CENTRAL AFRICAN REPUBLIC ECONOMIC UPDATE THIRD EDITION

The Central African Republic in Times of COVID-19

Diversifying the Economy to Build Resilience and Foster Growth

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ACRONYMS AND ABBREVIATIONS

AGOA	African Growth and Opportunity Act
BEAC	Bank of Central African States, *Banque des États de l'Afrique Centrale*
CAR	Central African Republic
CEMAC	Economic and Monetary Community of Central Africa, *Communauté Économique et Monétaire de l'Afrique Centrale*
CFAF	CFA franc
COBAC	Central African Banking Commission, *Commission Bancaire de l'Afrique Centrale*
COVID-19	Coronavirus Disease 2019
CPI	Consumer price index
DRC	Democratic Republic of the Congo
DVA	Domestic value added
ECCAS	Economic Community of Central African States
EFI	Economic Fitness Index
FCV	Fragility, conflict, and violence
FDI	Foreign direct investment
FVA	Foreign value added
GVC	Global value chain
HHI	Herfindahl-Hirschman Index
LIC	low-income country
MT	Metric ton
NPL	Non-performing loan
PEAs	Management and operating permits
RCA	Revealed comparative advantage
RCF	Rapid Credit Facility
ROC	Republic of the Congo
SOE	State-owned enterprise
SSA	Sub-Saharan Africa
WHO	World Health Organization

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This is the third edition of the Central African Republic Economic Update. It analyzes evolving economic trends in the Central African Republic (CAR) on an annual basis to assist the government and its development partners in identifying emerging opportunities and addressing persistent challenges. Each edition presents an overview of CAR's evolving macroeconomic position, followed by a detailed exploration of a specific topic. The objectives of the series are to: i) strengthen the analytical underpinnings of development policy in CAR; and (ii) contribute to an informed debate on policy options to enhance macroeconomic management and accelerate progress on the World Bank Group's twin goals of eliminating extreme poverty and promoting shared prosperity in a context of state fragility.

This Economic Update builds on the previous edition, relying on peace and stability as a condition for domestic resource mobilization and economic diversification. The report reviews recent economic developments to assess the status economic diversification and present opportunities to diversify the economy to build resilience and strengthen the pace of recovery. It also shares best practices of peer countries that either have or are on their way to diversify their economies after long periods of political instability.

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KEY MESSAGES

Recent Economic Developments

The economy of the Central African Republic (CAR) grew at a slower pace in 2019 compared to 2018. Still, it grew at 3.1 percent, year-on-year, in 2019, above the average of regional peers (1.6 percent) and countries affected by fragility, conflict, and violence (FCV) (2.7 percent). Despite improvements in security following the signing of the peace agreement in February 2019, the economy performed worse than expected due to the collapse by about 30 percent in the production of coffee and cotton, which in turn was the result of persistent structural challenges in the agriculture sector. On the demand side, private consumption remained the main driver of economic growth, while the agriculture and services sectors drove growth on the supply side. Moreover, extreme poverty remains high and projected to affect 71 percent of the population—3.4 million people—in 2019.

Inflation increased in 2019, and CEMAC's monetary policy remained on track. The tightening of monetary policy, as well as progress on implementing the new Economic and Monetary Community of Central Africa's (*Communauté Économique et Monétaire de l'Afrique Centrale*, CEMAC) foreign exchange regulation in March 2019, contributed to a strong recovery of gross foreign assets, from 2.7 months' worth of imports in 2018 to 3.3 months in 2019. Inflation was contained at an average of 2.8 percent in 2019 as inflationary pressures from the blockade of the main trade route between Bangui and Cameroon in March abated.

Fiscal stance improved, but CAR remains at high risk of debt distress. Public expenditure grew at a slower pace in 2019 than in 2018, mainly due to delays in public investments. Government revenues picked up at 18.4 percent of GDP in 2019 thanks to a significant increase in official grants. As a result, the overall fiscal situation improved in 2019, and the debt-to-GDP ratio continued to decline. However, CAR remains at high risk of debt distress, primarily due to low exports and mobilization of domestic resources.

The external position has improved. The current-account balance remained in deficit at 5.2 percent of GDP in 2019, down from an estimated deficit of 8 percent in 2018. The improvement was due to an increase in net official transfers and the implementation of the Bank of Central African State's new exchange rate regulation, which limited the repatriation of investment income, especially in the mineral sector, including diamond and gold.

