8.4% in Tunisia between 2015 and 2017, compared to 0.5% in Algeria.

With 192 new projects financed per year between 2010 and 2017, representing 23.9% of FDI on the continent, North Africa remains the most attractive region in Africa for FDI. The bulk of capital flows are concentrated in Morocco (38.4% over 2010-17) and Egypt (35.2%), while Tunisia (13.3%) and Algeria (9.6%) remain less attractive (UNCTAD, 2018). The FDI/GDP ratio was 0.4% for Algeria compared to 6.1% between 2015-17 for Tunisia, due to the size of its economy and despite the limited number of new projects in 2017. The type of FDI also differs according to the country (Table 5.4).

Table 5.4. **Top 5 most attractive sectors for FDI (stock) in North Africa**

	Algeria, 2016	Egypt, 2017	Morocco, 2017	Tunisia, 2016
1	Industry (61.9%)	Oil sector (67.3%)	Industry (23.4%)	Industry (52.7%)
2	Building and public works (15.8%)	Services (11.2%)	Real estate (18.2%)	Telecom. (35.3%)
3	Services (15.1%)	Manufacturing (10%)	Telecom. (13.6%)	Tourism (8.2%)
4	Tourism (2.1%)	Building and public works (4.5%)	Tourism (9.6%)	Transportation (1.8%)
5	Agriculture (1.4%)	Agriculture (0.1%)	Energy/mining (6.3%)	Agriculture (0.9%)
Total	96.3%	93.1%	71.2%	98.9%

Source: Adapted from data taken from Algeria's National Agency for Development and Investment (ANDI) (l'*Agence nationale pour développement de l'investissement*), 2018, FIPA-Tunisia, 2016, Central Bank of Egypt (CBE, 2018) and Morocco's Finance Ministry (OCMF) (*Office des changes du ministère des Finances*), 2019.

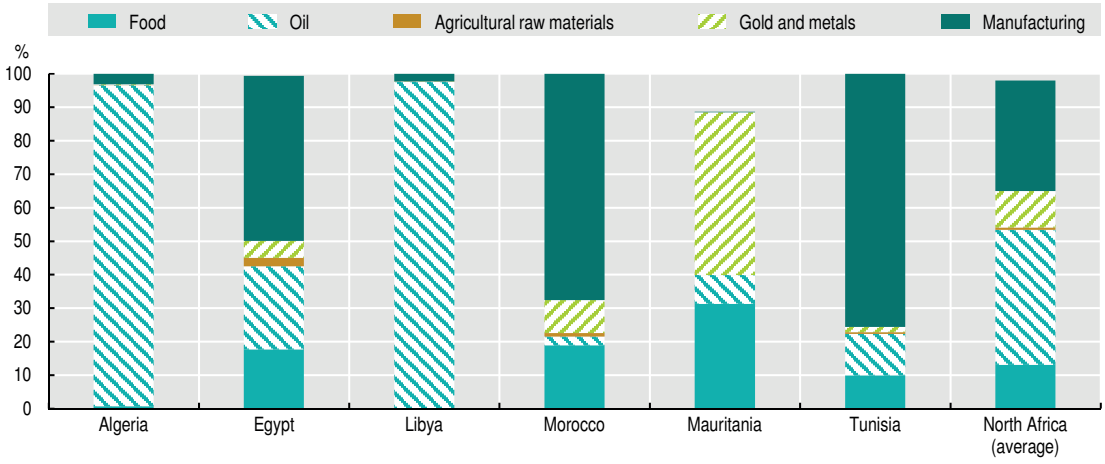
With the exception of Morocco, FDI (in stock) is largely concentrated in the same sectors. For Algeria, Egypt and Tunisia, five sectors account for more than 90% of FDI, with industry being the most attractive. In Egypt, the oil sector has received the majority of FDI, due to the economic zone established by China. Overall, the construction industry, telecommunications and tourism are all equally attractive sectors for FDI. This is not the case for the agricultural sector, due to climate risk.

The concentration of FDI in the industrial sector is positive for technology transfers, an essential part of productive transformation. FDI in the same sectors will induce countries to compete with each other to attract investors. This will pressure them to improve their institutions and implement reforms, like those launched by Morocco and Tunisia. FDI in similar sectors can be positive for the development of regional production chains and economies of scale.

North African exports remain focused on raw materials to developed countries

Despite their geographic proximity to Europe, North African countries do not have very diversified exports. On average, oil remains the region's leading product (40.3%), followed by manufactured goods (33%), food (13.1%), and gold and metals (10.8%). Agricultural raw materials do not appear in the average export mix, as they account for only 0.7% of total exports (Figure 5.2).

Figure 5.2. **Average breakdown of goods exported by North African countries, 2010-2017**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
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This overall dynamic fails to highlight the disparities between countries. Algeria and Libya rank 18th and 21st in the world for oil production and 95% of their exports are derived from this product. Their economies are narrowly based and vulnerable to external shocks. Foreign sales of black gold have fallen slightly due to a decline in international prices and political instability in Libya. With the exception of Morocco, the other countries of North Africa also export oil, but to a lesser degree. Diversifying these economies in order to reduce their dependence on oil and to foster their productive transformation would be a step forward.

Compared to Algeria and Libya, the economies of Morocco and Tunisia are more diversified. The majority of exports are manufactured goods: 75.5% of exports in Tunisia and 67.5% in Morocco over the period 2010-17. The two countries' share of exports in the manufacturing sector has been growing since 2010, especially in Tunisia. The

manufacturing industry is also very strong in Egypt (representing 49.3% of exports on average between 2010 and 2017). Manufacturing is the sector of specialisation in non-oil exporting countries. This specialisation has brought about the development of specific services, such as marketing, intellectual property and certifications. This trend is an indicator of productive transformation within the economy.

However, exports from Tunisia and Morocco in the manufacturing sector are limited to a certain number of industries (e.g. clothing, textiles, leather, chemicals, electrical switching equipment, car parts) and are often dependent on imported goods. These industries do not require highly skilled workers. However, according to estimations from the International Labour Organization, these sectors employ 25% of the workforce in North Africa (ILO, 2019). Furthermore, manufacturing has become less profitable in European countries due to competition from Asia. The relatively low cost of labour[1] and the geographic proximity of Morocco and Tunisia to Europe are factors that have facilitated the delocalisation of certain industries from developed countries. The two economies also both export food products, with Morocco out-producing Tunisia in this industry (18.9% of total exports compared to 9.9%). However, Tunisia exports some oil (12.4%), unlike Morocco, which exports gold and metals (9.8%).

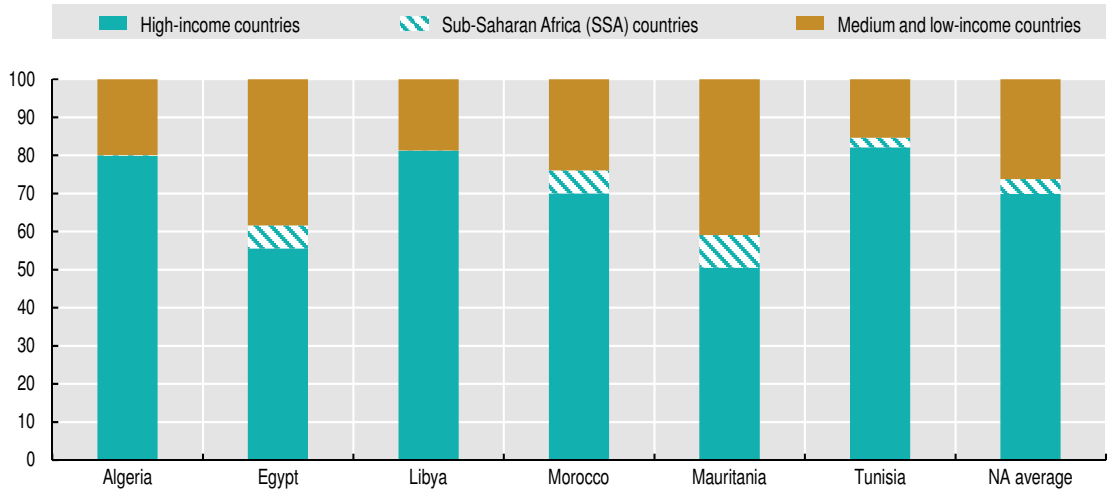
Egypt has the most diversified economy. Manufacturing constitutes almost half of all exports, oil a quarter, and food products, agricultural raw materials, gold and metals, another quarter. The share of manufactured products in total exports of goods rose from 40.4% in 1995 to 53.6% in 2017. This increase offsets the decline in oil exports from 37.2% to 21.3% over the same period.

Finally, **Mauritania** shows a low degree of productive transformation, despite the relative diversification of its exports. By focusing on low-value export of minerals (gold and metals, 48.6% of exports between 2010 and 2017) and agricultural raw materials (31.3%), the country does not take full advantage of international trade. Fishing illustrates this paradox. In 2014-15, the industry represented between 30% and 50% of exports, approximately 29% of state revenue and 55 000 direct and indirect jobs. However, its national fleet of 4 000 vessels remains very artisanal, with less than 400 000 tons of catch per year in 2014 and 2015, and only two fishing ports in Nouakchott and Nouadhibou. In 2014 and 2015, of an exploitable potential of over 1.6 million tonnes per year, half of the catch was made in the Exclusive Economic Zone (EEZ). This zone was largely exploited by long-distance trawlers (60%) operating under the open license regime (from China, Russia, Ukraine and the European Union). Industrial fish processing accounts for less than 10% of exports. About 80 plants are limited to storage and freezing (PECH Committee, 2018).

Productive transformation in North Africa requires countries to include more high-tech goods in their export baskets. The share of these goods remains minor throughout the region, except in Morocco and Tunisia, with high-tech exports representing 5.6% and 5.4% of total exports in 2010-16. In order for productive transformation to succeed, countries need to embrace the technologies needed to develop sophisticated goods. This requires reforms toward a more stimulating economic climate for investors.

Two-thirds of North African exports go to high-income countries (Figure 5.3). Demand is highest from high-income countries for oil and manufactured goods. These countries are key trading partners. The proximity to Europe reduces transport costs and facilitates the export of raw materials. Since 2010, 69.9% of North African exports have been destined for high-income countries, reaching a high of 80% of exports for Tunisia (manufactured goods), Algeria and Libya (oil), and about 50% for Egypt and Mauritania. The dynamics of these exports vary for each country and the international situation. Exports are increasing in Egypt and Morocco, decreasing in Algeria, Libya, and Mauritania, and remain stable in Tunisia. Imports of commodities by high-income countries, and oil in particular, are shrinking, as alternative sources of energy develop in these markets.

Figure 5.3. **Destinations of North African exports, average 2010-17**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
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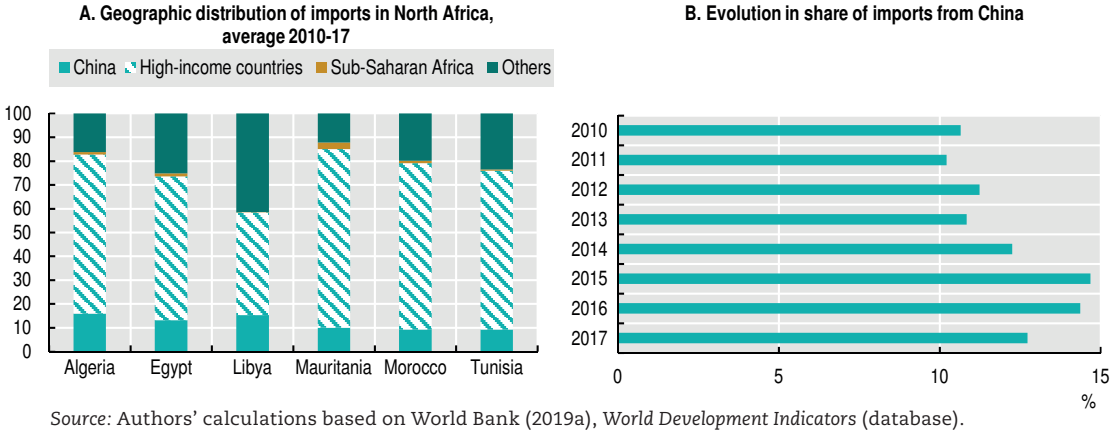
There were fewer exports from the region to low and middle-income countries because of their demand structure. Only 26.2% of North African exports go to low-income countries, of which 3.9% goes to sub-Saharan Africa (SSA). The oil-producing countries, notably Algeria and Libya, export very little, if at all, to sub-Saharan Africa. On the other hand, Morocco and Egypt send more than one-third of their exports to low-income countries. However this share has declined over time in favour of high-income markets. SSA receives on average only 6% of exports from Egypt and Morocco. Despite the decline in Moroccan exports to low and middle-income countries (dominated by exports to non-African countries), those to SSA countries have increased since 2010 because of growing interest in this area. Morocco has applied for membership to the Economic Community of West African States (ECOWAS) in order to benefit from preferential tariffs. Mauritania exports the most to middle and low-income countries, mainly fish, gold and metals, with 8.5% of its exports going to SSA.

North Africa's integration into the global economy can also be viewed in the context of the geographic distribution of its imports, which shows an increase in purchases from China. Egypt is the most diversified country in terms of origin of imports, while Mauritania receives the majority of its imports from high-income countries, at nearly 75%. These countries remain North Africa's largest trading partners in terms of imports (over 60%, Figure 5.4A). Imports from SSA remain negligible, as North African demand is mainly for capital-intensive finished products.

The share of imports from China rose consistently between 2010 and 2015 (14.7%) before falling between 2016 and 2017 (Figure 5.4B). An increase in ties between these countries is positive for rapid productive transformation: infrastructure can be built at lower cost and gradual technology transfers are facilitated. This example of a South-South partnership should increase competition in the market for sophisticated goods, currently dominated by high-income countries. Consequently, high-income countries will have to adjust to the needs of North African countries. Nevertheless, technology transfers from China, essential to the process of productive transformation, are yet to be seen. Proper value chains between local and Chinese companies in these countries need to be developed.

Figure 5.4. **Import structure in North Africa**



Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database).
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North Africa's integration into the global economy and its production capabilities are linked to the labour market. Indeed, growth generated by productive transformation should lead to more highly skilled jobs. This shift should result in a decline in the share of agricultural employment and a transfer of workers to the industrial sector. However, the current structure of the labour market offers few prospects for highly skilled jobs. Most jobs are created in agriculture and services (72% of the total), compared to 28% in the industrial sector (AUC/OECD, 2018). These numbers confirm the limited extent of productive transformation, which should increase employment for highly skilled labour and improve countries' production and export profiles.

Product development and commercial potential of North African countries

This section assesses the commercial potential of North African countries from a perspective of the Product Space Study. Identification of revealed and latent comparative advantage niches will reveal the potential for productive transformation in these countries.

Box 5.1. **Product Space Method of Analysis**

The concept of product space was developed by Hausmann and Klinger (2006) who postulated that the speed by which a country can migrate from the production of unsophisticated, low value-added goods to that of sophisticated, high value-added goods depends on their proximity to products in which the country has developed a comparative advantage. Over time, countries improve the composition of their exports by moving into the product space of goods that are related to their current exports rather than unrelated goods (Hausmann and Klinger, 2007; Hidalgo et al., 2007).

World Bank data (available on the WITS website) disaggregated to four digits in HS (Harmonised System) nomenclature are used. The identification of goods in which each country has a revealed comparative advantage (RCA) is based on the Balassa (1965) approach. In the analysis of productive transformation, latent comparative advantage niches (LCAs) of North African countries are identified and consist of products which are not yet exports, in which countries could easily develop a comparative advantage. A product is considered an export if the country has demonstrated a comparative advantage in that product for at least four years during a certain period. Once the products have been identified, analysis is restricted to data from 2015 for the purpose of brevity.

Comparative advantage is characterised by low diversification of exports in North African countries

Exports comprise mainly raw materials or low value-added products. Comparative advantage is varied, ranging from highly concentrated (Libya and Algeria) to relatively diversified (Egypt, Morocco, Tunisia). Economic activity is thus highly contrasted (Table 5.5). The export baskets of North African countries represent between 90% and 99% of their total exports. Productive transformation requires higher added value for products already present, as well as a greater diversification in exports.

Table 5.5. **Key features of revealed comparative advantages (RCAs) in North Africa**

	Algeria	Egypt	Libya	Mauritania	Morocco	Tunisia
Number of exports	16	242	15	22	170	214
Percentage of world exports	99%	87%	96%	98%	89%	90%
Number of exports at 50%	2	15	1	3	9	11
Number of exports at 75%	2	73	2	5	32	42
Number of exports at 90%	3	242	3	8	170	214

Source: Authors' calculations based on DESA/UNSD (2019), *United Nations Comtrade* (database).

The export baskets of Algeria and Libya contain few goods, 16 and 15 respectively, which account for 99.1% and 96% of their exports. Exports focus on oil and its derivatives, more than 90% of exports (Table 5.6). Productive transformation has been extremely limited. Mauritania's export basket is also concentrated (98% of exports, with five products out of 22 accounting for 70% of exports). These sales are dominated by iron ore, copper and gold (52%), and seafood (29%).

