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

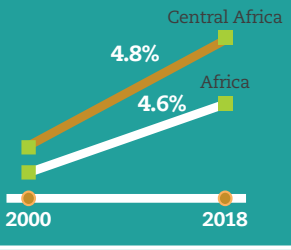
Central Africa is highly dependent on raw materials which represented 85% of its total exports in 2017, compared with an average of 51% for Africa. Oil alone accounts for almost half of all foreign receipts. In addition, the region has a much higher level of **export concentration** than the rest of 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.

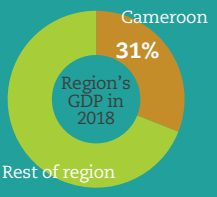
# Public policies for productive transformation in Central Africa

## Growth

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

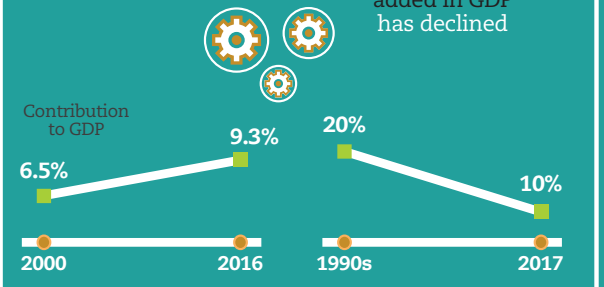



The largest economy in purchasing power parity value is Cameroon




## Structure of the economy

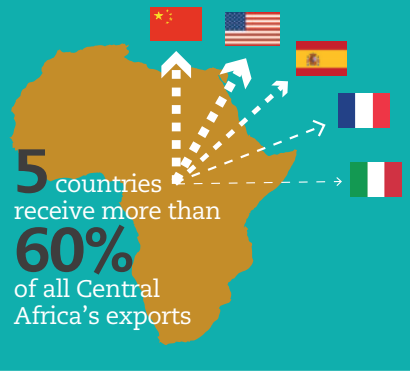
The manufacturing sector remains weak




The average share of manufacturing value added in GDP has declined

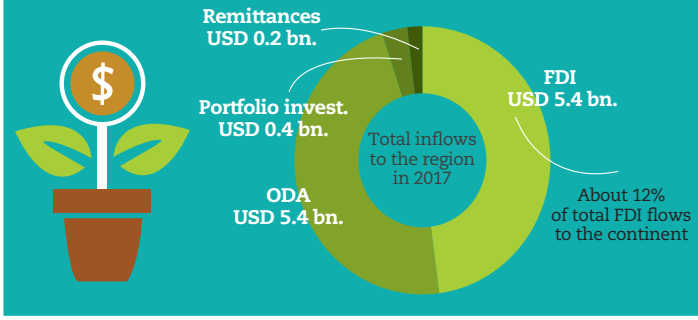



## Trade



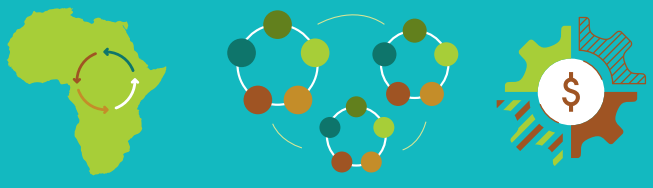

## Financial inflows

The region received the least FDI in Africa