Economic Outlook and Risks

The pandemic is weighing on the country's economic outlook. CAR's economic growth has been revised downward at -1.2 percent in 2020. The Coronavirus Disease 2019 (COVID-19) pandemic is expected to deteriorate the country's fiscal and external position and increase inflation in 2020, with disruptions in global supply chains and contraction of the global economy. COVID-19 is expected to exacerbate existing vulnerabilities and reverse years of progress in poverty reduction. Extreme poverty is expected to increase by 1.5 percentage points, year-on-year, in 2020, implying that more than 140,000 people could be pushed into extreme poverty. As the negative impact of the crisis dissipates, CAR's economy is projected to grow at an average of 2 percent in the medium term—3 percentage points below pre-COVID-19 projections.

The political and security situation add to the downside risks. The peace agreement signed in February 2019 was a critical step toward achieving peace and security in the country, but there is still a risk

of reversal, especially with the upcoming elections. COVID-19 may not only disrupt but threaten planned upcoming elections. Possible deterioration of the political and security environment is contingent on the effective implementation of the peace agreement, a peaceful democratic transition after the elections, and the progressive redeployment of the state in provinces. Finally, CAR's dependence on international aid, which represents more than half of total government revenues, is a significant downside risk. In such a context, even a slight disruption in the flow of international assistance will weaken the country's fiscal and external position and economic growth prospects. To reduce its vulnerability to international aid flows, CAR needs to strengthen domestic revenue collection, improve the management of natural resources, and prioritize productive investment.

Diversifying the Economy to Build Resilience in Times of Uncertainty

CAR's economic performance has been disappointing since independence, and poverty remains high. The country's economy relies heavily on subsistence agriculture and forestry activities, which remain the backbone of the economy, although both sectors are underdeveloped. Despite its natural resource wealth and potential, CAR's economic performance has been worse than expected, with extreme poverty affecting nearly 3.4 million people in 2019—70.9 percent of the population (using the international poverty line of US$1.90 per day, 2011 PPP). Its poor economic performance is on the one hand due to successive episodes of political instability and violence, especially in in 2013 when GDP collapsed by 36.7 percent. On the other hand, limited economic diversification has restricted CAR's ability to grow sustainably. Its main export products—coffee, cotton, diamond, and timber—represent about 90 percent of export revenues. CAR's number of export markets and products exported are less than one-fourth of the average of FCV countries.

The country's export competitiveness and participation in global value chain (GVCs) have declined significantly. Total exports have fallen by half since 2000, resulting in a deterioration of CAR's participation in GVCs. Diamond exports, the country's main exports in the early 2000s, fell substantially at least ten years before the 2013 crisis due to a combination of transparency and governance issues and an insufficient legal and institutional framework. Diamonds have been replaced by timber, which has been the most significant contributor to CAR's total exports since 2005. The gap between CAR and the world-quality frontier in terms of exports widened between 2002 and 2010, before narrowing in 2010–18, although the quality of its exports remains below the average of Sub-Saharan African (SSA) and FCV countries. Similarly, the complexity of the economy has declined over time, primarily due to the succession of conflict, which has undermined the development of the private sector.

CAR needs to diversify its economy to build resilience, create jobs, and reduce vulnerabilities. It is heavily dependent on subsistence agriculture and the export of a few commodities, making the economy vulnerable to adverse shocks. Diversifying CAR's economy is critical to achieving long-term sustainable development and strengthening resilience. Economic diversification can further reduce poverty and vulnerabilities by generating a wide array of employment opportunities throughout the economy. Economic diversification could also be a pathway to address the fragility trap and escape the vicious cycle of violence by supporting structural transformation, job creation, and greater economic opportunities, reducing grievances, frustration, and conflicts.

CAR could leverage the potential of the agriculture and forestry sectors as well as existing export opportunities to diversify its economy. The authorities can

diversify the economy by upgrading existing exports and tapping into emerging products in which the country has a relative comparative advantage. Key export products such as wood and cotton have high potential for new specializations, as they open a path for broad-based diversification. There are a least ten "nearby" products related to the wood industry, such as plywood, cork-related products, simply shaped wood, fertilizers, and wood for decorative use. There is a significant opportunity to specialize in these products, as the know-how and capabilities required to produce them are similar to those currently used in the wood industry. Similarly, raw cotton is connected to more than ten other products, including carded cotton, wool yarn, and yarn of textile fibers. Though diamonds and coffee are related to few other products, they may offer valuable opportunities for niche markets. Moreover, CAR has a revealed comparative advantage in eighteen emerging products, including wax, wigs, and legumes, that could also serve as a base for economic diversification.