In Egypt, Morocco and Tunisia, the export basket is more diversified. It contains respectively 242, 170 and 214 products representing approximately 90% of sales abroad. In fact, Egypt's export basket is more diversified than that of Tunisia and Morocco: 15 products account for half of the exports, compared to 11 in Tunisia and nine in Morocco (Table 5.6).

Table 5.6. **Main exports of North African countries**

Country	Key products as a percentage of total exports in 2015
Algeria	Petroleum oils and oils obtained from bituminous minerals (55%); petroleum and other gaseous hydrocarbons (40%); ammonia, anhydrous or in aqueous solution (1.6%); mineral or chemical nitrogen fertilisers (1.3%).
Egypt	Petroleum oils and oils obtained from bituminous minerals (27%); wires, cables, including coaxial cables (4%); fresh or dried citrus fruit (2%); clothing (2%); gold, including gold plated with platinum (2%).
Libya	Petroleum oils and oils obtained from bituminous minerals (64%); petroleum and other gaseous hydrocarbons (22%); gold, including gold plated with platinum (7%).
Mauritania	Iron ores and concentrates (30%); molluscs (17%); frozen fish (17%); copper ores and concentrates (12%); gold, including gold plated with platinum (10%); petroleum oils and oils obtained from bituminous minerals (4%).
Morocco	Wires, cables, including coaxial cables (12%); motor vehicles (9%); diphosphorus pentoxide, phosphoric acid, polyphosphoric acids (6%); clothing (5%); mineral or chemical fertilisers (5%); natural calcium phosphates, natural aluminium-calcium phosphates and phosphate chalk (3%); tomatoes, fresh or chilled (3%); molluscs (3%).
Tunisia	Wires, cables, including coaxial cables (13%); clothing (10%); olive oil and derivatives (6%); petroleum oils and oils obtained from bituminous minerals (4%); electric apparatus for switching (4%); parts and accessories of motor vehicles (3%); monitors and projectors, not incorporating a television receiving device (3%).

Source: Authors' calculations based on DESA/UNSD (2019), *United Nations Comtrade* (database).

RCAs show similar export structures, with the same products in various export baskets, hence the low level of trade between countries. Petroleum oils and oils obtained from bituminous minerals, predominant in exports from Algeria and Libya, are found in all baskets, as are electrical wires and cables and clothing in Egypt, Tunisia and in Morocco.

The pattern of comparative advantage shows that export baskets consist mainly of raw materials, or semi-finished and finished products with low added-value. Automobiles are manufactured in Morocco because assembly lines exist there. Value could be added to this activity through the manufacturing of spare parts. The identification of each country's latent comparative advantage (LCA) focuses on goods that are missing in export baskets and on which countries can easily position themselves, as these goods are close to current comparative advantage niches. Like RCAs, LCAs vary according to the country (Table 5.7).

Table 5.7. **Main products with latent comparative advantage in North Africa**

Country	Products
Algeria (16 products)	Acyclic alcohol and its derivatives, tanned or raw hides and skins, onions, shallots, garlic, unwrought aluminium, natural cork, clothing, etc.
Egypt (155 products)	Rubber tires, medicine, pastry products, fruit (apricots, cherries, peaches, nectarines, plums), plastic packaging (caps, lids, capsules and others), etc.
Libya (16 products)	Remelting of iron or steel ingots, unwrought aluminium, acyclic hydrocarbons, raw hides cattle skins, waste, parings and debris of plastics, etc.
Mauritania (20 products)	Prepared or preserved fish, oil seeds and oleaginous fruits, waste, parings and scrap of plastics, raw hides and bovine skins (including buffalo), precious stones (other than diamonds), alliaceous vegetables, tomatoes, etc.
Morocco (101 products)	Motor vehicle accessories, fresh apples, pears and quinces, iron or steel articles, plastic articles, fish fillets, etc.
Tunisia (142 products)	Taps, valves and similar apparatus for pipes, electronic integrated circuits, electronic structures and parts, petroleum gases and other gaseous hydrocarbons, packaging articles, unwrought aluminium, etc.

Source: Authors' calculations based on DESA/UNSD (2019), *United Nations Comtrade* (database).

Analysing LCAs yields two findings. On the one hand, the latent export basket is more diversified in countries which have a large number of RCA products, notably, Egypt, Morocco and Tunisia. The possibilities for export diversification are more limited for Algeria, Libya and Mauritania. On the other hand, the North African latent export basket contains few high added-value goods, except for automobile parts and accessories (Morocco) and faucets (Tunisia). Generally, quality upgrading requires increased technological know-how and a better business climate.

The structure of company ownership affects the comparative advantage of exports (both RCA and LCA). Private capital, both domestic and foreign, facilitates productive transformation more than state-owned businesses. Egypt, Morocco and Tunisia stand out with a high level of domestic private investment in business, namely 93.4%, 89.8% and 92% respectively in 2013. Companies with at least 10% of shares owned by foreign shareholders represent 7.2% of the total in Egypt, 12% in Morocco and 11.7% in Tunisia in the same year. Instability caused by the Arab Spring has had a negative impact on private share ownership, which went from 7.2% in 2013 to 4.9% in 2016 (World Bank, 2019b).

Export baskets contribute little to GDP in North Africa

The next two sections examine the productive transformation in North Africa through the lens of export sophistication. At this level, two approaches are possible.

The first, proposed by Hausmann, Hwang and Rodrik (2007), is based on the contribution of exported products to aggregate productivity as measured by GDP per capita. It leads to the calculation of the PRODY index which measures the contribution of an exported good to GDP per capita, indicating the implicit technicality of the products.

The second, developed by Hausmann *et al.* (2011), is based on the analysis of product complexity; that is, the sophistication of the combination of factors of production (physical capital, human capital, labour, know-how). Complex goods will tend to be produced in a limited number of countries while low-complexity goods may be manufactured in a large

number of countries. The complexity of an economy reflects its ability to produce a wide range of goods with different levels of sophistication.

Results for the PRODY index show that North Africa's export baskets contribute little to its GDP. This contribution is lowest in oil-exporting countries, while countries with more diversified markets fare better. Egypt, Morocco and Tunisia, for example, which have larger export baskets, show a similar distribution in their products' contribution to GDP per capita. Exports in Mauritania and Algeria, are less diversified, and contribute little to GDP per capita, particularly in Algeria. As a whole, in view of the fact that PRODY is relatively limited in North African countries, productive transformation should concentrate on diversification, and focus on products which contribute substantially to GDP per capita. These products are more complex and will therefore require more technological know-how. In this sense, non-oil-producing countries are in a better position to undergo productive transformation and benefit from it.

The products and economies of North Africa lack complexity

North Africa's export products, and their economies in general, lack complexity. Furthermore, products from Morocco, Egypt and Tunisia are generally more complex than Algerian or Mauritanian products. Quality upgrading, in the context of productive transformation, in countries such as Egypt, Morocco, and Tunisia, can occur rapidly, as these countries already manufacture relatively complex, high-value products. The capabilities of these countries in terms of human capital and infrastructure will be advantageous for technological innovation. This will improve product quality and greater integration into the global value chain. The complexity of an economy can be understood via the combination of know-how and other factors that enable the production of more complex products.

The level of complexity in the economy is linked to actors' available know-how. Knowledge and skills are broadened through the interaction between individuals in increasingly complex networks, resulting in the manufacturing of more sophisticated products. The economy's complexity is intrinsically linked to the complexity of the products it produces. It is reflected in the product composition of a country as well as its knowledge structures.

Table 5.8. **Economic Complexity Index (ECI) of North African countries, 2000-16**

	2000-04	2005-09	2010-14	2015-16	2000-16
Algeria	-0.9	-0.9	-1.6	-1.2	-1.1
Egypt	-0.4	-0.2	-0.3	-0.2	-0.3
Mauritania	-1.0	-1.7	-1.7	-	-1.5
Morocco	-0.7	-0.5	-0.6	-0.8	-0.6
Tunisia	-0.3	-0.1	0.2	0.1	0.0
Average	-0.6	-0.7	-0.8	-0.5	-0.7

Source: The Observatory of Economic Complexity (2018).

In general, the economies of North African countries are characterised by low economic complexity. The most complex economies are Tunisia and Egypt, and the least complex are Algeria and Mauritania. These results corroborate the analysis of product complexity. Between 2000 and 2016, Algeria and Mauritania's economic complexity decreased, whereas Egypt and Tunisia's increased. An economy's complexity is a reflection of a country's real potential for productive transformation. From this standpoint, Tunisia, Egypt and Morocco are all well positioned.

Constraints to productive transformation in North Africa

Despite North Africa's attempts at industrialisation and the region's assets, productive transformation remains limited. This is due to highly concentrated economies, particularly for oil-producing countries. A number of obstacles prevent countries from integrating into global value chains: (i) a lag in innovation and technology; (ii) weak regional integration and insufficient infrastructure networks; and, (iii) a poor business climate and financing difficulties.

A lag in innovation and technology persists

North African countries lag far behind in the domain of human capital, innovation and technology, compared to OECD countries (Table 5.9).

Despite progress in education and training, the average human capital index in most of these countries (with the exception of Tunisia) is less than half of the OECD average. This is because of a lack of researchers and insufficient spending on R&D. In North Africa, the number of researchers per one million people is a third that of OECD countries (Table 5.9). The region devotes a meagre 0.7% of its GDP to R&D, compared with 2.4% in OECD countries. Technological skills and overall innovation indicators, at 19.5 and 28.8, are almost half of the OECD values (40.9 and 50.7, respectively). The lack of competitiveness is apparent, although a number of significant disparities exist with regard to knowledge acquisition and ICT. Algeria is less competitive than Egypt, Morocco and Tunisia. Morocco has shown improvement in the field of ICT, while Tunisia has improved in the acquisition of skills and competences.

Table 5.9. **Technology and innovation indicators in selected North African economies**

	Algeria	Egypt	Morocco	Tunisia	Av.	OECD
Number of researchers per 1 million inhabitants**		569.98	866.61	1 636.52	1 024.37	3 545.74
R&D spending as % of GDP**		0.58	0.71	0.67	0.66	2.43
Human capital and research	25.91	22.95	25.13	43.23	29.31	49.75
Knowledge and technology outputs	13.42	21.13	19.88	23.39	19.46	40.88
Information and communication technology (ICTs)	25.9	43.82	63.59	58.36	47.92	77.33
Global Innovation Index (GII)	23.9	27.2	31.1	32.9	28.78	50.69
Competitive Industrial Performance Index (CIP)*	0.01 (94th)	0.03 (73rd)	0.04 (63rd)	0.04 (61st)	0.03	

Notes: * Value of 2016 CIP and ranking in brackets. The CIP of the top five countries are: Germany (0.52), Japan (0.40), China (0.38), United States (0.37) and Korea (0.37). France (0.27) is ranked 11th out of 144 countries.
** Average between 2010 and 2015.
Source: Authors' calculations based on World Bank (2019a), *World Development Indicators* (database) and Global Innovation Index (2018), *Global Innovation Index* (database).

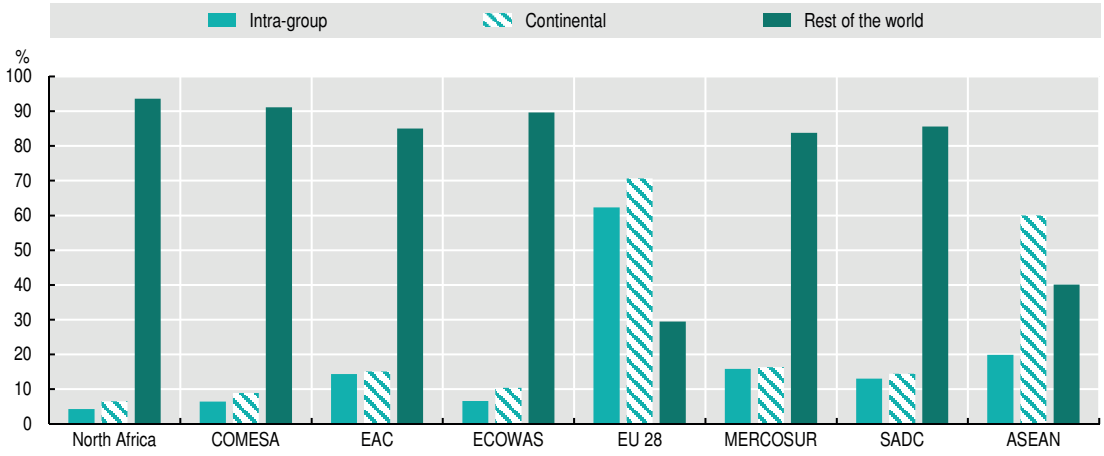
Regional integration infrastructure networks in North Africa can be strengthened

The low level of trade integration has slowed productive transformation and has hindered the implementation of regional value chains (RVCs). Intra-regional trade represented only 4.7% of total trade between 2010 and 2017, lower than other blocks, such as the Common Market for Eastern and Southern Africa (COMESA, 9.4%), the West African Economic and Monetary Union (WAEMU, 13.7%) and the Southern African Development Community (SADC, 19.2%) in Africa, or the Association of South East Asian Nations (ASEAN, 24.4%).

Weak regional integration is a result of strategies which favour North-South, rather than South-South, integration. In addition to competition for FDI, little genuine desire for a regional export platform, hubs for joint production, or RVCs exists.

Intra-regional trade also faces other commercial and non-commercial constraints. Trade barriers are very high, especially non-tariff barriers (e.g. technical, sanitary and phytosanitary standards, import licensing procedures, pre-shipment inspections, rules of origin). Trade is also limited by an unfavourable regulatory framework, a weak business climate, underdeveloped infrastructure and poor logistics performance.

Figure 5.5. **Intra- and extra-regional trade in North Africa, average 2010-17**



Notes: North Africa (NA), Association of South East Asian Nations (ASEAN), Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Economic Community of West African States (ECOWAS), European Union 28 (EU 28), Southern Common Market (Mercosur), Southern African Development Community (SADC), West African Economic and Monetary Union (WAEMU).

Source: DESA/UNSD (2019), *United Nations Comtrade* (database).

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The Logistics Performance Index based on surveys in the region is lower than the average of developed and developing countries (Table 5.10). North African countries lack efficiency in customs clearance procedures and infrastructure quality. Transport costs are high, despite extensive coastlines. Transhipment costs, difficulties encountered during transit, and an absence of harmonised regulations also remain burdensome.

Specifically, Libya's performance in customs clearance, monitoring and product traceability is poor. Its infrastructures have deteriorated since the fall of the Gaddafi regime. Mauritania suffers from weak trade and transport infrastructures as well as a lack of logistic services. The other countries are confronted with congested ports, limited access to railroad and port services, and poorly standardised border procedures (with the exception, to an extent, of Egypt and Morocco).

Table 5.10. **Logistics Performance Index in North Africa, 2018**

	Algeria	Libya	Egypt	Mauritania	Morocco	Tunisia	NA	ECA
Efficiency of customs process	2.28	2.00	2.67	2.36	2.16	2.27	2.29	3.04
Quality of trade and transport infrastructure	2.45	2.17	2.91	2.58	2.09	2.27	2.41	3.13
Ability to ship internationally at competitive rates	2.54	2.18	2.94	2.80	2.15	2.53	2.52	3.14
Competence and quality of logistic services	2.53	2.21	2.95	2.59	2.06	2.45	2.46	3.21
Tracking and traceability	2.65	1.90	2.91	2.57	2.18	2.78	2.49	3.27
Frequency of on-time delivery	2.89	2.78	3.30	3.09	2.54	3.20	2.96	3.24
Score	**2.56**	**2.21**	**2.95**	**2.67**	**2.20**	**2.59**	**2.53**	**3.65**

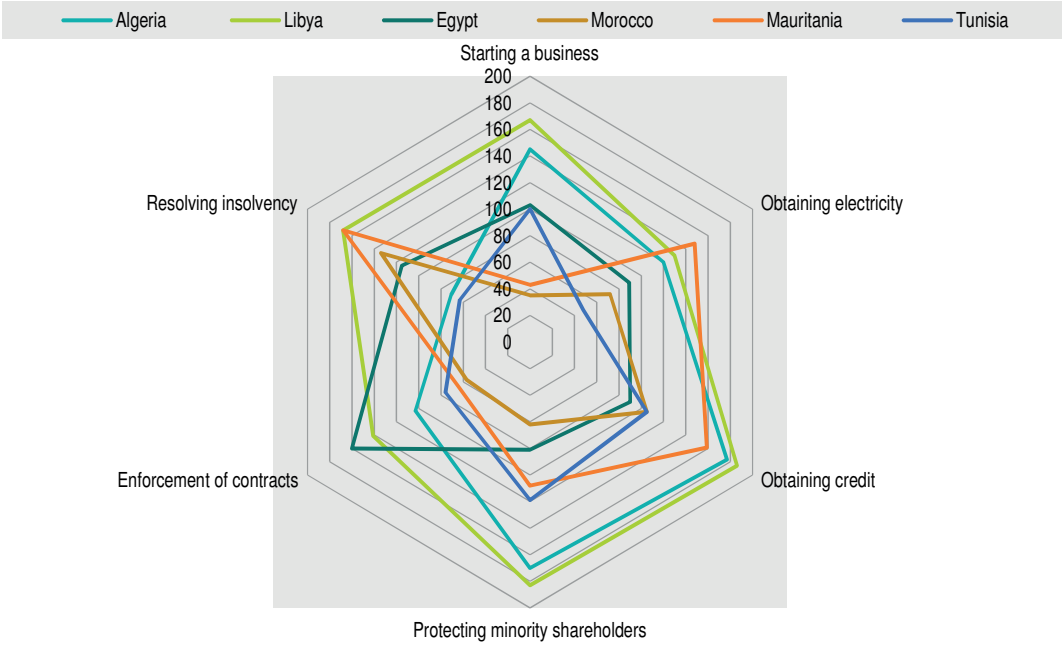
Notes: Europe and Central Asia (ECA) and North Africa (NA).