## Regional strategies for productive transformation

### Three main recommended actions

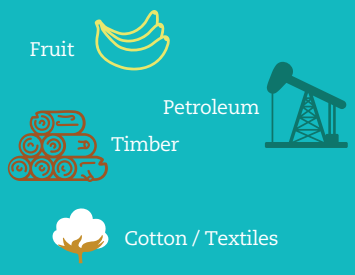


Strengthening regional integration

Promoting business clusters and special economic zones

Facilitating access to financing

### Potential value chains in the region



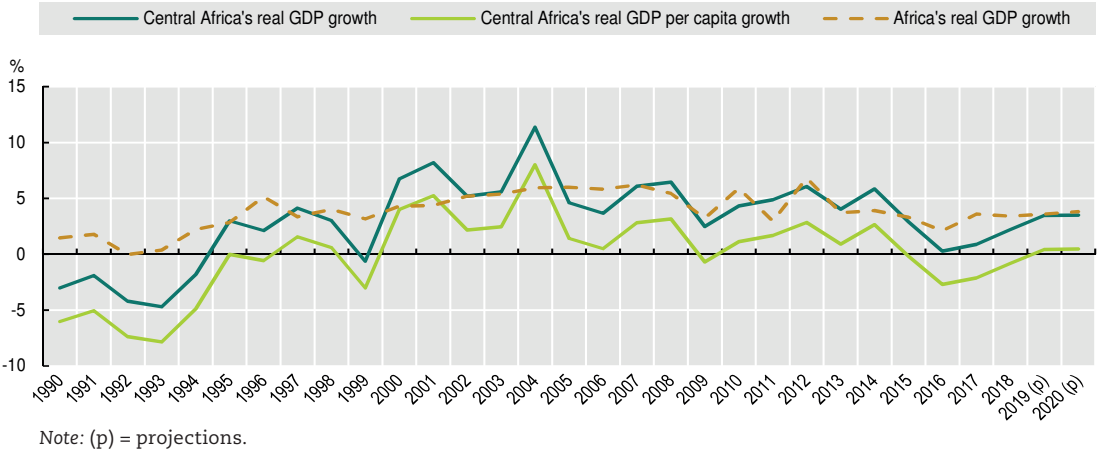
## Central Africa regional profile

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).
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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

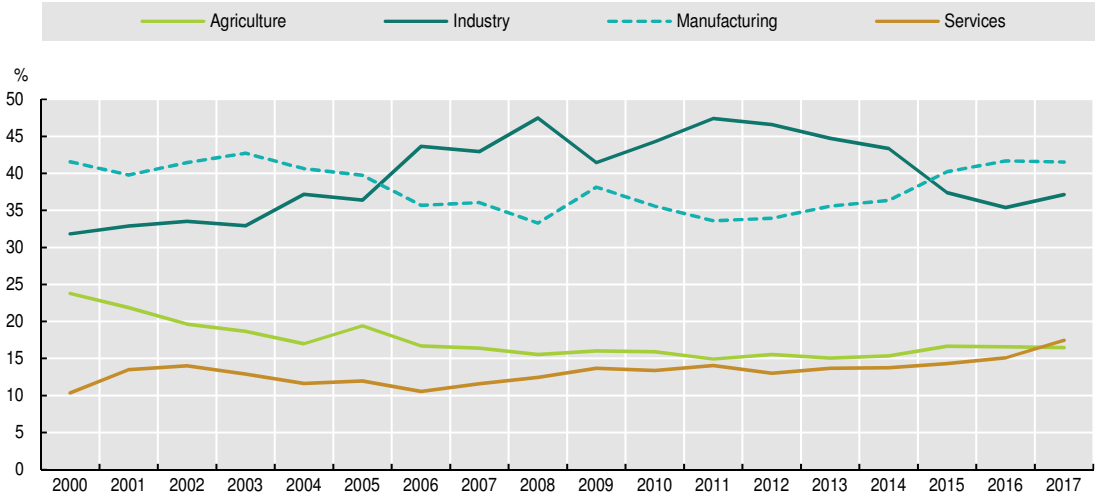
that ranks in the high human development category. Central Africa has a low level of bank penetration, a large informal sector and high national poverty rates: 47% in Chad in 2011, and 64% in DR Congo in 2012 (World Bank, 2018a).

### 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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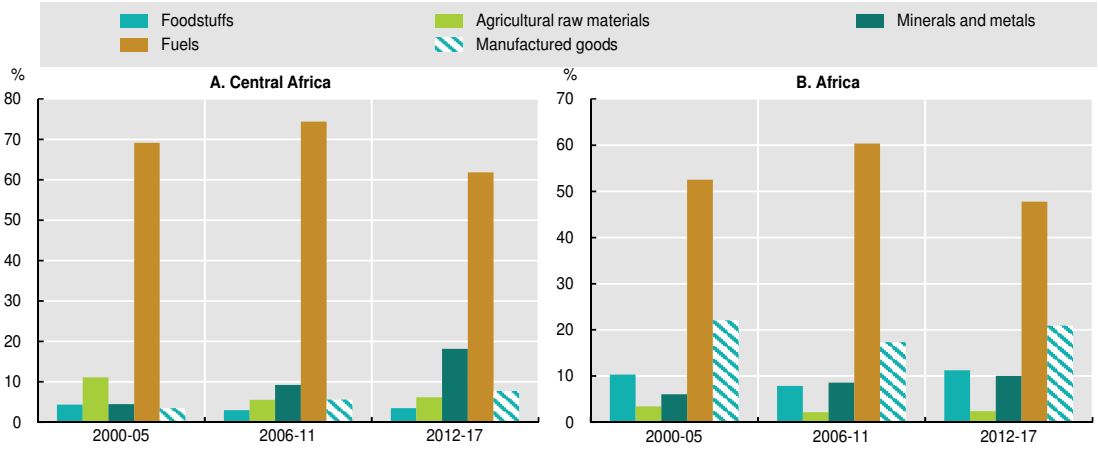
### Exports in Central Africa remain dominated by raw materials