There are also opportunities to discover new products and markets. In CAR, there are potential opportunity gains in producing and exporting products closely related to goods that are already produced and exported, including eggs, prepared animal feed, malt extract, and bakery products, as CAR may be able to relatively easily produce these new products. In terms of new markets, there is great potential to increase exports to neighboring countries. Asia and Europe are CAR's top export destinations, despite the high level of competition in these markets and important constraints related to transport costs and profitability. The regional market (i.e., Cameroon, the Democratic Republic of the Congo, the Republic of the Congo (ROC), Sudan, South Sudan, and Chad) is made up of US$31 billion in annual imports, with a population of more than 175 million. CAR's neighboring countries are currently net importers of products it is currently exporting elsewhere. Weak regional integration, missing logistics infrastructure, and poor-quality infrastructure are among the factors that explain the low levels of intra-regional trade. The market for cotton products in the DRC, ROC, and South Sudan is estimated at US$77 million, and the markets for coffee and wood are estimated at US$82 million and US$59 million, respectively. Neighboring countries import agricultural and food products in which CAR has a high relative comparative advantage, and the market for these products is estimated at US$211 million. There are also opportunities in the global market, especially with the reinstatement of African Growth and Opportunity Act (AGOA) benefits for CAR in December 2016. CAR's exports to the United States have increased since 2017, and there are opportunities to increase the export of wood products, which are AGOA eligible.

CAR can unlock the potential of the agriculture and forestry sectors by promoting agribusiness and on-site transformation. Cotton offers a unique opportunity for diversification because it is connected to several products, from oil to cotton liners. The cotton sector could also play a critical role in spatial transformation, as its production areas are in two out of three priority agricultural basins. However, there is an urgent need to restructure the sector to develop the value chain while creating risk-mitigating mechanisms to minimize exposure to world commodity price shocks. There are also opportunities to produce palm oil and related products and specialize in auxiliary industries, which has the potential to generate more jobs per hectare than other large-scale farming operations. CAR could leverage the agricultural value chain, mainly related to cotton and palm oil, for economic diversification and job creation. The forestry sector is attractive because of its capacity to generate revenue, create wage jobs, support inclusion, and accelerate spatial transformation in CAR. For example, the country could develop its wood processing capacity, which remains low, although the regulatory framework requires that at least 70 percent of logs from first-grade species are processed on site. In addition to security and institutional constraints, CAR needs to address and streamline various export costs that increase transaction costs and reduce firm profitability.

The country needs to address key cross-cutting issues to improve economic diversification. Efforts to increase social cohesion and economic diversification require the authorities to reestablish the rule of law, build a capable bureaucracy, and establish effective institutions. An unsatisfactory business environment has prevented the development of the private sector. Despite increasing over the past few years, credit to the economy and financial inclusion remain at low levels. Inadequate access to transport is one of the major obstacles for CAR's cross-border trading. Transportation costs along the main corridor Bangui-Douala are some of the highest in the world and limit the country's trade options. The Ubangi river has the potential to accelerate regional integration, unlock opportunities for diversification, boost the country's competitiveness, and reduce the cost of imports. Transporting goods along the Ubangi river is about US$20 cheaper per ton than using the Bangui-Doula corridor. However, the Ubangi river is only navigable four months out of the year, mainly between Bangui and Brazzaville, because of the silting of the river associated with the impact of climate change and low water levels. CAR would need to improve the navigability of the river to fully leverage its potential. Moreover, there is limited access to energy, and the energy sector is underdeveloped. Only 14 percent of the population has access to electricity in 2016—mainly in the capital Bangui—and only one in three communes is serviced by the national water company. While CAR's energy sector has been liberalized, there are no private investors in the sector, and public enterprises suffer from poor performance. The new peace agreement is an opportunity to demobilize armed groups, promote social cohesion, and establish the foundation for economic diversification. Table 1 summarizes the main policy recommendations from this report.