Source: Authors' calculations based on World Bank (2018a), *Logistics Performance Index* (database).

The business climate and access to financing need improvement

Productive transformation in the countries of North Africa is slow because of weak institutions. Indeed, the *Doing Business* report rankings[2] showed poor performance in the business climate category for these countries (Figure 5.6). Although Morocco and Tunisia are improving in this area, major progress needs to be made in the areas of entrepreneurship and insolvency regulation in Algeria, Libya, and Mauritania, in particular. Businesses in all countries are confronted with problems that affect their competitiveness, namely property transfer, financing, corruption and non-payment.

Figure 5.6. **Business Climate Index in North Africa, 2017**



Note: Economies are ranked on their ease of doing business, from 1–190. A high ranking means the regulatory environment is more conducive to the starting and operation of a local firm depending on each dimension considered.

Source: Author's calculations based on World Bank (2017), *Doing Business 2018: Reforming to Create Jobs* (database).

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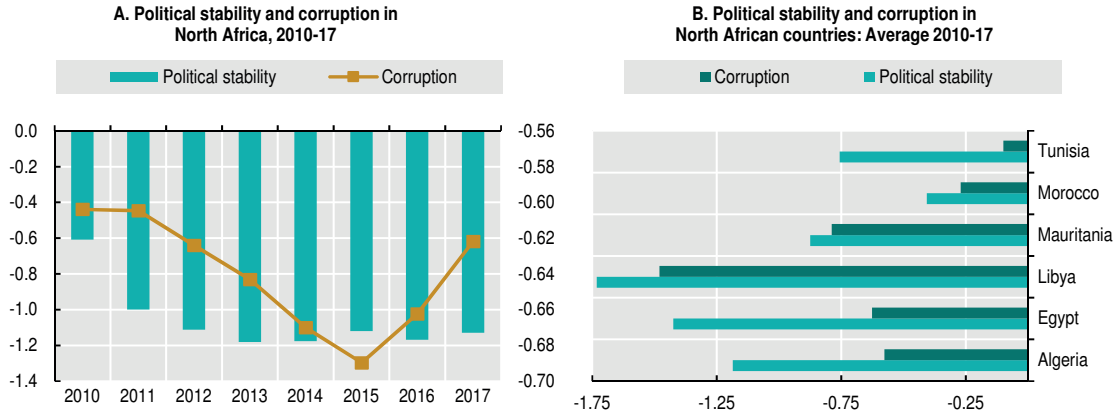
The Arab Spring adversely affected the business climate. The problem of weak institutions was made worse by a growing informal sector and the risk of political instability. The share of the informal economy in the non-farm sector went from 47.3% in 2000-04 to 53% in 2005-09, decreasing slightly to 50.2% in 2010-14 (ILO, 2015). The size of the informal economy varies, and did so in particular over the period 2010-14: Algeria (40.7%), Egypt (49.6%), Morocco (70.1%) and Tunisia (40.2%). The informal economy has hindered productive transformation, as it causes losses in tax revenue and poor economic forecasts.

In addition, political instability and corruption are major issues, which go together and which have increased in a region (Figure 5.7A) that is also confronted with security issues. These problems are more evident in Algeria, Egypt and Libya than in Morocco and Tunisia (Figure 5.7B). Political instability increased in particular between 2010 and 2017 in Egypt, Libya and Tunisia. At the same time, corruption levels increased in Algeria, Libya and Mauritania. This has impeded domestic and foreign investment, indispensable for productive transformation.

Figure 5.7. **Political stability and corruption control in North Africa**



Source: Authors' calculations based on Word Bank (2019a), *World Development Indicators* (database).
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Financing and private sector support represent two major challenges. Financial systems are weak, both on a structural and institutional level, despite progress in some countries. Access to financing for farmers is still very difficult compared to other sectors for a number of reasons: farming is considered high-risk, there are few guarantees, and rural areas are difficult to reach. Mining and services also lack the financial means to develop economies of scale (Table 5.11). The weakness of capital markets prevents countries and businesses from developing economic ties at all levels.

Table 5.11. **Access to financial services in North Africa**

	Algeria	Egypt	Mauritania	Morocco	Tunisia
Percentage of companies that view the cost of/access to financing as difficult	50.1	23.4	52.4	27.7	23.9
Loans granted to private sector by financial institutions (% of GDP)	22.1	28.1	20.8	63.2	73.4
Unpaid loans (% of total)	11.4	7.2	27.6	6.90	14.5
Stock market capitalisation (% of GDP)	-	13.8	-	57.1	20.3

Source: World Bank (2018b), *Global Financial Development Report 2017/2018: Bankers without Borders*.

Thanks to the Casablanca Stock Exchange, Morocco has the highest market capitalisation on the continent, at 57.1% of GDP. It is low in Egypt and Tunisia and almost non-existent in Algeria and Mauritania. This limits companies' access to financing. As a result, credit levels are minimal in North Africa, particularly in Algeria, Mauritania and Egypt. In addition to limited access to financing, Mauritania and Tunisia have a high percentage of unpaid loans. By increasing information asymmetry between bankers and economic actors, this further restricts access to the financing necessary for productive transformation. The high level of unpaid loans can explain credit rationing by banks to small- and medium-sized companies.

Public policies to support and reinforce productive capacity in North Africa

Investing in human capital and innovation

Public policies to improve human capital can lead to greater support for R&D. There are not enough researchers and not enough funding for research in these countries. It is in this context that Morocco, for example, has created technology parks (*cités de l'innovation*) in Marrakesh, Fez, Rabat and Casablanca, partnering with universities. These parks can serve as hubs for R&D projects, young entrepreneurs, business and industrial clusters. Morocco has also strengthened its Technical and Industrial Centres (*centres*

techniques industriels),[3] which accompany businesses in their technological development. Development centres for advanced technologies have also been established (OECD, 2018).

Greater support of business innovation can improve competitiveness. This can be realised through the implementation of financing mechanisms and the transfer of technological know-how. These R&D measures can be accompanied by career guidance, the development of information systems in the labour market to better anticipate required skills, and a stronger partnership between business associations and the state. This has been the case with the automotive sector in Morocco. Business associations set up working committees in order to recommend specific policies to the government (creation of test laboratories, research subsidies, and financial incentives for entrepreneurs). This has resulted in a more educated and highly skilled work force.

Innovation policy remains weak. Results are poor as shown, for example, by patent filings of SMEs. The company GS1 Tunisia's "Tunicode" programme provides bar codes for local products according to GS1 standards, and represents, nonetheless, a good example of innovation policy. Effective public policies require closer links between the private sector and vocational training institutions and/or science and technology institutes. Assistance programmes for certification and patent grant projects are needed, as well as vocational training for long-term-unemployed young people.

Public policies should be defined according to the comparative advantage of each country. Morocco, as part of its industrial emergence plan in the late 2000s, identified the automotive sector as strategic and potentially competitive. The government invested in the training of technicians and specialised managers, with subsidies ranging between EUR 450 and EUR 2 700 per person per year. The government also supported the creation of the Automotive Industry Training Institutes (IFMIA) in Casablanca, Kenitra and Tangiers, with a view to promoting automotive clusters. This attracted USD 1.5 billion in investment by the French car group Renault (Maturana et al., 2015).

Innovation in agriculture

Policies to strengthen human capital in agricultural countries, Mauritania in particular, can target specialists such as agronomists, technicians, and biologists. The establishment of test laboratories and improvements in technical and managerial skills can lead to quality upgrading of products and a better position in the value chain. Training programmes on sanitary and phytosanitary standards are required.

National innovation programmes can facilitate productive transformation in agriculture. These programmes cover everything from seed production to irrigation and processing, marketing and distribution. They should also include crop conservation techniques and food processing, as well as certification programmes for high added-value industries (organic, halal, etc.). This can promote regional brands and increase competitiveness on a continental and global scale.

Agriculture in North Africa can take advantage of digital technology to boost productivity and competitiveness. Governments can implement policies to encourage the creation of technology clusters in agricultural science and the emergence and development of start-ups. They can also put into practice new pumping and irrigation techniques based on solar and wind energy. The Bizerte[4] cluster in Tunisia, for example, consists of an agribusiness tech hub, a network of "Agro'tech" partners, and 150 hectares of industrial space. In addition, in order to make agriculture more competitive, ICTs can be used in decision-making, irrigation management, fertiliser control and disease prevention.

Innovation in extractive economies

Extractive economies (notably Algeria and Libya), require R&D policies to improve innovation. Upgrading skills in engineering and project management and co-operation

with leading foreign firms can help them integrate into extractive industry value chains. An increase in exchange programmes between multinationals and local partners can reduce the existing technological gap.

Innovation in manufacturing

Economies with comparative advantages in the manufacturing industry, such as Morocco and Tunisia, need to reduce the knowledge gap with competitors to provide good quality products. This will involve developing skills, as well as new management and engineering practices, and the financing of more quality business schools, as there are very few at the moment. Most importantly, the textile-clothing sector requires specific education and training policies, as the industry changes constantly. Governments can strengthen innovation capabilities through training in design, marketing, branding, etc.

The automotive and aerospace industries have strong growth potential but require new skills in marketing, technological development and communication. Improvements in productivity and competitiveness require skills training for the new technological era (artificial intelligence, digitalisation, big data). Education policies which aim to provide a more educated workforce can help this changing industry.

Innovation in services

Public policies can facilitate productive transformation in countries that have made progress in the service industry, such as Tunisia, Morocco or Egypt. In particular, services play an important "invisible" role in manufacturing (marketing, supply chain, R&D, design and training). Investment and development in science, technology, engineering and innovation is essential. The Sfax Science Park in Tunisia and the Casablanca Technology Park in Morocco are interesting examples of synergies between the world of innovation and smart business (Box 5.2). In particular, these countries can develop skills in the field of communication, information technology and languages. Transitioning from an educated and inexpensive workforce to a highly skilled workforce can improve the quality of services and attract new investment. Strengthening regulation in personal data protection and intellectual property rights can increase these countries' attractiveness. Countries can also increase the number of call centres and high-tech hubs, and provide training in outsourcing.

Box 5.2. The Sfax Technology Park and the Casablanca Technology Park

Technology parks are stimulating a new fabric of creative and innovative businesses, creating skilled jobs and increasing competitiveness. The Sfax Technology Park was launched in 2004 to foster ICT and multimedia. It consists of 10 500 m² for businesses and a R&D, IT, Multimedia and Digital Data Processing Centre. It has developed production spaces, a research environment and advanced training facilities. It has served as an incubator for an experienced pool of skilled labour, and has created a network of companies that co-operate in their respective specialisations.

The Casablanca Technology Park is based on ICT (Web 2.0, mobile technology, e-commerce) as well as green technologies. This successful experiment in business incubation was replicated in Rabat, Tangier and Fez. Since its creation in 2005, the park has supported nearly 800 innovative companies. It consists of 280 Moroccan start-ups and SMEs, with nearly 2 000 employees, the majority of which are under 30, and has a turnover of more than 60 new start-ups every year. It has strengthened the competitive advantage of Morocco through the creation of synergies, the pooling of research infrastructures, and the acquisition of skills and knowledge through partnerships with universities and industries in the region.

Value chains can exploit existing complementarities between countries

RVCs can improve the position of these countries in global value chains. The potential for complementarity is evident and the resources needed for integration upstream or downstream in certain chains exist. RVCs can be developed if regional investments are made, infrastructure and transport networks are constructed, and specific trade policies are implemented. The productive characteristics of countries in the region and their comparative advantages are likely to facilitate RVCs and hence their positioning in global value chains.

The textile value chain

Egypt, Morocco and Tunisia have been able to integrate the textile-clothing value chain and benefit from their geographic proximity to Europe and the free trade agreement with the United States (for Egypt and Morocco). The creation of integrated production networks targeting specific niches (design, branding, marketing) can result in quality upgrades. This is because these countries possess the know-how and raw materials (wool, cotton, etc.) are readily available.

The automotive value chain

North African countries can also exploit their geographic position. Progress made in the automotive industry can also promote the value chain. Co-operation between Algeria, Morocco and Tunisia in the field of automobile assembly, for example, would offer important opportunities to each of these countries. RVC integration is possible, especially as these countries possess the necessary raw materials such as gas, oil, steel and renewable energies. They also have special economic zones (Tangier Automotive City in Morocco, free zones in Bizerte and Zarzis in Tunisia). Morocco and Tunisia can take advantage of their proximity to Algeria to develop sales activities for automotive components. Algerian companies can establish joint ventures with their Tunisian and Moroccan counterparts to develop assembly activities (ECA, 2016).

The aeronautics value chain

RVCs in aeronautics are possible, and both Morocco and Tunisia have made progress in this area. Geographic proximity to industry leaders and the existence of on-site industrial assembly platforms (Midparc and Nouacer in Morocco, Aéropôle M'Ghira in Tunisia) can make quality upgrades possible. The development of skills in prototype design, modelling and production is crucial. The appropriate logistical infrastructure required for FDI in high added-value activities (e.g. mechatronics, software development, 3D parts modelling) is equally important.

The energy value chain

The existence of natural resources (oil, gas and mining) in North Africa can enable RVCs based on energy.

Processing industries can be developed throughout the region, including synthetic fibre industries for textiles and clothing, and plastic industries for the manufacture of aeronautics components.

Furthermore, RVCs can be developed in renewable energies. Specialised production units already exist and technical and operational skills are available. Two main levers are in place and can support the development of these RVCs: co-operation projects with Europe to produce solar energy and regulations favouring the investment of local actors (Box 5.3).

Box 5.3. **Potential for renewable energy in North Africa**

The region has enormous potential in solar energy, due to some of the most favourable sunshine on the planet: up to 3 900 hours per year, with fairly high average solar radiation values (GIZ, 2013). Most countries have adopted long-term strategies to increase the share of renewable energy in their energy mix: 52%, 37% and 30% in Morocco, Algeria and Tunisia respectively by 2030, and 42% in Egypt by 2035.

In Morocco, the national energy strategy (2016-30) aims to reduce energy dependence to 82% in 2030, while Tunisia has implemented a Solar Plan (TSP). Egypt implemented a strategy to limit dependence on fossil fuels in 2014. Finally, in Algeria, the government plans to establish a national renewable energy industry.

There are co-operation and partnership projects between North African countries and several European countries which aim to invest in solar energy and export it to Europe. These include the "MedGrid" and "MED-TSO" projects of the Mediterranean Solar Plan for North Africa, established by the Union for the Mediterranean. They plan to export 22 000 MW to Europe by 2030 (ECA, 2018).

The agribusiness value chain

In view of the importance of agriculture in the region, RVCs need to develop in the agribusiness sector. Potential in this sector has not been fully realised, even though the possibilities to improve technically (productivity) and economically (processing and marketing) are evident. Factors which can contribute to the transformation of the region into a competitive hub include: the presence of industrial processing clusters, diversified production, a growing demand for quality from markets, and the development of a number of distribution techniques (e.g. marketing, branding, and certification). Countries can sign agreements for joint management of water resources and joint support of regional brands[5] of processed products to help develop RVCs.

Support for RVCs requires integrated and coherent policies in each sector. This can encourage actors to take advantage of supply chain segmentation to meet the specific needs of their economy (ECA, 2018). Such policies can help the private sector exploit the attributes of each country, strengthen the country's competitiveness, and stimulate the interconnection of economies in the region.

Countries can benefit more from current trade agreements[6] and the presence of multinationals in order to improve their branding, retail and RVC development. Countries can aid the development of RVCs in the region by negotiating cumulative rules of origin for countries that have signed several free trade agreements (and therefore have problems with rules of origin). Furthermore, countries that have received offers from Europe to sign full and in-depth free trade agreements (Egypt, Morocco and Tunisia), should co-ordinate closely between each other. Finally, countries can harmonise trade rules with partners in the region.