**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

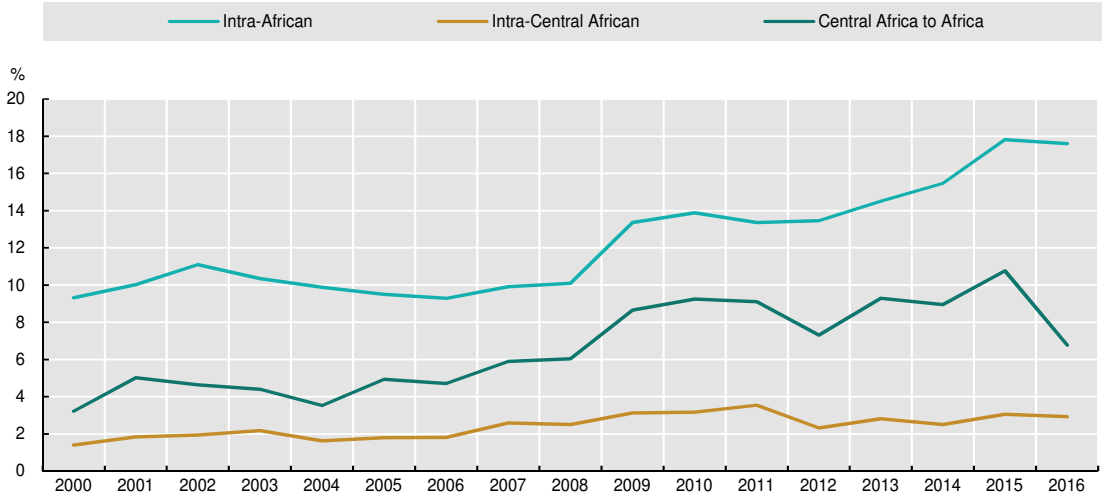
#### Intra-regional trade remains limited

**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**

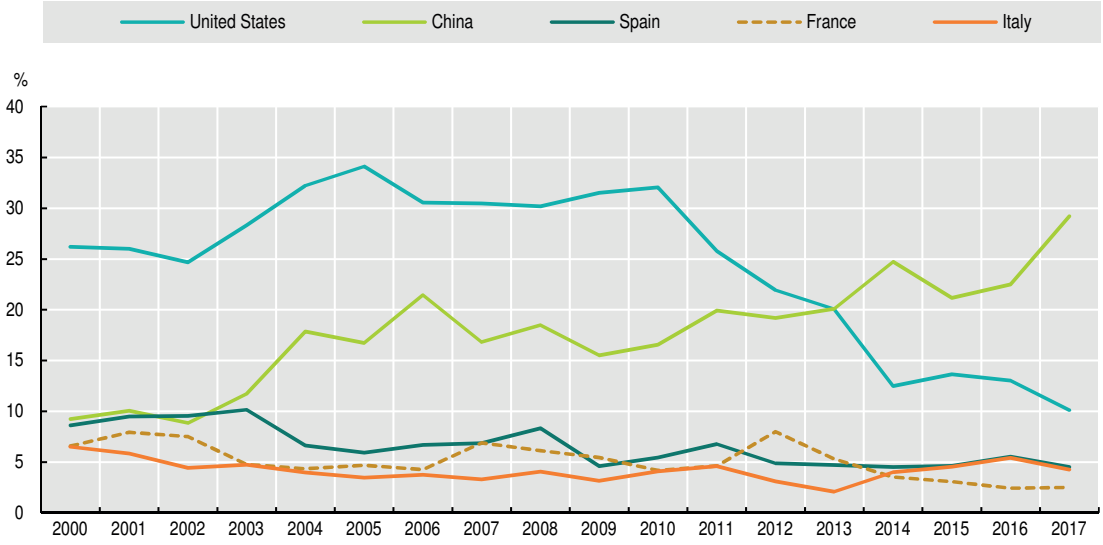
| Indicators/country | Burundi | Cameroun | Central African Rep. | Chad | Congo | DR Congo | Equatorial Guinea | Gabon | São Tomé and Príncipe | Central Africa |
|---|---|---|---|---|---|---|---|---|---|---|
| Share of five main exports (percentage of total exports) | 92.2 | 73 | 83.1 | 98.2 | 92.6 | 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.