TABLE 1 Key policy recommendations

	Short term	Long term
Component 1: Boost the Performance of the Forestry Sector		
Attract strong and financially viable actors in the forestry sector	• Strengthen the process in CAR for evaluating and validating new concessioners.	• Enhance capacities to oversee and monitor the performance of the sector and ensure that forestry operations are consistent with both long-term environmental stability and CAR's legal framework. • Promote new sustainable business models in the sector such as biomass power from logging and wood-processing to provide energy to small towns and communities in forestry regions, or even to supplement the energy needs of Bangui.
Optimize timber harvest and processing efficiency	• Develop a revitalization plan for the sector, focusing on optimizing the forest harvest and improving processing equipment.	• Improve transportation infrastructure to lower transportation costs, which, combined with limited timber processing capacity, lead to excessively selective logging.
Strengthen the legality and traceability of forestry operations	• Restart the Forest Law Enforcement, Governance, and Trade (FLEGT) process to combat illegal forest exploitation and develop and implement a comprehensive forest-management framework consistent with the FLEGT process. Build the capacity of the Forest Administration to implement and monitor the FLEGT process.	• Strengthen national systems for timber and lumber traceability and collection of export taxes. • Strengthen systems for allocating artisanal cutting permits and community-based natural resources management (Non-Timber Forest Products).
Reduce vulnerabilities and poverty in forest communities	• Promote the use of designated forestry taxes for local development in forest communities in line with the decentralization process.	• Promote the diversification of livelihood opportunities in forest communities.
Promote climate-linked financing	• Finalize the preparation of the National REDD+ Strategy and implement the National REDD+ Investment Framework prepared under the Central African Forest Initiative.	• Enable a strong and high-level dialogue with donors to benefit from climate-linked international financing.
Component 2: Unlock the Potential of the Agriculture Sector		
Improve agricultural production and productivity	• Promote the transformation and export of corn, sesame, and palm oil. • Operationalize National Cotton Office and Seeds Offices. • Build the capacity of State structures such as ICRA (Central African Institute for Agricultural Research), et ACDA (Central African Agricultural Development Agency).	• Develop programs that enhance the supply of agricultural inputs, such as fertilizer, improved seeds, and storage, and adopt storage standards; • Revise the laws regulating land rights, with explicit provisions for farmers and herders as well as increased enforcement capacity, for the long-term development of the agriculture sector.
Improve the quality of existing products and promote the transformation and export of agricultural products	• Strengthen capacity building on quality certifications and control testing labs. • Financially support high-value products, especially in the cotton and coffee sector.	• Promote research and development as well as knowledge sharing. • Revise outdated land laws to incentivize investment in agribusinesses.
Restructure the cotton sector and develop other commercially attractive products.	• Promote the growth of micro, small, and medium enterprises and cooperatives. • Provide support for improved inputs (i.e., seeds, fertilizer, and pesticide) and quality assurance. • Clear identified arrears, amounting to CFAF 11 billion at end-February 2019. • Facilitate access to finance by creating a credit mechanism in coordination with ginning companies and secured via purchasing contracts between companies and producers.	• Introduce risk-mitigating mechanisms to minimize exposure to world commodity price shocks. • Improve the genetics of cotton varieties to ensure they are suitable for current lint market demand. • Implement the entire roadmap to revive the cotton sector. • Encourage the production and sale of commercially attractive yields such as cassava, groundnuts, sorghum, millet, maize, sesame, plantains, tobacco, and palm oil.

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TABLE 1 Key policy recommendations (*Continued*)

	Short term	Long term
Component 3: Address Key Cross-Cutting Issues		
Address political and institutional fragility to enable economic transformation		• Reinforce state legitimacy through the redeployment of civil servants, the provision of public goods and services, and decentralization, especially in remote areas; • Reestablish the rule of law, build a capable bureaucracy, and establish effective institutions to facilitate economic transformation.
Enable the business environment	• Improve the regulatory framework for business registration, number of procedures, and time and cost to start and operate a business. • Update business regulations and the legal and institutional framework to facilitate public-private-partnerships to enable private-sector participation; • Reduce export times through improved border compliance procedures and a reduction of import costs related to documentary requirements. • Improve the time and cost for resolving a commercial dispute and the quality of judicial processes to reduce the overall cost of enforcing contracts. • Simplifying tax and other payments and fees for permits and licenses.	• Increase the energy generation capacity of private contractors and stimulate linkages with local suppliers around road rehabilitation projects; • Design an investment policy for improving access to finance and market information as well as the overall investment climate. • Improve skills and labor market conditions, including the provision of modern infrastructure and business development and innovation services.
Expand access to finance and financial inclusion	• Raise awareness among local banks on the opportunities offered by both the agriculture and forestry sector. • Improve mobile phone penetration and modernize payment systems. • Strengthen non-bank institutions such as cooperatives and agent networks.	• Design programs to open up access to a range of financial services, including savings, insurance, and credit. • Design national financial education strategies.
Strengthen regional integration to improve trade with neighboring countries	• Rehabilitate and maintain key trade corridors (Bangui-Mbaiki-Mongoumba). • Leverage the Political Agreement for Peace and Reconciliation to strengthen and improve security along the Douala-Bangui Corridor.	• Improve the navigability of the Ubangi river to increase connectivity to neighboring countries and create a strategy to increase exports to neighboring countries.
Improve connectivity and address infrastructure bottlenecks	• Improve rural connectivity and create a rural road maintenance strategy to increase market access, overcome remoteness, and reduce trade costs, especially in the priority agricultural basins (Ouham/Ouham-Pendé and Nana-Gribizi/Kémo/Ouaka). • Expand broadband infrastructure to improve information and communication technologies connectivity and accessibility and facilitate the extension of 2G and 3G networks, especially in underserved areas to promote the digitization of the economy; • Strengthen the regulatory environment through improved governance processes and the revision of the electricity tariff structure.	• Improve access to electricity/energy and logistic performance. • Introduce special industrial and export processing zones to cost-effectively address critical infrastructure constraints related top land, electricity, transport, and communications. • Implement an institutional framework to develop mini grids.