Strengthening regional and continental integration

Greater regional integration is a positive rather than negative development, even if countries continue to compete with each other. Exports from Egypt, Morocco and Tunisia in textiles and clothing, for example, are relatively high in the region, although their share in relation to world exports remains quite low: 3.2% for Egypt, 1.2% for Morocco and 0.5% for Tunisia (ECA, 2018). This shows that historical differences can be overcome

in favour of immediate economic interests. A transition from competitor to partner is beneficial for all. Countries can achieve this by collaborating on well thought-out training and knowledge transfers and by developing regional industrial platforms. They can also procure raw materials from neighbouring markets for regional industries and conduct concerted negotiations with international investors.

The importance of regional complementarity does not diminish the importance of continental integration. Trade openness under the African Continental Free Trade Area (AfCFTA) can be beneficial for at least three reasons.

- First, it can facilitate the flow of skills, technology transfer and complementarities in infrastructure.
- Secondly, it can reduce dependence on traditional markets (the European market in particular) and capitalise on the benefits already acquired (quality, logistical know-how, etc.).
- Finally, it can bring about real growth opportunities, especially for local businesses to upgrade their products. Moreover, regional demand in Africa is shifting towards more processed goods. This sector grew 1.5 times faster than the annual average between 2005 and 2015 (AUC/OECD, 2018).

Continental integration can encourage integration of production, strengthen RVCs and support productive transformation in North Africa. Through the facilitation of trade and capital flows, the AfCFTA can impel each country to nurture its comparative advantages and develop its industries. It can enable the creation of successful business models which can be replicated throughout the region. This can result in quality jobs for young people and women and more buoyant industrial sectors, including agribusiness, textiles and clothing, leather, wood and paper, automobiles and transport equipment, electronics and metals (ECA, 2018).

Greater openness towards trade on the continent can help countries adapt to demand and develop sectors in which they have an advantage.

- Morocco has already signed trade and investment agreements between the *Office Chérifien des Phosphates* (OCP) and organisations in sub-Saharan Africa, such as the Community of Sahel-Saharan States (CEN-SAD) and WAEMU, to produce and export fertilisers.
- Tunisia has also signed tax and investment agreements with several sub-Saharan African countries. This has increased exports in cast iron, iron and steel, paper, cardboard and plastics.
- Finally, Egypt's membership in COMESA has boosted exports in essential oils, electrical materials and hydrocarbons.

Government policies on ICT investment and transport infrastructure should increase trade between North Africa and the rest of the continent in the medium and long term. Major Trans-African highway projects, such as the Cairo-Dakar highway or the Algiers-Lagos highway are in progress. In addition, new shipping lines are being planned, like that of Wazzan II in Morocco, which links the ports of Tangiers (Morocco), Casablanca (Morocco), Monrovia (Liberia), Abidjan (Côte d'Ivoire), Tema (Ghana), Takoradi (Ghana) and Cotonou (Benin). Another shipping line will link the cities of Gabès and Sfax (Tunisia) to Dakar (Senegal), Abidjan (Côte d'Ivoire) and Tema (Ghana).

The continental free trade agreement should lead to market defragmentation. Countries can harmonise legislation, regulations and licensing procedures to achieve greater mobility of goods, services and skills. This, in turn, can improve access to raw materials and human capital for businesses. Common policies can facilitate trade.

Countries should develop multimodal trade corridors, establish border posts, standardise administrative documentation, and sign regional transit agreements.

Intra-regional trade facilitation measures are essential. Countries need to remove barriers to the free movement of goods and services in the region (especially non-tariff barriers), harmonise technical standards, and simplify customs and border control procedures. They should also sign bilateral, mutual-recognition agreements regarding conformity assessment for high added-value products. Better communication and understanding between parties regarding existing regional free trade agreements is also necessary.

Finally, greater monetary and financial integration should be encouraged. The establishment of a regional financial information system would allow banks to manage risks linked to intra-regional transactions. Once regulation, infrastructure and financial instruments have been harmonised, currency convertibility can ease trade and eliminate bottlenecks that occur in fragmented financial markets. With this in mind, the implementation of the African Development Bank's (AfDB) 2010 action plan is necessary, as it will be beneficial for investors in sectors which show comparative advantage.[7]

Infrastructure and logistics can stimulate the private sector

In order for RVCs to develop fully, infrastructure issues should be resolved. North African countries can attract more investment if they modernise basic infrastructure and improve connectivity of ports and airports. Delegating port and airport management to efficient operators can reduce wait times and improve shipment tracking. Public entities involved in infrastructure management in these countries may need restructuring.

Improving infrastructure in countries with high agricultural potential

Agricultural countries need to develop rural infrastructure which can bring down transportation costs and increase competitiveness. The creation of local supply bases can ensure access to farm inputs, such as pesticides and seeds, and hence increase efficiency. In addition, a stronger water infrastructure (dams, dikes, supply and sanitation systems, etc.) can facilitate productive transformation. Increased investment in water systems and water resource management is also important. The Oum-Er-Rbia project in Morocco, for example, provides irrigation services and improves farmers' access to technology, financing and agricultural markets. It enables capacity development for both borrowers and agencies involved in the project.

Improving infrastructure in extractive economies

For some extractive economies, improvements in power supply are essential. The construction of infrastructure to connect main supply sites to ports can increase efficiency in the value chain. Furthermore, modern and efficient transport networks (road and railway) can facilitate the movement of heavy and rather hazardous goods and improve links between sectors within the value chain. Finally, productive transformation can develop further through the installation of additional oil refining units in both exporting (Algeria, Egypt, Libya) and importing (Morocco and Tunisia) countries. Processing plants in plastics and composites, the automotive and aeronautics industries, synthetic fibres and fabrics, chemical products and fertilisers, etc., can also advance productive transformation. Egypt, for example, launched a vast project to modernise and expand its refineries at the beginning of 2017. Of the estimated USD 8 billion total for the project, USD 4.3 billion was devoted to the Egyptian Refining Company (ERC)'s refinery in Mostorod.

Improving infrastructure in the manufacturing industry

Strategically planned and managed business clusters and special economic zones (SEZs) are highly beneficial for countries with comparative advantages in industry and, more specifically, in manufacturing. The Suez Economic Zone, which was established by China, has allowed Egypt to move up the value chain in the oil industry (drills and components). Similar zones have been created in Mauritania (mining), Morocco and Tunisia (manufacturing), and Algeria and Libya (oil) and should be mainstreamed in the future.

The development of freight distribution clusters, or logistic zones, leads to cost reduction, more connectivity and greater competitiveness. Regulations need to be relaxed with regards to a number of activities (warehousing, consignment, and transit) and countries should strive for greater market flexibility when it comes to transport and logistic services. The port of Alexandria in Egypt sees a high percentage of foreign trade (60%) pass through each year. Faced with an increase in industrial activity, port authorities needed to improve local and regional connections. In 2015, they launched the Great Alexandria Port 2035 Strategy to expand the port area and modernise infrastructure. The port will have new terminals, a SEZ, new industrial logistics centres, and a tourist area with a marina.

Governments need to ensure that SEZs have spillover effects on the economy as a whole. To avoid the establishment of a dual economy (onshore/offshore), incentives and benefits granted to companies in these areas should have time limits. Governments can help prevent economic disarticulation by providing the necessary infrastructure for the successful interaction of all actors in these zones. Governments should negotiate with businesses that wish to settle in these areas. Performance contracts can set out objectives, such as jobs, added value creation, and export targets. In return, governments can support businesses with regards to property taxes, training and project financing, etc. The "Tangier Med" zone in Morocco is an interesting example. The government and fixed-term investors have signed Performance contracts pertaining to a number of industries located in the area (mechanical and metallurgical, automotive, aeronautics, logistics).

Improving infrastructure in the service industry

The telecommunications infrastructure and, particularly, the provision of broadband internet and low-cost communications is essential to service economies. Access to these services remains expensive in some countries (Morocco for broadband internet and Mauritania for mobile telephony). An opening of the market to foreign operators can break up monopolies, improve the quality of service, bring down prices, and hence benefit businesses.

Public-private partnerships (PPPs) are good solutions for infrastructure investment, especially as the legislative framework exists. To this end, governments can tap into technical and managerial expertise and train officials from different ministries and public agencies. Legal provisions need to further protect investors (transparent and credible tendering processes, interministerial co-ordination, limited political interference, etc.). Infrastructure projects should be properly studied and prepared to qualify as bankable. Countries can establish a central platform for PPP authorisations and licences. As for tenders, governments should focus on performance requirements rather than technical specifications. Moreover, the allocation of projects should be based on justified needs and not on inappropriate political motivations. Finally, reforms are essential for the development of partnerships, particularly in the areas of energy subsidies and foreign exchange risk management (OECD, 2014).

Technological advances can be exploited to optimise infrastructure management. For example, new communication technologies, fibre optic cables and satellite systems can

be used to increase infrastructure efficiency and improve demand management. This can be applied to the control of the power grid, the reading of water and electricity meters, the monitoring of road congestion, logistics management and public transport. New technology can ultimately help reduce transaction costs and improve competitiveness (Konrad Adenauer Stiftung, 2017).

In order to strengthen the private sector on the African continent, governments need to commit to providing a conducive institutional and regulatory environment. Necessary measures include: a greater number of diplomatic and trade representatives, a simplification of customs procedures, increased private sector financing by banks, and an easing of exchange rate regulations.

Improving the business climate and access to financing

In order to improve the business climate, governments can change labour market regulations, strengthen intellectual property protection and prevent rent-seeking. In addition to R&D, governments can improve access to information, reduce administrative barriers, and digitise administrative procedures in order to attract investment. In addition, the consistency and coherence of regulations and laws is essential. Moreover, fiscal stability is often more attractive to investors than temporary exemptions or other incentives. Nonetheless, these can be granted to actors leading innovative projects that create value.

Improvements to the business climate should also focus on strengthening domestic production to establish channels between the local economy and multinational firms. This initiative can be driven by a national innovation scheme, which can generate technology and information flows between companies and institutions. The objective of such a scheme is to reduce the gap between offshore and onshore sectors, as well as to facilitate upgrading and increase efficiency.

Existing government codes and investment laws, especially in Egypt, Morocco and Tunisia, are favourable to foreign investors, but remain inadequate for these countries to successfully integrate into regional and global value chains. Governments need to support businesses, notably SMEs. Public-private partnerships should be encouraged to improve productive capacities and foster links between multinational firms and local firms. The PPP model for the construction of the "Noor" solar power plant in Ouarzazate, Morocco, can be used as an example of how to attract foreign partners.

Governments should prioritise policies to improve the business climate based on their economic potential. In the case of high agricultural potential, public investments can target irrigation systems, greenhouses and cold storage, and be a catalyst for private investment. In an extractive economy, government investment can concentrate on contract enforcement, permit regulation, pricing transparency, and combating corruption. As for manufacturing industries, sector-specific investment and trade-related measures can be taken in favour of businesses, especially SMEs. These measures include the protection of property rights and the establishment of an appropriate bankruptcy code. Finally, in service economies, policies can focus on opening up and strengthening connections between local and international actors. This can happen through a gradual, well thought-out liberalisation of the tertiary sector.

Improving the business climate goes hand in hand with strengthening the entrepreneurial spirit. This can facilitate innovation and upgrading. Local entrepreneurs, who are more committed and more familiar with the characteristics of the market, can increase production and, above all, adapt when faced with economic difficulties. Better yet, they can serve as a vital base for the local market in the event of disengagement by

multinational firms (AfDB/OECD/UNDP, 2014). To this end, local decision makers need to be more involved in the promotion of SMEs and employment policies. At the same time, policy makers should target productive entrepreneurs who want to create value rather than benefit from tax, monetary and financial benefits.

North African countries can build and/or develop an entrepreneurial base through training programmes in particular, the financing of young entrepreneurs, and the support of strategic partnerships with local firms. Targeted actions for young project leaders can enable them to set up quickly with minimal costs and prospect for international markets. Various actions are possible: providing facilities to comply with international standards, supporting marketing platforms in target countries, and removing barriers to venture capital development. In addition, training centres and universities should be encouraged to respond to market needs, facilitate dialogue with the private sector, and ensure that training programmes stimulate young people's entrepreneurship.

Government policies can focus on improving financial mediation and on mobilising domestic savings to support investment. SMEs, which dominate the economies of these countries, have to rely on alternative forms of financing, such as private equity (notably capital-risk funds) and microfinance, as bank loans are difficult to access. Governments can also provide better adapted financial solutions, such as asset-backed lending or credit guarantee schemes. In addition, capacity-building initiatives can modernise production and improve quality standards (AfDB/OECD/UNDP, 2017).

Notes

1. The average monthly revenue per inhabitant between 2010 and 2016 in North Africa was USD 253 compared to USD 2 604.1 for OECD countries and USD 104.9 for SSA (World Bank, 2019a).
2. High index numbers show poor performance in the business climate category.
3. Centre des techniques et matériaux de construction (CETEMCO), Centre d'études et de recherches des industries métallurgiques, mécaniques, électriques et électroniques (CERIMME), and Centre technique des industries des équipements de véhicules (CETIEV).
4. This government decision was made in the context of the 11th Development Plan of the National Strategy for the Support of the Agri-food Industry.
5. Examples of certain brands that can be promoted in North Africa include argan oil in Morocco, dried figs in Algeria, and sun-dried tomatoes in Tunisia.
6. This refers to the EU-Africa Partnership, the Pan-Arab Free Trade Area Agreement, the Agadir Agreement and bilateral agreements.
7. This action plan is based on five points: the financing of foreign trade and investment in the Maghreb; the harmonisation of payment systems and technical platforms; the harmonisation of regulations governing banking and financial supervision; a strengthening of co-operation and co-ordination between financial institutions; the exchange of information on regulation and the financial sector (AfDB, 2010).

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Chapter 6

Public policies for productive transformation in West Africa

This chapter examines the public policies for productive transformation in the 15 countries of West Africa. Despite sustained growth and progress in advancing regional integration, West African countries remain at a competitive disadvantage. The chapter starts by examining productive structures via the dynamics of macroeconomic aggregates as well as West Africa's integration into world markets. It highlights sectors in which these countries possess a latent or revealed specialisation advantage and it identifies opportunities for expanding the industrial and manufacturing sectors, to leverage better inter-state complementarities. Lastly, this chapter proposes public policy areas that could aid the region's productive transformation.

IN BRIEF

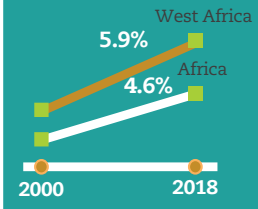
For over a decade, high GDP growth rates in West Africa have not translated into real productive transformation. The 15 countries of the region – large exporters of unprocessed raw materials – lag behind in terms of industrialisation, competitiveness and moving up the value chain. Despite having made progress on financial and macroeconomic integration, results in terms of **innovation** and overall **competitiveness** remain muted or even negative in the majority of countries. This also applies for other indicators such as industrialisation, the share of high and medium-tech products in overall manufacturing value added, or the share of manufactured products in total exports. An examination of revealed comparative advantage (RCA) confirms that the majority of West African countries specialise in primary resources that are exported unprocessed.

Five strategic policies are proposed to accelerate the productive transformation of raw materials in situ: a strengthening of **regional complementarities**, improving entrepreneurial innovation, facilitating **access to markets**, rationalising tax policy (national and regional), and ensuring better access to energy and land.