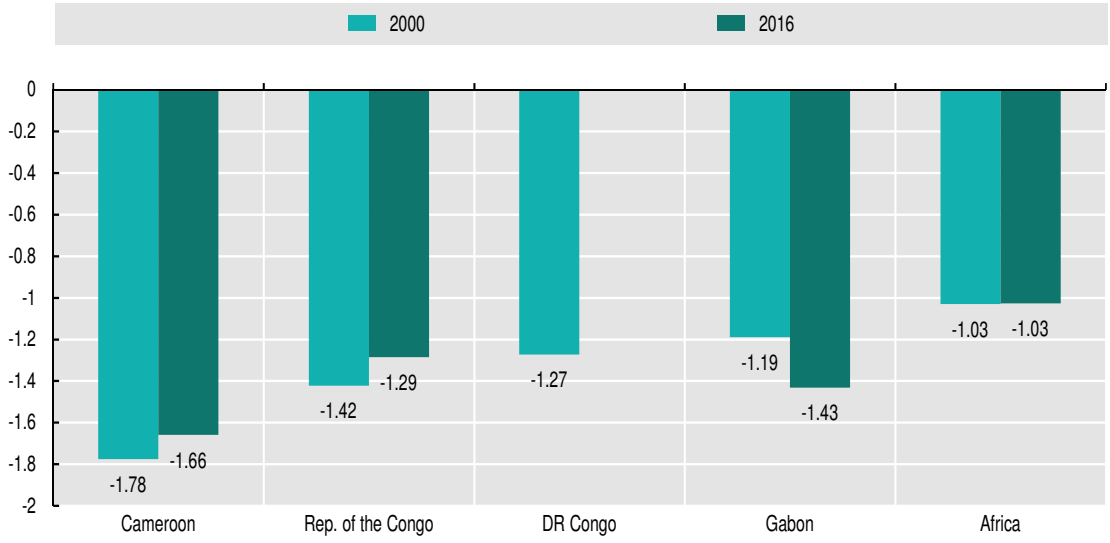
## The absence of revealed comparative advantage (RCA) in manufactured goods has hindered diversification

**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.<br>• 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<br>• Increase exports<br>• 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.<br>• Improve and guarantee cotton quality.<br>• Support and develop the transformation of fibre.<br>• Improve promotion and marketing of cotton and textiles.<br>• 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<br>• 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.<br>• 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.<br>• Improve rural infrastructure.<br>• Increase food supply<br>• Promote agricultural research. |
| Regional Strategy for the Conservation and Sustainable Management of Forest Ecosystems in Central Africa (COMIFAC) | 1999 | • Harmonise fiscal and forestry regulation<br>• Improve resources knowledge<br>• Improve ecosystems management and reforestation nationally and regionally.<br>• 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.<br>• 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.<br>• Increase profitability of different sectors<br>• Stabilise markets.<br>• Improve supply structures.<br>• 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.

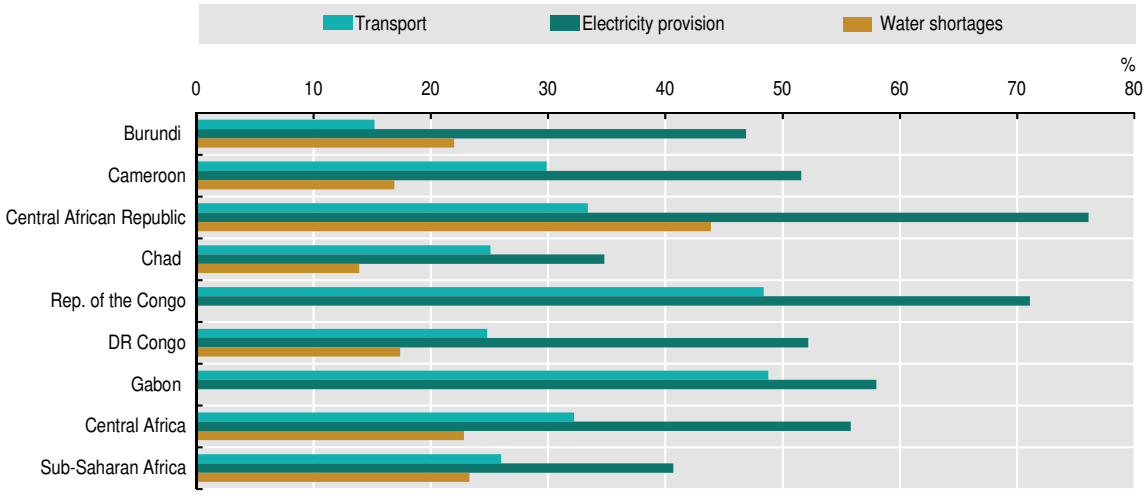
Table 3.11. **Level and quality of infrastructure, 2017**