1 Impact of COVID-19, Recent Economic Developments, and Outlooks

1.1 Immediate impact of COVID-19

Coronavirus Disease 2019 (COVID-19) reached the Central African Republic (CAR) in mid-March 2020 and could overwhelm the country's weak healthcare system. As of July 13, 2020, 4,288 cases have been reported, with 52 deaths (two-thirds of cases were locally transmitted, and one-third were imported). The situation could deteriorate rapidly, as the health system is ill-equipped to address the outbreak. According to the United Nations, CAR is one of the least prepared countries to face the COVID-19 pandemic, with 2.2 million people already in need of health assistance and about 70 percent of health services provided by humanitarian organizations. With only one health specialist per 20,534 people, the pandemic, if not contained, could overwhelm the country's weak healthcare system (Box 1).

The government has adopted several measures to contain the spread of COVID-19. From the onset of the pandemic, the government has enacted several policy measures to curb the spread of the virus. These measures included, among others, travel bans, social distancing measures, the installation of handwashing devices in all public areas, the mandatory use of face masks, and communication campaigns in French and Sango to raise awareness of this new health threat. In collaboration with the World Health Organization (WHO), the government has prepared a COVID-19 preparedness and response plan, estimated at 27 billion CFA francs (CFAF) (around US$45 million), which aims to address some of the national health system's main weaknesses in a sustainable way. Among other interventions, the plan includes massive testing of the population to assess and manage new cases in a timely manner. However, the public policy response to the pandemic has only been partially implemented and relatively soft in several areas.[1]

The pandemic will have an impact on CAR's economy through both external and internal transmission channels. In terms of *external transmission channels*, international demand for the country's export commodities (i.e., diamond, coffee, cotton, and timber) is expected to fall significantly due to plummeting global growth and financial market uproar. CAR is heavily dependent on exports to Asia, especially China, which accounts for 44 percent of total exports. As economic activities in China slow down due to COVID-19, international demand for timber—CAR's main export product—is projected to decline. On the import side, the sharp drop in oil prices is expected to reduce the import bill. The combination of both import and export effects is likely to improve the country's current-account balance. Commodity prices are expected to decline sharply because of the global economic downturn. As a result, the pandemic is likely to reduce tax revenues substantially as exports collapse. This will negatively affect domestically financed investments and the ability of the government to contain the pandemic and mitigate its economic impact. Foreign direct investment (FDI) is expected to decline by 60 percent in 2020 due to global uncertainty and the economic slowdown, but it is projected to reach its pre-crisis level as the impact of the pandemic recedes. *Internally*, the government's measures to contain the spread of COVID-19, including restrictions on movement within the country, travel bans, closing of schools, bans on mass gatherings, and closing of the airport, are likely to slow down economic activities, disrupt local businesses, reduce tax revenue collection, and increase unemployment. Much of the labor force is self-employed in the informal sector such as street vendors and moto-taxi drivers, who will be significantly affected by reduced demand.

The fiscal deficit is widening due to an increase in public spending to address the COVID-19 pandemic. As of end-June 2020, the primary fiscal balance posted a deficit of CFAF 63.7 billion, up from a deficit of CFAF 36.2 billion during the first half of 2019. In response to the pandemic, the government has increased public spending by one-third compared to the level in the previous year, as goods and services and capital expenditures—including for the rehabilitation and construction of health facilities—increased significantly. Still, domestic revenues are estimated to have increased marginally and reached CFAF 60.8 billion during the first half of 2020—3.6 percent above the level in the same period in 2019, primarily due to the partial implementation of containment measures and restrictions on movement.