Public policies for productive transformation in West Africa

Growth

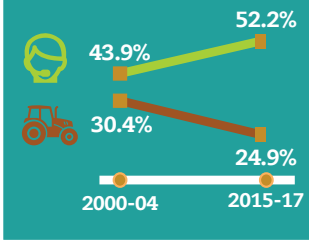
West Africa is the fastest growing region in the continent



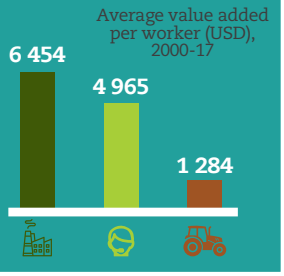
Nigeria represents 77% of the regional GDP

Structure of the economy

The share of services in GDP has been rising, compared to agriculture



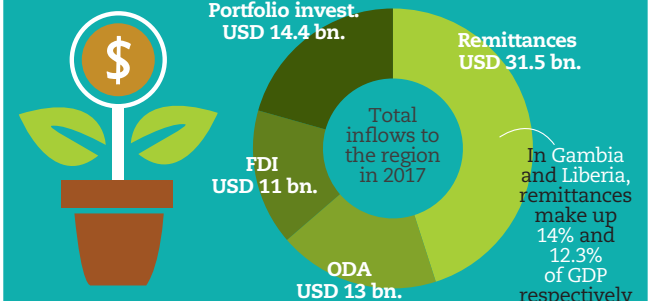
Worker productivity is highest in industry



Trade

Export diversification remains low

Financial inflows



Regional strategies for productive transformation

Five strategies for West Africa

Build on regional complementarities

Boost entrepreneurial innovation

Remove non-tariff barriers

Co-ordinate on fiscal policy

Improve access to energy and land

Potential value chains in the region

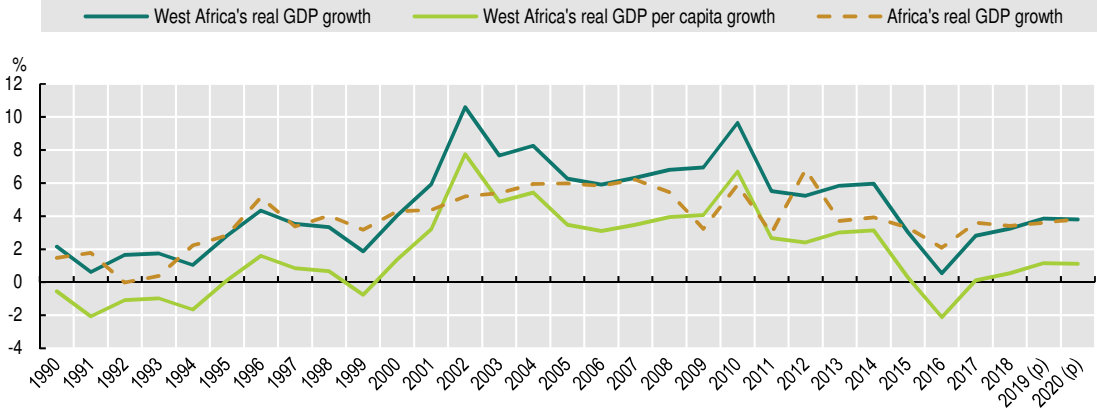
West Africa regional profile

Table 6.1. **Capabilities for productive transformation in West Africa**

		Source	2000	2014	2015	2016	2017	2018
Production technology	Employers and paid employees as % of total employment	ILO	17.0	20.1	20.3	20.4	20.6	20.8
	Labour productivity as % of United States productivity	CB	6.5	7.3	7.3	7.4	7.6	7.7
	Private gross fixed capital formation as % of gross domestic product (GDP)	IMF	10.4	14.1	13.9	13.9	12.7	12.0
	Capacity for innovation, 0-100 (best)	WEF	-	-	-	-	23.3	28.1
Regional network	Intra-region as % of imports in intermediate goods	Comtrade	18.5	12.1	8.9	9.4	10.5	-
	Intra-Africa as % of greenfield foreign direct investment inflows	fDi markets	-	2.6	1.0	4.8	0.6	0.3
	Venture capital availability, 1-7 (best)	WEF	-	2.9	3.0	3.0	2.4	2.4
Capacity to meet demands	ISO9001 certification as % of Africa's total	ISO	1.0	5.6	5.4	5.1	7.2	-
	Fully- and semi-processed goods as % of region's total goods export	Comtrade	16.8	28.1	32.5	41.6	32.2	-
	Share of Africa's total consumption goods import (%)	Comtrade	24.0	25.8	25.1	23.4	25.3	-

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 6.1. **Growth dynamics in West Africa and Africa, 1990-2020**



Note: (p) = projections.
Source: Authors' calculations based on IMF (2019), *World Economic Outlook* (database).
StatLink https://doi.org/10.1787/888933967625

Table 6.2. **Financial flows and tax revenues to West 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	2.7	9.9	11.9	18.3	15.5	13.4	11.6	9.7	12.4	11.0
		Portfolio investments	0.1	1.8	5.0	6.5	18.9	14.1	7.9	5.5	4.3	14.4
		Remittances	2.6	20.2	23.6	27.3	27.4	27.7	28.5	31.7	28.5	31.5
	Public	Official development assistance	4.6	12.3	12.2	12.1	13.6	12.2	12.4	12.4	11.5	13.0
Total foreign inflows			**10.0**	**44.2**	**52.7**	**64.3**	**75.3**	**67.4**	**60.5**	**59.2**	**56.7**	**69.9**
Tax revenues			**14.0**	**34.8**	**39.8**	**56.4**	**62.0**	**61.0**	**61.3**	**45.0**	**38.4**	**41.8**
Private savings			**21.7**	**69.2**	**95.8**	**78.7**	**88.3**	**113.7**	**109.0**	**83.8**	**93.7**	**100.1**

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 (2018a), *World Development Indicators* (database).

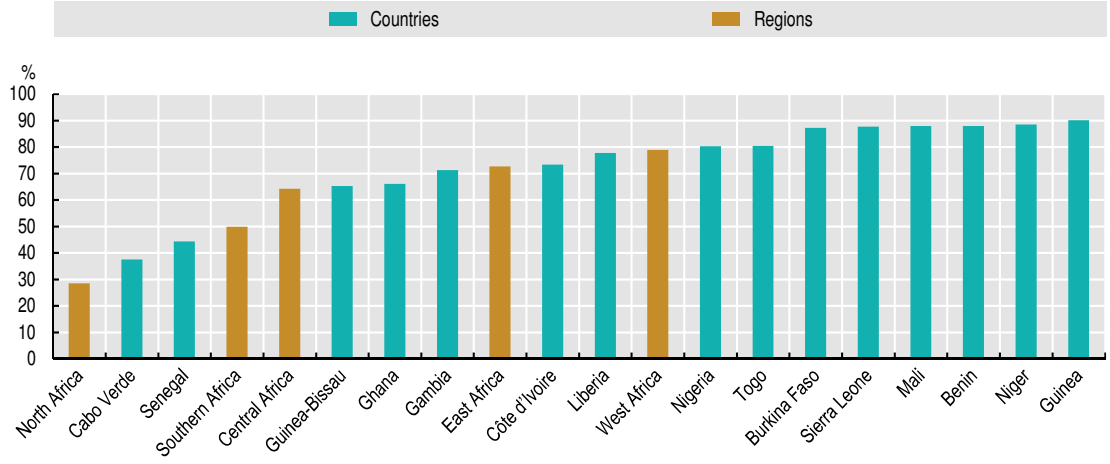
Early moves toward productive transformation remain insufficient in West Africa

The countries of West Africa have been joined in a regional economic community since 1975. The 15 countries that make up the region (Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo) accounted for 24% of Africa's GDP in 2018. The UN counted 367 million inhabitants in the region in 2017 all of whom are members of ECOWAS, a regional economic community formed in 1975 with a view to creating an economic and monetary union, boosting trade and better integrating the region in global value chains.

Of all sectors, industry contributes least to GDP and employment, despite the value added of each worker in this sector being the highest. Worker productivity is the highest in industry, with an average value add per worker of USD 6 454.4 over the 2000-17 period. Services take second place with an average of USD 4 965.4, versus USD 1 283.7 for agriculture. Overall, total factor productivity has been falling, from 1.4 over the 2000-04 period to 0.8 over 2015-17. This fall is attributable to the low level of innovation and technological development, which is reflected in the performance of productive structures. Growth of value added in the agricultural sector remains volatile. Years of growth have been followed by contraction the next, or within a timeframe of around three years. Exports are primarily focused on raw materials (75%) while in 2016 65% of imports consisted of manufactured goods.

Industry contributes on average just 20% to GDP. The agricultural sector and services account for almost 80% of GDP in the majority of countries. The share of services in GDP has been rising, from 43.9% over the 2000-04 period to 52.2% in 2015-17, compared with a fall in agriculture's share (from 30.4% to 24.9%). The decline in the manufacturing sector is attributable to the absence or failure of industrial policies as well as to the closure of several factories over the period. The informal sector bolsters the performance of the tertiary sector. Agriculture remains the primary source of jobs, overwhelmingly informal. In all, over the past decade despite high GDP growth rates, the productive structures have failed to truly transform. As such, there is a lack of decent jobs (Figure 6.2), both poverty and inequality have remained difficult to reduce, and the diversification process has remained slow.

Figure 6.2. **Percentage of workers in vulnerable employment in West African countries, most recent observation (2008-17)**



Source: Authors' calculations based on ILO (2019), *Key Indicators of the Labour Market* (database).
StatLink https://doi.org/10.1787/888933967644

The economic situation depends heavily on exports of raw materials

As the second largest regional economy on the continent after North Africa, West Africa has posted sustained growth although it remains exposed to external shocks. Between 2000 and 2014 growth was very strong although it slowed over the period. GDP per capita shrank between 2015 and 2016 due to the 2015 oil crisis. The region's economic growth fell to 0.5% in 2016, before bouncing back to 2.7% in 2017 and to 3.2% in 2018 (Figure 6.1). The various phases of growth since 2000 were marked by a rise in public spending while private investment, both national and foreign (see Table 6.A1.1 in the Annex), remains inadequate.

The region's largest economy is Nigeria (77% of total GDP and 52% of the population) and it was severely affected by the fall in the price of oil and ineffective counter-cyclical policies. Growth improved in Nigeria between 2017 and 2018 going from 0.8% to 1.9%, thanks to fewer disruptions to oil production and a recovery of the non-oil economy. The knock-on effect for growth in Benin and Niger is estimated at 0.5 and 0.33 of a percentage point (AfDB, 2018).

Broadly, the export baskets for West African countries remain poorly diversified. On average, five products comprised 75% of the total value of exports in 2017 and just 12 products account for 90%. The Herfindahl-Hirschman index, which is the only standardised measure used given the nature of the data, confirms the high concentration of exports. When diversification is highest, this takes the value of 0 (that is, *n* goods exported in equal quantities). When it tends towards 1, concentration becomes highest and a country's exports rely on a single (or very few) goods. The examination of this index shows that concentration has intensified in nine countries (Table 6.A1.2), while six others (Benin, Guinea, Liberia, Niger, Nigeria and Togo) have improved their diversification.

Industrial competitiveness remains poor

Competitiveness indicators indicate poor progress or deterioration in the majority of countries. The region's competitiveness was assessed using three indicators: the Global Innovation Index (GII), the Global Competitiveness Index (GCI) and the Index of Industrial Competitiveness. The GII measures multidimensional aspects of innovation in the economy via changes in the political, environmental and business systems, governance, education, research and development (R&D), infrastructure, information and communication technologies (ICTs), market sophistication, trade, competition, investment, business sophistication, knowledge acquisition and dissemination, and technology, amongst others. The GII has been falling throughout the region with indexes reaching around 27.11 for Senegal and 6.1 for Liberia in 2017. West African countries also feature among the 26 poorest performing countries in the world in terms of innovation in all its dimensions. The gap between the region and the rest of the world is continuing to widen.

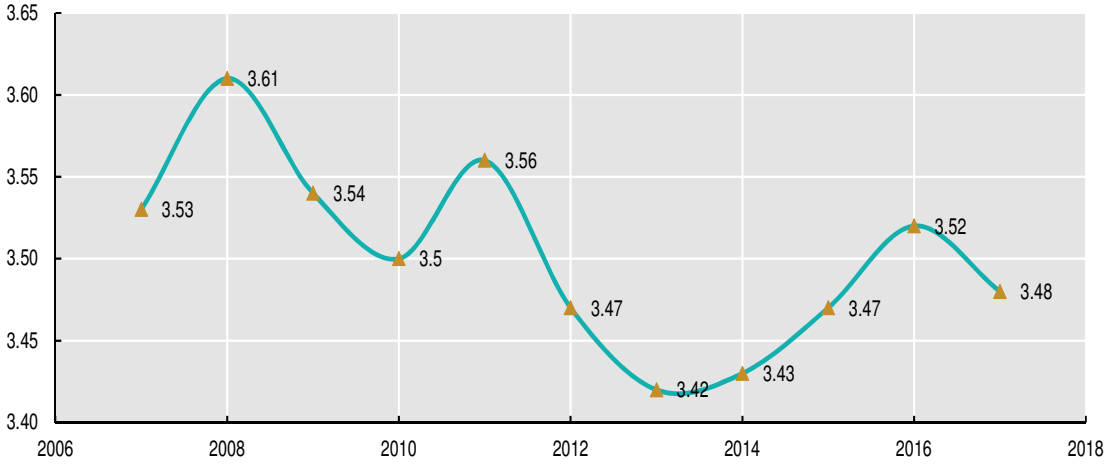
The GII per country comparison shows varied performances, with better results in Gambia and Senegal (Table 6.3). Senegal was ranked 106th in 2017 out of 126 countries having gained six points, and Gambia 117th with a similar gain of six points, thanks to good climactic conditions, an improved business environment and a rise in international prices for primary materials. Nigeria (ranked 118$^{th)}$ rose two points in 2017 despite an ongoing slump due to uncertainty in the business environment since 2012. The country is faced with enormous challenges to adapt to lower oil prices.

Table 6.3. **Global Innovation Index (GII) scores for West Africa, 2013-18**

	2013	2014	2015	2016	2017	2018	Rank in 2018 of 126 countries
Benin	25.1	24.21	-	22.20	23.04	20.61	121
Burkina Faso	27.03	28.18	28.7	21	21.86	18.96	124
Cabo Verde	26.9	27	28.6	28.6	27	-	
Côte d'Ivoire	23.42	27.02	27.2	25.8	23.96	19.96	123
Gambia	26.39	27	27.5	27.7	27.9		117
Ghana	31	30.26	28	26.7	26.8	24.52	107
Guinea	25.7	20.25	18.5	18.3	18.2	20.71	119
Guinea-Bissau	9.5	10.2	10.6	17.2	18	-	
Liberia	10	10.4	10.5	6	6.1	-	
Mali	28.84	26.18	28.4	24.8	22.48	23.32	112
Niger	24.03	24.27	21.2	20.4	21.18	20.57	122
Nigeria	26.57	27.79	23.7	23.1	21.92	22.37	118
Senegal	30.48	30.06	31	26.1	27.11	26.53	100
Togo	23.04	17.65	18.4	18.4	18.41	18.91	125
ECOWAS	**24.14**	**23.61**	**23.25**	**21.85**	**21.71**	-	

Source: Authors' calculations, based on Global Innovation Index (2018), *Global Innovation Index* (database).

Figure 6.3. **Global Competitiveness Index (GCI) scores for West Africa, 2006-17**



Source: Authors' calculations, based on WEF (2018), *Global Competitiveness Report*.
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Comparative advantages in exports are underexploited

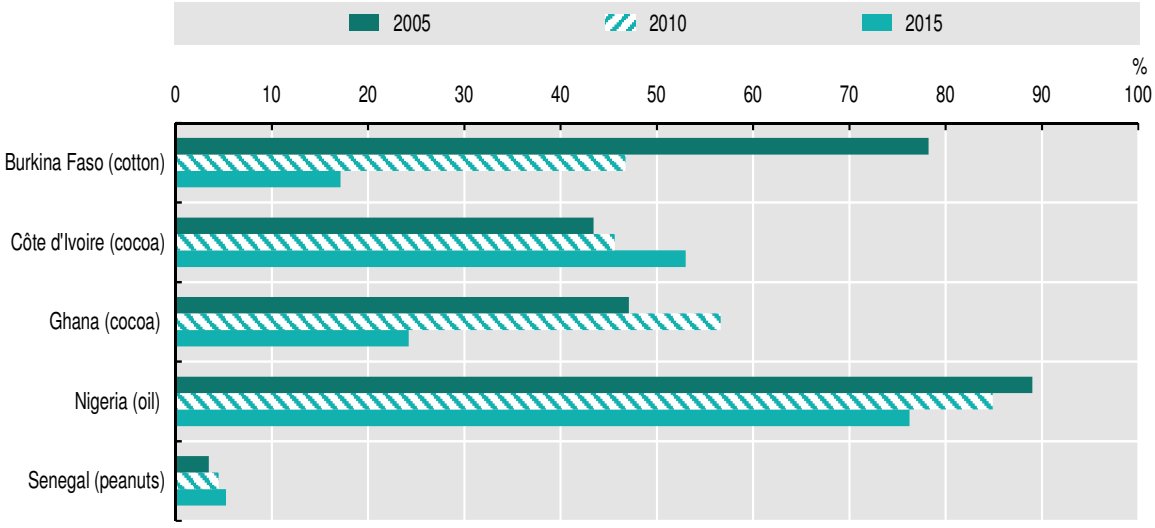
Several primary products exported with a comparative advantage (RCA) remain fairly key in world trade. Overall, ECOWAS has a RCA on products that represented 24.2% of world trade between 2008 and 2011, versus 17.4% between 2001 and 2003 (AfDB, 2013). West Africa is highly specialised in the production and export of raw materials (cocoa, uranium, cotton). The disaggregated analysis of several flagship products of the leading countries in the region (Nigeria, Côte d'Ivoire, Ghana, Senegal and Burkina Faso) is also enlightening (Figure 6.4):

- **Côte d'Ivoire** is the leading world producer of cocoa, and its share in national exports remained significant over the two periods (more than 40% throughout 2005-15). Cocoa accounts for up to 10% of GDP and 15% of public revenue (World

Bank, 2017) and its production is driven by around 600 000 family farms, supporting approximately 6 million people.