| 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.

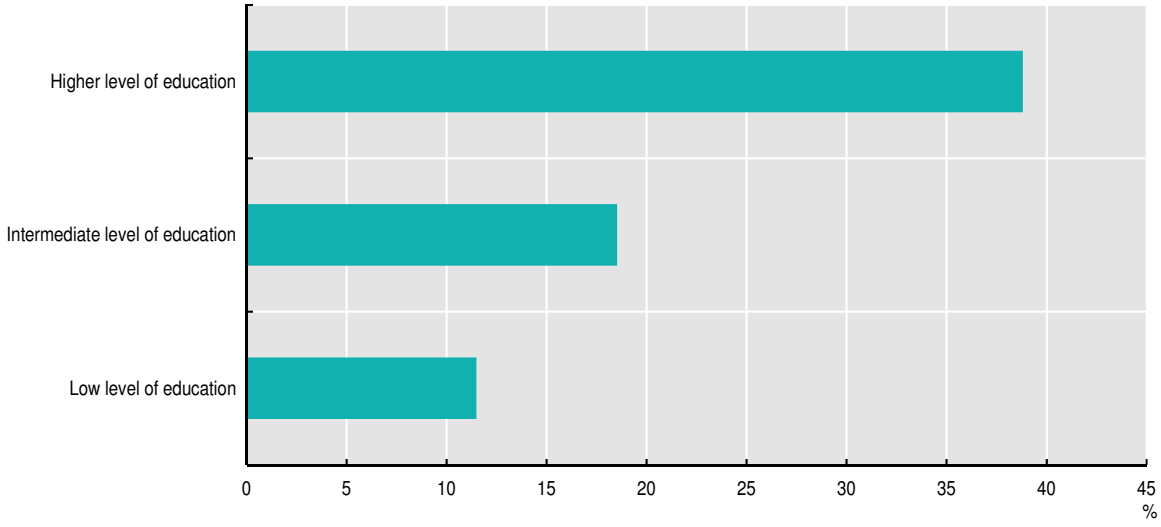
### Improving access to energy

**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**

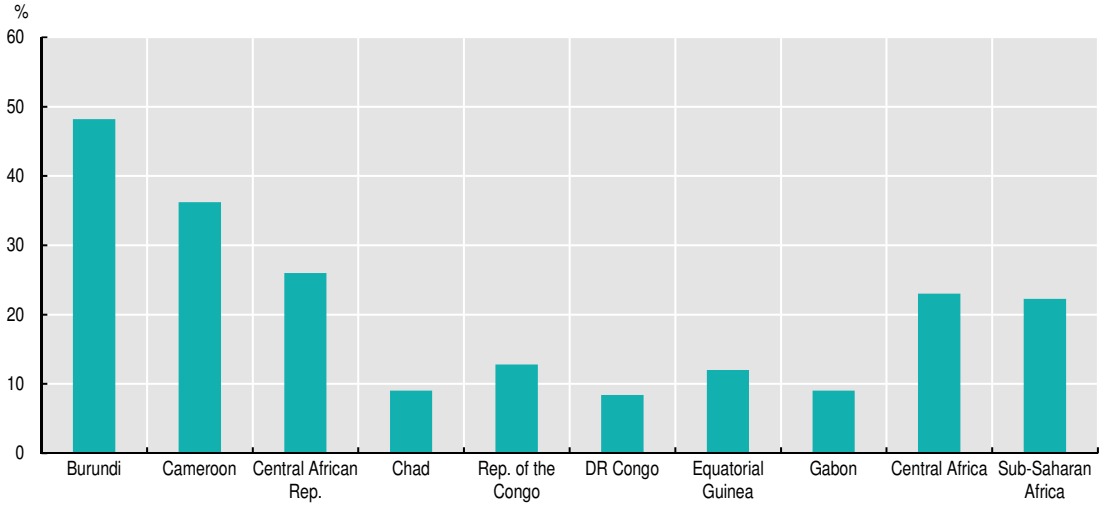



*Note:* Data lacking for other countries for the whole period.
*Source:* Authors' calculations based on World Bank (2018a), *World Development Indicators* (database).
StatLink https://doi.org/10.1787/888933967245