[1] This is confirmed by the COVID-19 Government Response Stringency Index (GRSI). With a score of 64.8 out 100 on the GRSI on July 13, 2020, CAR belongs to a group of African countries in which government measures to the pandemic have been less strict than those of other African countries.

BOX 1

Pre-existing structural challenges left CAR especially vulnerable to the COVID-19 outbreak and its socioeconomic impact

CAR's health system suffers from poor capacity, which poses an additional challenge for the country to provide the health services necessary to adequately respond to the COVID-19 epidemic. Weaknesses in the health system stem from: (i) a lack of a robust epidemiological surveillance mechanism; (ii) low capacity, with only one WHO-accredited laboratory (*Institut Pasteur de Bangui*) able to diagnose and confirm COVID-19 cases; (iii) a poorly developed medical supply chain, which inhibits the flow and access to essential life-saving medicine and medical supplies; and (iv) limited communication networks and community awareness (although the Ministry of Health has made significant efforts to communicate health-related information through mass media).

The country's vulnerabilities relate to the labor market structure, limited fiscal buffer, and high prevalence of poverty. The labor force is largely concentrated in the informal sector, which represents more than 75 percent of total employment. This suggests that a large share of Central Africans are highly vulnerable to the economic impact of COVID-19 due to the precariousness of most jobs, limited coverage of pensions and unemployment insurance schemes, and limited government-funded social safety-net programs. Meanwhile, CAR does not have sufficient fiscal buffers; domestic revenues remain insufficient to cover priority expenditures and finance the growing needs of the population; and the country remains at high risk of debt distress. CAR is heavily dependent on international aid, with grants representing more than 50 percent of total government revenues in 2019. The fiscal deficit widened the first half of 2020, as public expenditures increased in response to the COVID-19 pandemic. Poverty remains pervasive and ubiquitous, with 71 percent of the population living in extreme poverty in 2019—equivalent to 3.4 million people. The pandemic is expected to further increase poverty, as loss of income, price increases, and low access to basics services will push many households back into poverty. Access to health services and education was limited even before the crisis, which means that the outbreak will further undermine the provision of basic services. For instance, nearly one-third of primary school-age children are out of school, and only 59 percent complete primary education. School closures could deteriorate these indicators and have a long-term effect on human capital development and earning potential, particularly among poor households, which tend to have access to less-educated parents for homeschooling.

COVID-19 could exacerbate the fragile security environment. The signing of the peace accord in February 2019 has led to a sharp decline in conflict-related incidents and civilian deaths. However, the agreement remains fragile, and its implementation is behind schedule. The socioeconomic impact of COVID-19 could add to the climate of uncertainty and fragile security environment. It could slow down the effective implementation of the peace agreement and lead to social unrest and disrupt the preparations of the upcoming presidential and legislative elections, scheduled in December 2020 et April 2021, and local elections.

Inflation has increased due to the effect of the limited food supply on domestic markets. Inflation accelerated from 3.6 percent, year-on-year, in May 2019 to 4.6 percent in the same period in 2020. Containment measures restricting the movement of goods and people between the capital city of Bangui and remote areas, along with the control of movement across the borders with neighboring countries, have disrupted local supply chains, lowered the domestic food supply, and increased inflation. Supply-chain disruptions at the Cameroon border, as well as neighboring countries restricting access to their territories and ports, have led to an increase in the price of basic necessities and inflationary pressures, with a significant impact on households with limited income and savings. Urban transport prices have risen by more than 60 percent since social-distancing measures went into effect.[2] The general price level has gradually fallen back to pre-crisis levels.

To minimize the socioeconomic impact of the pandemic, the Government of CAR and the Bank of Central African States have adopted fiscal and monetary measures, respectively. With regard to fiscal measures, the government plans to reduce non-priority public expenditures through six main measures: (i) suspend retroactive payroll adjustments, compensation for leave not taken, salary regularizations, and various reimbursements; (ii) cancel spending related to external missions; (iii) suspend expenditure on official, cultural, and sporting events;

[2] Bus fares have increased by 60 percent and taxi fares have increased by 67 percent.