- **Burkina Faso** has a very high competitive advantage in cotton (65.49). The high share of cotton in total exports (64% over 2005-10) fell dramatically to reach 25.3% in 2011-15, due to climatic conditions.
- **Ghana** also possesses high comparative advantage in cocoa beans, which account for a high share of exports (51.9% over 2005-10, and 25.3% over 2011-15).
- **Nigeria** has a low RCA in oil, which accounted for 86.5% and 81.5% of exports over the 2005-10 and 2011-15 periods. Nigeria is the 12th leading producer of oil in the world and the first in Africa and it drives economic growth. Regulatory uncertainty, military activities and the theft of oil in the Niger Delta deter investment however, to the point that Angola is about to displace Nigeria in its position as the leading African oil producer.
- In **Senegal**, peanuts contributed to comparative advantage over the 2005-10 and 2011-15 periods, despite accounting for only a small share of total exports. However, the discovery of large oil and gas deposits could make a difference.

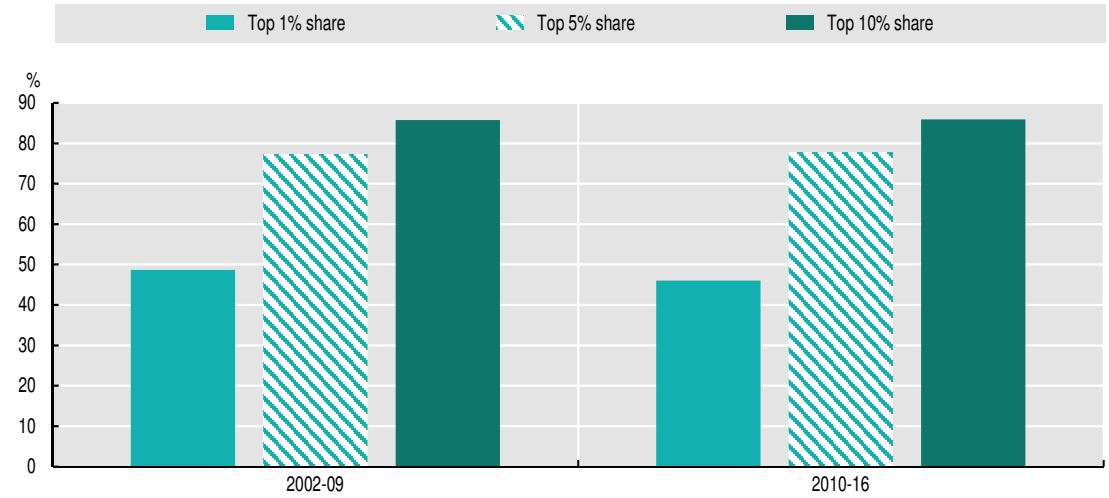
Figure 6.4. **Share of selected major export products with RCA in total exports for five ECOWAS countries**



Source: Authors' calculations based on United Nations Statistics Division (2018), *UN Comtrade* (database).
StatLink https://doi.org/10.1787/888933967682

Exports are also concentrated with a small number of trading partners. Over the 2002-09 period, just 1% of the largest partners absorbed almost 46% of exports, down to 45% in 2010-16 (Figure 6.5). In 2016, the region's leading partners were: India (16% of exports), Switzerland and Liechtenstein (7.2%), the United States (6.6%), United Arab Emirates (6.1%), Netherlands (5.1%) and France (5%). The cumulated share of exports absorbed by 5% and 10% of partners, were 75% and 84%, respectively, over the 2002-09 period, then 77% and 86% over 2010-16.

Figure 6.5. **Share of top trading partners in West Africa's total exports**

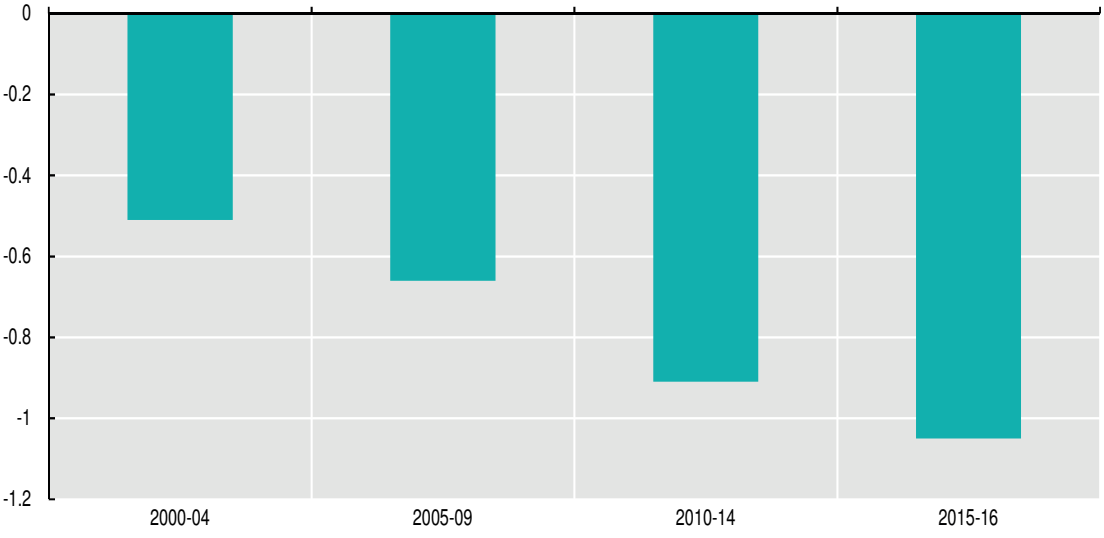


Source: Authors' calculations based on UNCTAD (2019), *UNCTADStat* (database).
StatLink https://doi.org/10.1787/888933967701

Exports contribute very little to productive growth

The economic complexity index and the export sophistication index shed light on the process of productive transformation and the move up market of these countries. The economic complexity of a country is calculated as a function of the diversity of exports and the number of countries capable of producing them. The complexity index of the region was negative over the study period in nearly all of the countries. It remains below the world average, and it has been falling broadly in the region. The index fell from -0.51 in 2000-04, to -1.05 in 2015-16 (Figure 6.6). The decline is largest in Nigeria, Guinea-Bissau, Niger, Burkina Faso, Guinea, Côte d'Ivoire, Gambia and Ghana. Only Cabo Verde reported positive indices over the period.

Figure 6.6. **Economic Complexity Index in West Africa**



Source: Authors' calculations, based on Center for International Development (2019), *The Atlas of Economic Complexity* (database).
StatLink https://doi.org/10.1787/888933967720

The sophistication of exported products is both a key agent for the structural transformation of productive capacities as well as a driver of future economic growth. This applies irrespective of the profile of the exporting country. The sophistication of product *k*, obtained via $PRODY_K$ represents an associated level of revenue/productivity (Hausmann, Hwang and Rodrik, 2007, Hausmann and Hidalgo, 2011). The continuous search for improved quality suggests that each country must be able to identify the variety of products for which it possesses comparative advantage and be able to respond to world demand. In 2013, the ten countries with the lowest level of sophistication in the world included Guinea-Bissau, Gambia and Mali.

Box 6.1. Increasing product sophistication: The case of Nigeria

The high share of oil in exports leaves little room for the specialisation of other Nigerian products (AfDB, 2013). The country's economy was better diversified in the 1960s, prior to the oil boom of the 1970s. Today it remains dominated by black gold and the Dutch disease effect on other sectors.

Oil products, which are the leading Nigerian exports to ECOWAS countries, account for more than 85% of exports since 1997, to the detriment of other products. Exports by value and revenues have risen considerably, but they remain volatile and make the economy both outward looking and vulnerable.

Nigeria has begun to benefit from increasing product sophistication. Boosted by strong demand from its population, Nigeria's domestic market offers significant opportunities for diversifying services (which accounted for 60% of GDP in 2016). This trend is supported by the filmmaking industry in Nollywood, which is the second largest source of employment after agriculture with almost one million direct and indirect jobs.

Table 6.4. **Development of the Product Sophistication Index ($PRODY_K$) in five key countries of West Africa (USD billion)**

	2005-10	2011-15
Nigeria	4 370.40	5 596.76
Ghana	1 501.39	1 101.10
Côte d'Ivoire	1 242.83	1 707.85
Burkina Faso	813.40	408.09
Senegal	108.14	91.85

Source: Authors' calculations based on UNSD (2019), *UN Comtrade* (database).

Strategies thus far have lacked overall consistency that would build on momentum for regional integration

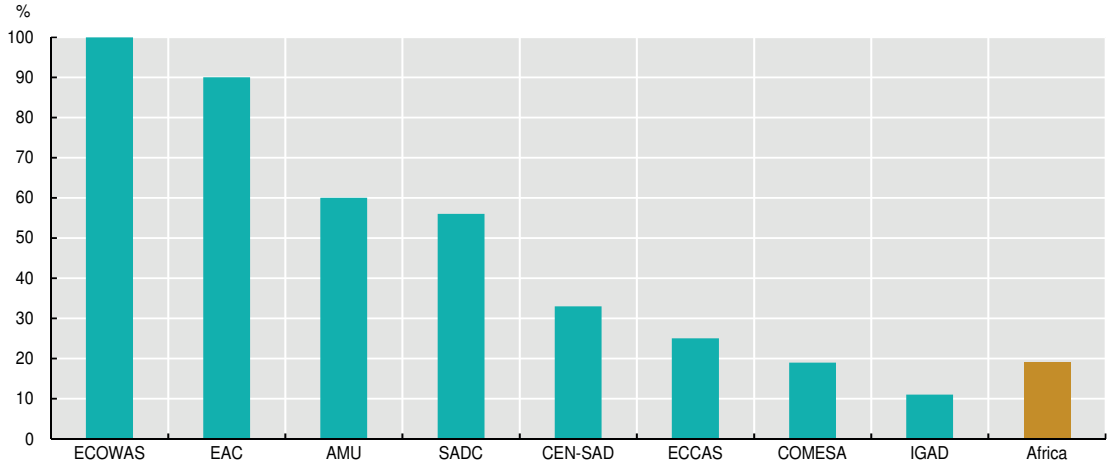
Some good initiatives have been undertaken regionally, but with disappointing results

In the 44 years since its founding, ECOWAS has achieved a great deal towards monetary and business harmonisation. A number of macroeconomic indicators that feature in the convergence criteria have performed well. Concrete measures have been initiated by ECOWAS, such as the harmonisation of monetary and business policy. For example, the West African Economic and Monetary Union (WAEMU) unites Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. While the West African

Monetary Zone (WAMZ), created in 2000 by Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone, aims to prepare for the introduction of a common currency. The creation of a customs union with a common external tariff (CET) introduced in 2015 is also considered a significant step (Box 6.2). An important step towards regional integration in West Africa is the project of setting up a single currency for the 15 ECOWAS countries by 2020, whose name "ECO" was validated in June 2019.

The region is also cited as an example in terms of removing barriers to the free circulation of people and introducing rights of residence and establishment (ENDA/CACID, 2013). Citizens of Member States can travel visa-free within the ECOWAS area (Figure 6.7).

Figure 6.7. **Share of countries in each regional economic community allowing visa-free travel for citizens of the same bloc, 2018**



Source: Authors' calculations based on UNWTO (2019), *2019 Visa Openness Report for Africa*.
StatLink https://doi.org/10.1787/888933967739

Box 6.2. **The Common External Tariff in West Africa**

The Common External Tariff (CET) was adopted in 1997 and came into force on 1 January 2000 in the WAEMU zone. This measure was conceived as a dynamic instrument for trade policy aimed at combatting trade deflection, at harmonising and simplifying taxation systems of Member States, at offering businesses both protection and a tax system tailored for their competitiveness and optimised consumer goods supply for the population. Through strong growth and regular and sustained customs income, this instrument is intended to improve the public finances of countries in the zone as well as to stimulate inter-community trade by reducing transaction costs. It is also intended to improve the Union's trade balance with the rest of the world via productivity gains. The CET was amended in 2014 and extended to the rest of the ECOWAS Member States under the framework of a customs union. This was comprised of the Customs Duty, Statistical Charge and the Community Solidarity Tax.

The CET came into force on 1 January 2015 in the 15 ECOWAS Member States. From then, customs duties were standardised and applied using a common nomenclature for 5 899 tariff lines. The products listed in the tariff and statistical nomenclature (TSN) of the CET are divided into five categories, with a rate of between 0 and 35%. The fifth tariff band is currently under consideration. Despite the adoption of this instrument for integration, tariff and non-tariff barriers to trade still exist. To deal with these barriers,

Box 6.2. **The Common External Tariff in West Africa** *(cont.)*

a draft ECOWAS Customs Code is being finalised. A study of the texts of conventions as they apply to customs duties has been carried out and a customs scheme has been prepared for ECOWAS merchandise.

In terms of results, the CET has had a mixed effect on the competitiveness of the region's economies. The share of port duties (which fall under the CET) as a percentage of total taxes has not noticeably increased since its introduction. Some individual countries have also come up against incompatibility issues in implementing the CET with regards to their obligations to the World Trade Organization (WTO).

Industrial policies in West Africa experienced three major stages

Outlining strategies for productive transformation presumes that lessons from past experience with industrial policy have been learned. The history of industrialisation began after Independence with strong state intervention, followed by a period of structural adjustment marked by privatisations and deindustrialisation, then renewed State control starting in 1995, all within a liberal framework (Table 6.5).

Industrial policy in West Africa has experienced three major stages. Following the Independence movements in the 1960s, a policy of industrialisation by import substitution prevailed against a backdrop of strong state intervention and national bias. Having inherited an economy based on export-oriented cash crops, leaders sought to modernise their countries and help them join the family of nations. Priority was given to developing large industries, that were often capital intensive, with the aim of locally producing mass market goods. Ghana, for example, undertook to produce aluminium, steel, and construction materials and to launch electrical, electronic and mechanical industries. In parallel, SME development was supported, with state-owned and local enterprises being promoted. A number of measures to protect the productive apparatus were introduced via investment codes and tax exemptions in particular.

- At first, this policy brought about a rise in manufacturing, but the industrial fabric never moved beyond the embryonic state because policies were either poorly suited or poorly implemented.
- Furthermore, the policy of import substitution was not linked to the promotion of exports, and domestic markets remained more or less narrow. The outcome was that governments promoted inefficient and globally uncompetitive industries (Bigsten and Söderbom, 2011), leading to bankruptcies of semi-public companies in Ghana, notably steel ones.

Throughout the second period, which extended from the 1980s to 1995, Structural Adjustment Programmes (SAP) set by the International Monetary Fund (IMF) and the World Bank aimed to promote economic liberalism. This resulted in state retreat from the economy and the questioning of policies aimed at promoting targeted industries. According to the international financial institutions, company inefficiencies were due to inappropriate macroeconomic choices, as well as distortions in the allocation of resources introduced by selective industrial policies. Structural adjustment, however, led to deindustrialisation, with the bankruptcy of a number of existing factories and the inability of remaining installations to confront competition, particularly from Asia.

Starting in 1995, the majority of countries in West Africa regained control in order to revive the process of industrialisation. A number of reforms of the judicial system and of laws pertaining to property were introduced. Equally, export processing zones were created and financial institutions were developed to support industry. The general

approach consisted of improving the business environment in the hopes that investment would follow (Aryeeteya and Moyo, 2012).

Measures were also introduced to reinvigorate industry. In December 1999, eight WAEMU countries adopted a Common Industrial Policy (CIP) to restructure industrial infrastructure, promote a co-ordinated industrial fabric and improve business competitiveness. In 2010, the ECOWAS countries adopted the West Africa Common Industrial Policy (WACIP), with the aim of boosting industrialisation through the processing of raw materials in situ, diversifying capacity, strengthening regional integration and promoting exports of manufactured goods (ECOWAS, 2012).

Table 6.5. **Industrial policy in West Africa**

Industrial strategy	Sectors	Measures	Results
1960-80 Import substitution	Non-durable consumer goods. Durable consumer goods and intermediate products (steel and petrochemicals). Rudimentary sectors	• Tariff barriers aimed at protecting local industry, import quotas, subsidies for local industry, export subsidies, loans for industrial restructuring, capped interest rates, targeted credit lines, flexible taxes. • Decrees promoting wholly or partially state-owned enterprises and/or national ones.	Low industrialisation
1980-94 Structural adjustment policies (SAP)	Public sector production	• Privatisation of public enterprises. • Liberalisation of trade. • Cessation of subsidies for local industry. • Investment code to promote foreign direct investment. • Large-scale investment in infrastructure.	Deindustrialisation
From 1994: Import substitution and promotion of exports	All sectors (light industry, services, diversification of local production).	• Upgrading and access to local resources. • Boosting competitiveness of industrial enterprises. • Creation of free zones. • Development of financial institutions. • Creation of an institution to support the private sector. • Reform of the judicial system. • Continuation of the privatisation programme. • Eradication of export subsidies. • Lowering of customs tariffs. • Tax relief. • Reform of customs clearance procedures. • Improvement of road movement. • WICAP in 2010.	Poor industrialisation

Source: Authors' compilation based on Otoo (2013), *Industrial Policy in West Africa*.