## 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**



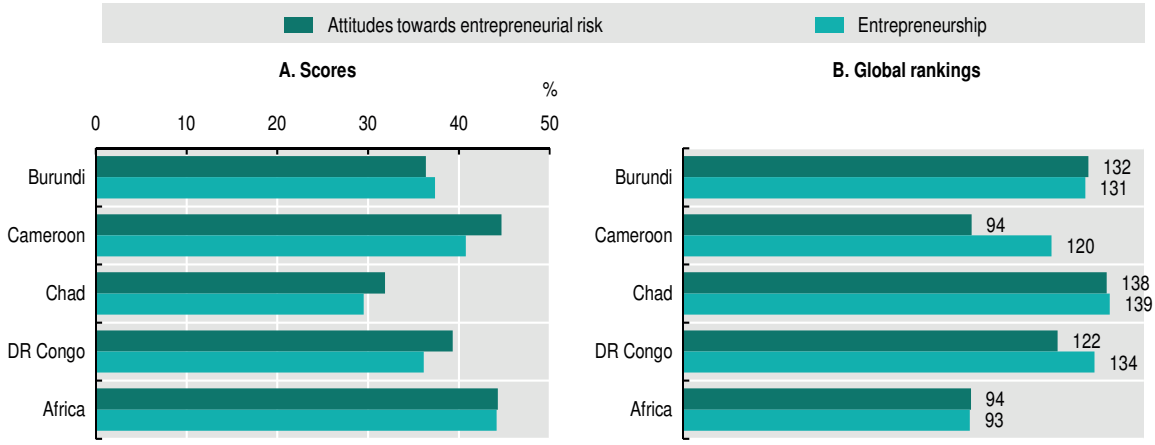

*Source:* Authors' calculations based on World Bank (2018b), *Global Findex database.*
StatLink https://doi.org/10.1787/888933967264

## 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.

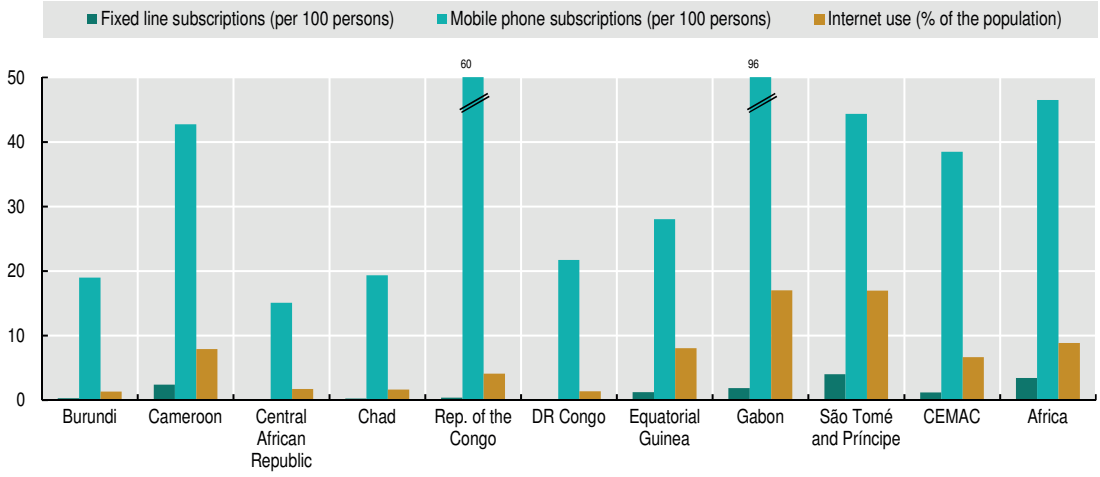
**Lifting tax burdens in exchange for smart taxes can encourage local production.** Involving the private sector in the financing and management of infrastructure and public services can be a solution. The public sector is often faced with weak and unstable resources when it comes to financing infrastructure. 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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