(iv) reduce subsidies to public agencies by 25 percent; and (v) reduce the operational expenses of state institutions by 25 percent.[3] Similarly, the Bank of Central African States (*Banque des États de l'Afrique Centrale*, BEAC) has taken significant measures to provide monetary stimulus to members of the Economic and Monetary Community of Central Africa (*Communauté Économique et Monétaire de l'Afrique Centrale*, CEMAC), minimize risk factors weighing on monetary and financial stability, and help the CEMAC region cope with the effects of the pandemic. Key measures include: (a) reducing the open market interest rate by 25 basis points, from 3.50 to 3.25 percent; (b) revising down the Marginal Loan Facility Rate by 100 basis points, from 6 to 5 percent; (c) increasing liquidity injections from US$400 million to US$800 million (CFAF 240 billion to CFAF 500 billion); (d) expand the range of private instruments allowed as collateral for monetary policy operations; and (e) reduce the level of applicable discounts on public and private instruments admitted as collateral for refinancing operations. The BEAC is actively monitoring economic developments and has expressed its commitment to take all necessary measures to curb the impact of the pandemic on the economies of the region.

The international community is supporting CAR to contain the pandemic and mitigate its negative impact on the country's economy and society. On April 20, 2020, the International Monetary Fund's (IMF) Board approved the disbursement of US$38 million under the Rapid Credit Facility (RCF)—25 percent of the quota—to help CAR meet its urgent balance-of-payments needs stemming from the COVID-19 pandemic. This was followed by the World Bank's approval of the US$7.5 million COVID-19 Preparedness and Response Project to prevent, detect, and respond to the threat posed by the pandemic while strengthening public health emergency management and building diagnostic capacities. Moreover, US$25 million in supplemental financing and a budget support of US$50 million have been approved by the World Bank's Board. Also, The European Union provided US$32.9 million and the African Development Bank provided US$14.4 million in budget support. CAR has also benefitted from debt-service relief under the IMF's Catastrophe Containment and Relief Trust, which provided debt-service relief for US$4 million in debt due to the IMF from April to October 2020. The G20 Debt Service Suspension Initiative[4] for the world's poorest countries could provide an additional CFAF 4.8 billion to protect lives and livelihoods in CAR.

1.2 Recent economic developments

1.2.1 CAR's economic growth decelerated in 2019

Global economy growth slowed to 2.4 percent in 2019 as trade tensions increased.[5] A reescalation of trade tensions between major economies has increased policy uncertainty, which is hampering global economic activity. Global economic growth slowed from 3.0 percent in 2018 to 2.4 percent in 2019—the lowest rate of expansion since the global financial crisis—reflecting mainly weaker-than-expected international trade and investment. Growth in low-income countries (LICs) remained robust but decelerated from 5.8 percent in 2018 to 5.4 percent in 2019, while in Sub-Saharan Africa (SSA) it declined from 2.6 percent in 2018 to an estimated 2.4 percent in 2019. In SSA, economic growth in the three largest economies—Angola, Nigeria, and South Africa—remained well below historical averages and contracted for a fifth consecutive year on a per capita basis. By contrast, average growth in CEMAC countries accelerated from 1.4 percent in 2018 to 2.3 percent in 2019, supported by a rise in oil prices and production as well as a dynamic non-oil sector.

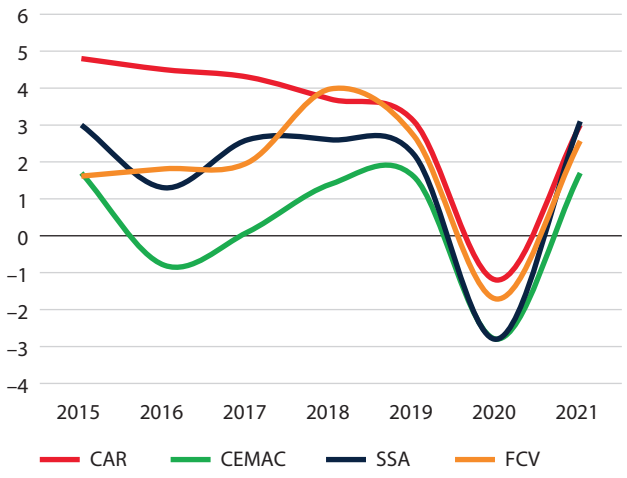
In this global economic context, CAR's economy grew by an estimated 3.1 percent of real GDP in 2019 (Figure 1). Despite security improvements, with the signing of a peace agreement in February 2019, the country's economic performance was worse than expected in 2019, mainly due to the collapse by about 30 percent in the production of coffee and cotton because of persistent structural issues in these sectors. CAR's economic growth has been on a downward path since 2015, when economic growth peaked

[3] These measures were adopted by the Ministry of Finance and Budget on March 25, 2020, through circular 167/2020/MFB/DIR/CAB/DGB. The reduction of non-priority expenditures is not expected to have significant poverty and social impacts, as these measures focus mainly on expenses related to missions abroad and cultural and sporting events.