Despite these efforts, industrialisation of the region remains a challenge. Youth unemployment could become a destabilising factor (AUC/OECD, 2018). In addition, a number of challenges remain, including security and political stability, which undermine development efforts in a number of Member States with crises, conflict and rising defence and security budgets. West Africa is also faced with food security and climate change risks.

Five strategies to accelerate productive transformation

1. Leverage regional complementarities to strengthen comparative advantage

New avenues could be explored to lever complementarities and similarities between countries as part of regional co-operation. A number of ECOWAS countries have high complementarity indices in trade. In 2017, these included, in descending order: Côte d'Ivoire and Senegal, Senegal and Mali, Senegal and Ghana, Senegal and Togo, Senegal and Nigeria, Gambia and Niger, Côte d'Ivoire and Burkina Faso (Table 6.A1.3). Similarly, productive structures (agriculture and mining) possess strong similarities for several exported products with comparative advantage and could thus mutually improve comparative advantage by supporting regional value chains and special economic zones (SEZs). These two measures could contribute to improving business productivity and competitiveness, facilitating access to national, regional and continent-wide markets, promoting better integration of the region into international value chains, and ensuring the consistency of regional policies for productive transformation.

Promoting high-potential regional value chains (RVCs)

There is more complementarity than competition between the ECOWAS countries. For the top 13 agricultural products, West Africa had between five and nine countries among the leading 20 producers in the world in 2017 (Table 6.6). The region thus has a near monopoly on world production of shea nuts, fonio, and yams, with over 90% of world production. It also leads the production of other products such as cocoa beans, cashew nuts and cassava.

Real opportunities for RVCs could be solidified, via integrated SEZs. For example, shea butter is often exported raw rather than processed in situ, an activity that could generate employment and large financial resources. The seven leading world producers are all in West Africa: Nigeria, Mali, Burkina Faso, Ghana, Côte d'Ivoire, Benin and Togo. Directly and indirectly, shea butter is responsible for the livelihoods of 3 million women in Africa (UNDP, 2013). Market demand for cassava derivative products is also growing. One-third of world production originates in West Africa and five countries in the region are amongst the top 20 producers. Industrial processing capacities should be expanded to keep up with demand. The region's producing countries could encourage industrial processing companies to set up next to large agricultural production zones.

The promotion of RVCs requires both sound management of the agricultural sector and the adoption of technology to upgrade agricultural products. With a view to promoting value chains, Senegal introduced five employment intensive farm service centres, focused on training those farmers with a minimum of ten hectares of land, access to water, and access to storage warehouses for harvests. It also introduced facilities for commercialisation, marketing and packaging. For its part, under its 2016-20 National Development Plan (NDP), Côte d'Ivoire launched a quality certification programme for agricultural products (OECD, 2018). Partnerships with large internationals organisations, such as that of Burkina Faso for shea butter (UNDP, 2013; APEX-Burkina, 2016), could also help local players with processing and exportation.

Table 6.6. **Examples of high potential value chains in West Africa**

Agricultural products	Total production, 2017 (thousands of tonnes)	West Africa's share in world production (percentage)	Number of countries in the global Top 20
Fonio	671.4	99.9	9
Cashew nuts, unshelled	1 410.5	35.5	9
Shea nuts	548.2	99.9	7
Yams	67 309.3	92.2	7
Millet	9 128.0	32.1	7
Okra	2 722.4	28.2	7
Peanuts, unshelled	6 006.6	12.8	7
Kola nuts	228.4	84.0	5
Dried beans (cowpea)	6 177.9	83.4	5
Cocoa, beans	3302.3	63.5	5
Cassava	96 223.9	33.0	5
Natural rubber	849.6	6.0	5
Oil, palm nut	14 789.0	4.7	5

Source: Authors' calculations based on FAO (2019), *FAOstat* (database).

The integration of value chains could be improved in the mining sector. The continent is a global reservoir of minerals and one of the future playing fields for the extractive industries (Lopes, 2014; Chisanga, 2017). Globally, 80% of mining projects are focused on four important mineral resources: iron, copper, gold and nickel. Ghana, Mali and Burkina Faso are amongst the largest producers of gold in Africa. Recent discoveries of iron, gas, gold, coal and oil in Guinea, Ghana, Liberia and Senegal are an indication of the abundance of mineral resources. These could be a game-changer if policies about local processing are

based on the careful selection of nodes of activity with the highest potential for ripple effects on the rest of the economy.

Promoting SEZs that are integrated regionally

Creating SEZs could enhance potential between countries that are producers of the same goods. Prospects for boosting agriculture between Côte d'Ivoire, Burkina Faso and Mali are in sight. The Sikasso-Korhogo-Bobo-Dioulasso (SKBO) project, signed in January 2017, was conceived to co-ordinate and strengthen co-operation between the three countries. It came into effect in May 2018 and aims to promote the creation and strengthening of public and private industrial projects via incentives targeting the private sector (Baba, 2018). This type of partnership should be strengthened, with genuine political will of the countries.

A new SEZ based on a chocolate industry is viable between Côte d'Ivoire and Ghana, as these two countries account for two-thirds of world production. This would entail initiating a good level of collaboration in order to develop technology to process raw materials, including cocoa, coffee and cashew nuts. The connections between the various countries via proper infrastructure and the development of the digital economy would be additional advantages. These public investments in infrastructure could help lift barriers for companies.

2. Boost entrepreneurial innovation in sub-sectors with strong positive externalities

Policies should aim to promote the development of the regional financial sector and access to payment channels. Access to credit must be improved, particularly for SMEs, while safeguarding that interest rates and guarantee requirements do not deter investments in productive sectors.

Harness the potential of the digital economy

The share of high to medium technology exports as a proportion of total exports (by value) in the countries of West Africa has been declining, attesting to a loss of competitiveness in this sector. The largest drops have been in Gambia, Cabo Verde and specifically, Nigeria, where the ratio went from 0.78% in 2001 to 0.19% in 2014, or a fall of almost 76%. Throughout the region, the average share of exports (high and medium technology in total exports by value) fell from 0.26% to 0.18% between 2001 and 2014, explained by low complexity of products and a loss of competitiveness in the sector.

The new digital age is promising for the region, both in terms of the emergence of start-ups and the performance of the private sector, as well as for strengthening trade relations. West Africa has definitely embarked on digital transformation with the Jumia e-commerce platform, launched in Nigeria in 2012, now being one of the most dynamic start-ups in Africa (see Chapter 1). However, productive transformation policies should be situated in a broader context of development policy that focuses on strengthening capital and knowledge accumulation. The challenges remain huge, particularly in terms of investments in fibre optic cable and efforts to facilitate access to Internet for the majority of the population.

Develop financing mechanisms for entrepreneurs and SMEs

The diaspora's financial contribution to the economy is large. Migrant transfers to West Africa increased from USD 27.3 billion to USD 31.5 billion between 2011 and 2017, to reach more than USD 32 billion in 2018 (World Bank/Knomad, 2019). Having risen since 2000, they represented 1.7% of West African GDP between 2000 and 2004, before rising to 4.3% during 2010-14 and 5.6% in 2017. Among the countries that rely on transfers most

heavily in terms of a proportion of GDP are: Gambia (14%), Liberia (12.3%), Cabo Verde (11.9%), Senegal (11.4%), Togo (8.9%) and Ghana (6%). In volume, the largest recipient in West Africa is Nigeria (USD 24.3 billion in 2018, or 6.1% of GDP).

Whilst the region's commercial banks suffer from overliquidity, SME/SMIs have trouble accessing adequate financing. Indeed, the ECOWAS Monetary Co-operation Programme (MCP) which has been in place since 1987 struggles to fulfil its objectives. The zone's banks do not fully play their part in financing the economy, partly because of the size of the informal sector and the non-bancarisation of many. The banks are more like deposit institutions rather than focused on the financing needs of large organisations and the state. The structure of deposits strongly restricts the capacity of banks to create long-term assets, and thus finance investment (Table 6.7). Medium and long-term loans are rising (42% of loans in 2015), but they remain insufficient to meet market needs. Further, banks are increasingly placing a greater share of their liquidity in public bonds issued on the regional market.

Table 6.7. **Origin of resources deposited in the WAEMU banking system, 2015**

Type of resource	Amount (EUR billions)	Proportion (percentage)
All resources collected by the WAEMU banking system	40	100
Deposits	34	85
Of which short-term deposits (less than 2 years)	32	80
Of which long-term deposits (more than 2 years)	2	5
Other	6	15

Source: WAEMU and Central Bank of West African States (BCEAO).

Adequate funding of SME/SMIs must take into account the importance of the informal sector and could draw on harmonised registers of guarantee. In Benin, 98% of active companies have less than USD 3 400 of capital. These companies account for no less than 60% to 70% of GDP and employ 90% of the active population. In Côte d'Ivoire, the Phoenix programme aims to introduce a guarantee fund for SME financing. Its implementation has been delayed and it remains uncertain given instability in ministerial portfolios in managing this project (OECD, 2018). Since 2012, Senegal has introduced a triad of measures to facilitate access to credit, notably targeting SMEs (OECD, 2017). These include a Sovereign Wealth Fund (FONSIS), the *Banque nationale de développement économique* (national development bank, BNDE) and a priority investment guarantee fund (FONGIP).

Going further, the introduction of a unified registry of guarantees could increase companies' access to credit. This system reduces the cost of managing loans and enables financial institutions to extend credit to small entrepreneurs (MFW4A, 2017). The guarantee registry system (CRS) established in Ghana in 2010 under the 2008 Law on Borrowers and Lenders is the first of its kind in sub-Saharan Africa (Oppong-Adusah, 2012). With 63% of banks and financial institutions using the registry, it has facilitated better access to financial services and loans for SMEs. By December 2002, around 9 000 SMEs and 30 000 micro-enterprises had obtained more than USD 6 billion in loans raised against personal property listed in the registry. By the end of 2016, the central banks of Liberia and Nigeria had also already adopted this measure (AfDB/OECD/UNDP, 2017).

Access to training

At the human capital level, misalignment between training and job market needs does not promote innovation. Despite substantial investment in training, sub-Saharan African still suffers from a skills deficit. Only 1% of adults have completed tertiary education, versus 3.9% on the global average (Barro and Lee, 2010). West Africa lags behind Africa and the rest of the world, particularly in terms of the quality of teaching in mathematics

and science, the availability of research and training services, as well as the level of employee training (Table 6.8).

Table 6.8. **Global Competitiveness Index (GCI) scores for higher education and training in West Africa and other global regions (scale of 1 to 7), 2010-11**

Region	Education system	Science and mathematics teaching	Availability of research and training services	Level of employee training
West Africa	3.7	3.5	3.9	3.7
Africa	3.5	3.5	3.6	3.8
East Asia	4.6	4.7	4.5	4.6
China	4.0	4.7	4.4	4.1
Benin	4.2	4.2	3.9	3.5
Côte d'Ivoire	3.1	3.6	4.2	4.3
Ghana	3.7	3.9	3.5	3.8
Mali	2.7	2.4	3.8	3.0
Niger	3.8	2.9	3.7	3.9
Senegal	3.6	3.9	4.5	3.3

Source: AfDB (2011b), *African Development Report*.

The low enrolment rates in sciences and technology (22% versus 38.8% in East Asia) have resulted in a serious skills gap on the job market. The number of technicians per 1 000 workers was just 0.63 in sub-Saharan Africa in 2007, versus 42.81 in China and 0.99 for researchers (versus 4.76 in China) (UNESCO Institute of Statistics, 2010). This shortage undermines private sector development and leaves the economy dependent on labour-intensive unqualified activities (agriculture and non-agriculture informal sector). Even in the agricultural sector, lack of qualifications hampers development, modernisation and the improvement of productivity, despite the strong export potential for products with comparative advantage. This situation both suppresses demand for human capital and perpetuates a low accumulation of human capital. Graduate profiles are also not matched to demand, hence the high unemployment rate for graduates, too many of whom have studied humanities (AFD/CREMIDE, 2019). As a result, it is difficult to attract technology-intensive foreign direct investment (FDI). Technology transfers suffer while the jobs that are created remain largely informal (93.4% of workers in Côte d'Ivoire).

From these findings, two recommendations arise. To promote productive transformation, West Africa must rectify the mismatch between skills and jobs. To align skills to market needs, it is necessary to strengthen the bridge between general education and vocational training, with vocational secondary schools. It is also necessary to support retraining and apprenticeship opportunities for unemployed youth and to develop public-private partnerships (PPP) to recognise skills obtained in the informal sector.

Strong measures are also necessary to lift the quality of teaching at all levels. In many West African countries, governments financially support private schools, particularly in higher education, without having a real quality control mechanism nor performance requirement. It has become imperative to encourage good teachers and to promote a culture of skills assessment. This could be achieved by indexing teachers' salary increases to performance, and by strengthening their qualifications via continuous education.

3. Remove non-tariff barriers to accessing national, regional and continental markets

Productive transformation in ECOWAS countries will be achieved via greater access to national and continental markets. The limited intra-zone trade despite the customs union is explained by the existence of rules of origin and non-tariff barriers related to

poorly developed and maintained road and rail infrastructure. Other non-tariff barriers are due to poor competitiveness of the transportation network and logistics services.

While the region has made notable progress in terms of free circulation of people, administrative barriers to the free circulation of goods in West Africa remain too high. On the main highway linking the region, on a 100 km stretch four checkpoints exist and these are often sites of petty corruption (Table 6.9). This number appears not to have been influenced by the WAEMU customs union, as the same number of controls exist on WAEMU roads as on those linking other ECOWAS countries.

Table 6.9. **Administrative checkpoints on West African trunk roads**

Route	Distance	Number of checkpoints per 100 km
Abidjan-Ouagadougou	1 122 km	3
Lomé-Ouagadougou	989 km	4
Cotonou-Niamey	1 036 km	3
Niamey-Ouagadougou	529 km	4
Accra-Ouagadougou	972 km	2
Lagos-Abidjan	992 km	7

Source: Akanni-Honvo (2003), *L'UEMOA et la Cedeao: Intégration à géométrie variable ou fusion* (p. 247).

SMEs are most affected by these barriers to entry on regional markets, with the impact being exacerbated by ignorance both about existing legislation and the progress of formal integration. Poor inter-regional trade is partly explained by the low competitiveness of production facilities as well as numerous barriers which include: quality and compliance rules, rules of origin, commercial information, implementation of existing trade agreements and customs procedures.

Strengthen regional co-operation by standardising rules of origin

General rules established by the World Customs Organization (WCO) and applied by the WTO stipulate that developing countries should benefit from favourable tariffs in the majority of countries. Tariffs accorded to them state that export products must only contain 40% of local content. Generally, free trade agreements include preferential rules of origin for goods produced with a certain percentage of materials originating from the countries that have signed to the agreement. An exporter of goods produced with non-originating materials must thus pay customs tariffs. In addition, producers can benefit from more preferential tariffs if the raw materials are 'substantially transformed' to create a new product.

However, in North-South agreements, the rationale for rules of origin differs. In effect, they generally reflect the interests of the North, where tariffs are lower than in Southern countries. This is the case for the European Union (EU) and the countries of the African Caribbean and Pacific (ACP) group of states. In North-South agreements, rules of origin are more likely to reflect the interest of Northern partners to avoid unwittingly extending the benefit of preferential treatment to non-eligible producers or good that have only been lightly transformed in the zone. They can also reflect the desire to control the process of preferential liberalisation so as to reduce adjustment costs for Northern industrial interests.

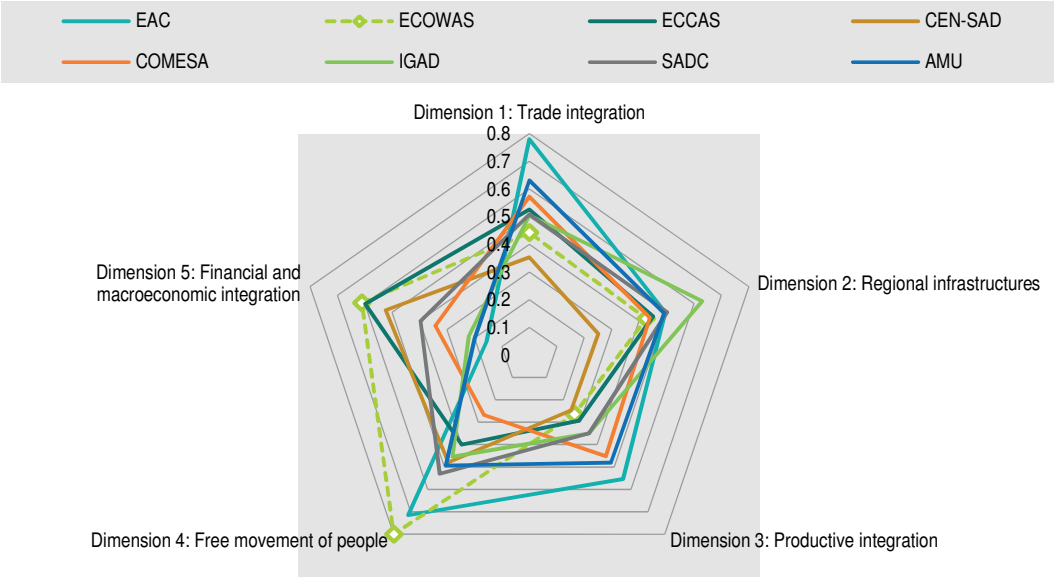
Rules of origins are proving to be too restrictive and they create costs for local companies. They limit the application of preferences to producers that are truly eligible. In the absence of a standardised rule of origin, the involuntary extension of preferential treatment to producers that only lightly process (or just transfer goods) in eligible countries would only serve to weaken preferences granted to truly eligible producers. In a free trade agreement, member countries retain the right to fix external tariffs. In the absence of rules of origin, this freedom could create arbitrage opportunities to transit imports for the whole zone via countries with the lowest external tariffs. This "diversion

of traffic" deprives other member countries of customs revenue and risks setting tariffs on a downward trajectory, the logical end of which can only be their total elimination. While this might be an optimal result for the global good, it may not necessarily be the wishes of the member governments.

Develop transportation networks and competitive logistics services

It is necessary to improve the transportation network in order to strengthen complementarity. The Africa Regional Integration Index (AUC/AfDB/ECA, 2016) points to inadequate productive integration of Member Countries and weak infrastructure that affect West Africa's overall score in the index. ECOWAS scores (0.265 for productive integration and 0.426 for infrastructure) are below average for the eight regional economic areas in Africa (Figure 6.8).

Figure 6.8. **Average scores of African RECs in five dimensions of regional integration**



Source: Authors' illustration based on AUC/AfDB/ECA (2016), *Africa Regional Integration Index*.
StatLink https://doi.org/10.1787/888933967758

The countries of the region have much to gain from accelerating the development of both regional infrastructure and of interlinkages between Member States. This could take place notably by mobilising financing for priority projects under the Community Development Programme, effective implementation of the Regional Programme for the Facilitation of Road Transport and Transit, as well as effective liberalisation of air transport in the region.

Initiatives such as the Abidjan-Lagos corridor, which should facilitate trade between Côte d'Ivoire, Ghana, Togo, Benin and Niger, could be multiplied. These could lead to a reduction in direct and indirect business costs and increase product competitiveness. Only the Sèmè-Kraké joint border post project designed to ease circulation between Benin and Nigeria had been completed by October 2018 with financial support from the EU. Other projects in the pipeline for the Community Development Programme include: the Lagos-Dakar highway, the Cotonou-Niamey-Ouagadougou-Doris-Abidjan rail loop,

the Ouagadougou-Bamako railway, the West African Academy of Science and the Ecoati observation satellite, amongst others.

In addition, port infrastructure in West Africa is less competitive in terms of charges and other transaction costs. Irrespective of the measure used, the ports fail to meet global best practices. Although the region has a dozen large maritime ports, none of them counts amongst the largest 70 ports in the world. In contrast, they are amongst the most expensive and slowest in terms of handling – between 11 and 30 days per container, or an average of two weeks, while the standard requires this delay to be seven days or under (ECA, 2017). These delays result in high supplementary costs.

4. Fiscal policy co-ordination should be a particular focus

It is imperative that tax policies be co-ordinated in order to boost exports, competitiveness and the motivation of suppliers to shift production. Economic policy should be co-ordinated and focused on developing certain sectors of the economy in order to motivate investors and suppliers to enter them. Effective results depend on the degree to which economic policy is aligned to the promotion of productive transformation. For example, exchange rate policies also have an impact on incentivising investors to commit for the long term.

In addition, countries stand to gain from co-operation by avoiding ending up competing on tax rebates. FDI went from USD 18.3 billion to USD 9.2 billion between 2011 and 2015, before recovering to USD 11.2 billion in 2016. Between 2013 and 2017, West Africa attracted 19% of new FDI projects in Africa (fDi Markets, 2018). These new projects were primarily drawn to the potential of the regional market, and they target diverse sectors.

5. Better access to energy and land is imperative for productive transformation

Access to energy

ECOWAS countries must imperatively strengthen regional co-operation to improve access to reliable electricity, which will ensure lower and more stable costs of production for firms in the region. It is to this end that the West African Power Pool was created in 1999, extending to 14 countries and bringing together 30 public and private companies. However, West Africa still represents 30% of the population of sub-Saharan Africa without electricity. The average rate of electrification is 52% with power outages reaching 80 hours per month (World Bank, 2018b). Ghana increased access from 45% to 84% between 2000 and 2016, but reliable supply remains problematic. Senegal has also been proactive and has doubled its access from 30% to 64% of the population between 2000 and 2016. Nigeria has electrification rates of around 61% (113 million people out of 185 million inhabitants). However, around 80% of Nigerians have a second energy source, in the form of diesel generators. At USD 0.25 per kilowatt hour, electricity in the region is also very expensive and it costs twice the world average (World Bank, 2018b).

Access to land

For agricultural economies such as in West Africa, access to land is fundamental for productive transformation. In places like Ghana, access to land has also proven essential for providing the stability necessary for investment. Since the 1990s access to land has been on a large scale in Ghana (Frankema and Van Waijenburg, 2018). It is also a crucial pillar for the consolidation of peace and security. Land registry systems that would facilitate data on land revenue and certify changes in ownership have yet to be introduced and customary laws still predominate. This measure could benefit from being more prominent in the National Agricultural Investment Programmes, the Regional Agricultural Investment Programme and the regional offensive for food production and the fight against hunger. Just 10% of rural land is registered in the region (AUC/OECD, 2018).

Annex 6.A1. West Africa economic indicators

Table 6.A1.1. **Macroeconomic indicators for West Africa**

	2000-04	2005-09	2010-14	2015-18	2019-22
Real GDP growth	7.3	6.5	6.4	4.9	5.6
Population (growth rate)	2.7	2.7	2.8	5.5	4.0
GDP per capita (growth rate)	4.5	3.6	3.6	-0.6	1.6
Public expenditure (percentage of GDP)	18.3	19.4	22.0	23.6	23.6
Public investment (percentage of GDP growth) (*)	6.9	8.4	13.2	11.8	-
Private investment (percentage of GDP growth) (*)	4.3	3.5	4.1	3.8	-
Exports (percentage of GDP)	25.8	26.0	22.8	17.7	18.7
Imports (percentage of GDP)	22.3	22.9	23.5	21.4	22.4
FDI as a percentage of GDP (*)	1.8	2.7	2.4	1.9	-
Migrant transfers (percentage of GDP)	1.7	5.6	4.3	5.3	-

Note: (*) The most recent data available is from 2017.
Source: IMF (2019), *World Economic Outlook* (database), and World Bank (2018a), *World Development Indicators* (database).

Table 6.A1.2. **Number of products, share of exports and the Herfindahl-Hirschman index in West Africa**

	Number of products and share in exports in 2007			Number of products and share in exports in 2017			Herfindahl-Hirschman index, by period			
	50% of flows	75% of flows	90% of flows	50% of flows	75% of flows	90% of flows	2000-04	2005-09	2010-14	2015-16
Benin	3 (51)	8 (77.5)	16 (90.6)	3 (59.4)	7 (78)	17 (90.2)	0.55	0.32	0.33	0.31
Burkina Faso	1 (72.1)	2 (77.3)	10 (90)	1 (62.2)	2 (78.6)	6 (90.7)	0.60	0.62	0.59	0.70
Cabo Verde	3 (52.1)	9 (76.6)	24 (90.5)	2 (58.1)	6 (76.9)	13 (90.2)	0.29	0.36	0.33	0.32
Côte d'Ivoire	3 (58.7)	8 (76.4)	21 (90.6)	2 (53.1)	8 (76.1)	22 (90)	0.37	0.33	0.34	0.40
Gambia	4 (51.7)	9 (75.5)	23 (90.1)	2 (61.7)	8 (76)	26 (90.1)	0.27	0.30	0.30	0.35
Ghana	2 (59.9)	6 (75.3)	20 (90.3)	2 (62.7)	3 (80.6)	10 (90.5)	0.40	0.43	0.42	0.43
Guinea	1 (50.3)	2 (77.2)	8 (90.3)	2 (65.1)	4 (77.6)	8 (90.4)	0.55	0.59	0.45	0.45
Guinea-Bissau	1 (87.7)	1 (87.7)	2 (92.2)	1 (88.4)	1 (88.4)	2 (92.6)	0.70	0.87	0.87	0.88
Liberia	1 (63.9)	2 (84.2)	3 (94.6)	2 (63.4)	4 (81.4)	7 (92.2)	0.68	0.67	0.40	0.39
Mali	1 (57.7)	2 (83.9)	5 (90.6)	1 (61.9)	2 (78.3)	6 (90.3)	0.59	0.61	0.68	0.76
Niger	2 (69.9)	3 (77.1)	9 (90.3)	3 (60.5)	5 (77.4)	11 (90.5)	0.38	0.41	0.39	0.34
Nigeria	1 (86.6)	1 (86.6)	2 (93.2)	1 (77.1)	1 (77.1)	4 (90.7)	0.88	0.86	0.79	0.73
Senegal	5 (50.5)	19 (75)	48 (90)	5 (54.4)	12 (75.6)	33 (90.2)	0.23	0.26	0.25	0.22
Sierra Leone	4 (50.5)	17 (75.7)	47 (90.1)	3 (56.4)	5 (77.2)	15 (90.6)	0.43	0.31	0.38	0.60
Togo	5 (56.4)	11 (75.5)	28 (90.4)	5 (53.3)	12 (75.8)	25 (90.6)	0.25	0.23	0.24	0.21
ECOWAS							**0.48**	**0.48**	**0.45**	**0.47**

Source: Authors' calculations based on UNCTAD (2019), *UNCTADstat* (database).

Table 6.A1.3. **Intra-regional complementarity index in West Africa, 2003**

	Exporting countries											
Importing country	**Benin**	**Burkina Faso**	**Côte d'Ivoire**	**Cabo Verde**	**Ghana**	**Guinea**	**Gambia**	**Mali**	**Niger**	**Nigeria**	**Senegal**	**Togo**	**Average**
Benin		20.3	48.6	10.30	25.2	19.2	46.1	9.3	18.7	16.7	55.9	40.0	**26.4**
Burkina Faso	19.9		52.3	8.7	22.7	24.7	36.3	10.1	11.6	22.4	60.2	41.1	**27.0**
Côte d'Ivoire	26.4	20.3		9.9	n.a.	27.1	24.6	16.9	14.0	26.5	65.3	34.0	**27.0**
Cabo Verde	24.4	23.8	47.0		30.4	13.2	50.2	14.1	15.0	15.3	47.0	46.0	**28.2**
Ghana	20.5	20.2	n.a.	12.7		n.a.	39.7	11.0	13.0	20.6	61.3	42.0	**26.0**
Guinea	26.7	20.8	50.2	11.9	n.a.		30.6	12.2	17.7	27.8	43.5	34.9	**26.0**
Gambia	23.7	22.8	39.4	10.2	24.8	15.1		8.4	17.4	12.7	49.4	41.6	**22.8**
Mali	19.4	19.9	45.8	9.9	24.1	24.0	36.3		11.3	19.7	61.7	40.0	**26.9**
Niger	23.8	22.8	47.7	9.0	24.1	14.2	51.9	8.5		16.2	55.3	35.3	**26.2**
Nigeria	21.2	20.6	40.5	12.9	25.0	27.2	36.9	13.7	12.3		54.6	43.7	**26.9**
Senegal	25.1	24.3	55.5	13.6	30.3	17.6	45.9	14.9	15.9	20.8		40.5	**27.1**
Togo	24.3	25.8	42.9	15.6	29.2	23.0	41.1	18.0	18.5	20.9	59.7		**28.0**
Average	**22.7**	**21.7**	**46.0**	**11.4**	**26.0**	**21.0**	**39.8**	**12.0**	**14.6**	**18.0**	**55.2**	**39.5**	

Source: Authors' calculations based on World Bank (2018a), *World Development Indicators* (database).

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Statistical annex

Data used in this edition of *Africa's Development Dynamics* has been compiled and presented in tables available for free download on the Development Centre's website (https://oe.cd/afdd2019) along with some additional social and economic indicators that add context to the report's analysis. Figures are presented on a national basis for African countries for which data is available.

All indicators that were chosen for the annex provide national data figures for all or nearly all African countries, as well as most countries in the rest of the world. These choices were made in order to allow for both comparisons between African countries as well as comparisons with groups of similar countries outside of Africa that could serve as benchmarks. These data will serve to give context to the analyses presented in the report and allow readers to investigate the underlying data in more depth, and as time passes, for readers to investigate data that is more current than what is found in the report.

Data was obtained from various sources, including harmonised data sets of annual national data from reputable international institutions, as well as some indicators that were calculated by researchers working on the publication. The statistical annex will be updated regularly in order to incorporate the addition of more recent figures, updates and corrections in external data sources, and as changes are made to the various classifications of countries used in the data. Therefore some differences between figures in the Statistical Annex and figures reported in the publication may reflect changes to the data tables made after the publication of the written report.

The following tables are available for download in Excel format:

Table 1	Indicators of growth, employment and inequality	**Table 12**	Export diversification
Table 2	Annual real GDP growth rates, 2000-23	**Table 13**	Global and regional trade
Table 3	Annual population growth rates, 2000-23	**Table 14**	External financial inflows
Table 4	Annual real GDP growth rates per capita, 2000-23	**Table 15**	Demographic estimates and projections
Table 5	Sectoral breakdown of the economy	**Table 16**	Subjective well-being
Table 6	Growth decomposition by expenditure	**Table 17**	Basic health indicators
Table 7	Public finances	**Table 18**	Basic education indicators
Table 8	Indicators of inequality and poverty	**Table 19**	Infrastructure
Table 9	Gender indicators	**Table 20**	Ecological sustainability
Table 10	Labour force characteristics	**Table 21**	Entrepreneurship and business environment
Table 11	Trade by manufacturing intensity		

The figures presented in these statistical tables, with the exception of Tables 2-4 represent the most recent years for which data is available. However, a complete dataset containing all these indicators for the years 2000-present is available on the same website. There, data can also be visualised online using the interactive Compare Your Country data analysis tool. Otherwise, the same indicators can be found online through the OECD's online statistical portal at https://stats.oecd.org/ and clicking on "Development", followed by "Africa's Development Dynamics" on the menu.

In addition to country-level data, statistics are used to calculate aggregates for the following groups:

- The five African Union regions (as defined by the Abuja Treaty)
- Africa, Asia, Latin America and Caribbean, and the World
- **Resource-rich countries**
  Countries that obtain a significant fraction of their GDP from underground natural-resource extraction are referred to as "resource-rich". These resource endowments can have major implications for economic, political, and social development. In this report, countries are identified as resource-rich based on how often over the previous few years, the value of hydrocarbons, coal and minerals extracted was above a certain percentage of GDP.
- **Income level**
  The World Bank divides the countries of the world into four categories based on GNI per capita, using their Atlas Method:[1] low-income countries, lower middle-income countries, upper middle-income countries, and high-income countries.
- **Geographic access**
  The report provides a breakdown between countries that are landlocked, countries that have a portion of coastline, and island nations. Gaining access to world trade can be complicated by a country's access to the ocean or lack thereof, while island nations have been shown to have different development patterns than other coastal nations. In addition to this three-way breakdown of countries, this report provides data on countries deemed "Landlocked Developing Countries (LLDC)" and "Small Island Developing States (SIDS)" by the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS).[2]
- **Least Developed Countries**[3]
  In addition to defining countries as LLDC and SIDS, the UN-OHRLLS also classifies some countries as "Least Developed Countries (LDC)". This categorisation of countries was officially established in 1971, by the UN General Assembly, and represents countries that face low levels of socio-economic development. Countries are designated as LDC countries based on income criteria, the health and education of their populations, and their economic vulnerability.
- **Fragile states**[4]
  The OECD studies fragility as a multi-dimensional concept of risks that could pose a critical challenge to the ability of countries to achieve their development aspirations, in particular the goals outlined by the UN's 2030 Agenda for Sustainable Development. Based on the results of this research, presented in the OECD *States of Fragility* report, countries are categorised as being "fragile" or "extremely fragile".
- **Regional Economic Communities and other intergovernmental organisations**
  Partnerships of countries formed for the purposes of regional integration or co-operation that have economic or political significance and that are particularly relevant to an analysis of African economic performance are included here. This includes the 8 Regional Economic Communities (RECs) recognised by the African Union, as well as other regional and international organisations, such the Association of Southeast Asian Nations (ASEAN), Mercado Común del Sur (MERCOSUR), the European Union (EU) and the OECD that serve as benchmarks.

Notes

1. Please see http://datahelpdesk.worldbank.org/knowledgebase/articles/378832-what-is-theworld-bank-atlas-method.
2. Please see http://unohrlls.org.
3. Please see unohrlls.org/about-ldcs/criteria-for-ldcs.
4. Please see http://www.oecd.org/dac/conflict-fragility-resilience/listofstateoffragilityreports.htm.

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