[4] As of June 24, 2020, CAR has submitted a request to all its bilateral creditors: China, France, India, Saudi Arabia, and Kuwait.

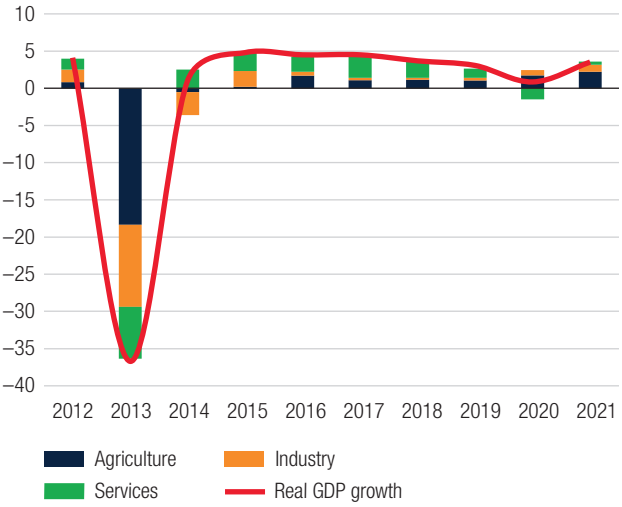
[5] World Bank. 2020. Global Economic Prospects, January 2020: Slow Growth, Policy Challenges. Washington, DC: World Bank.

FIGURE 1 Annual real GDP growth rates, 2015–21



Source: World Bank staff estimates using data from WEO, GEP, and MPO.
Note. Estimates were used for real GDP growth in 2019 and projections for 2020–21. CEMAC, countries affected by fragility, conflict, and violence (FCV), and Sub-Saharan Africa (SSA) do not include CAR.

FIGURE 2 Contribution to real GDP growth, 2012–21



Source: World Bank staff estimates using data from the WDI and MPO.
Note. Estimates were used for 2019 and projections for 2020–22.

at 4.8 percent of GDP. Since then, conflicts and violence have weighed on the country's economic performance. CAR's GDP growth has, nevertheless, outpaced the average of regional peers in recent years.

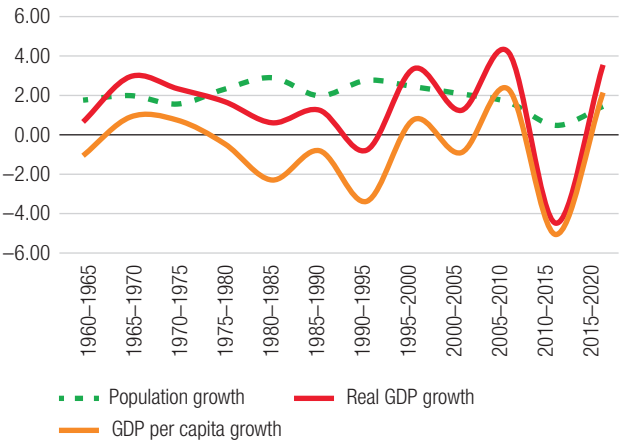
On the demand side, private consumption has remained the main driver of economic growth. Private consumption increased from 93.7 percent of GDP in 2018 to 96.1 percent in 2019. Gross fixed capital formation declined from 16.4 percent of GDP in 2018 to 14.2 percent in 2019, mainly due to delayed public investment spending. The export volume of goods is estimated to have slowed from 3.8 percent in 2018 to 1.9 percent in 2019, as weak international demand slowed timber exports and structural issues weighed on the coffee and cotton industries.

The agriculture and services sectors were the main supply-side drivers of economic growth in 2019. Economic activities were supported by dynamic agriculture and services sectors, which grew at 3.1 percent and 2.3 percent, respectively, in 2019 (Figure 2). However, the agriculture sector performed worse than expected, primarily due to a sharp fall in the production of coffee and cotton, and persistent mismanagement continues to prevent the potential of the agriculture sector from materializing. Improved security supported economic activity in the industrial and services sectors. The industrial sector, which represents only 17 percent of GDP, grew at 2.1 percent in 2019, up from 1.5 percent in 2018.

Recent improvements in GDP per capita growth have contributed to poverty reduction. CAR's living standards have, on average, eroded since independence, as its real GDP growth rate could not keep up with the growing population (Figure 3). However, GDP per capita growth has accelerated since the crisis in 2013, contributing to a reduction of people living in extreme poverty, which dropped from 75.9 percent of the population in 2013 to 71 percent in 2019.

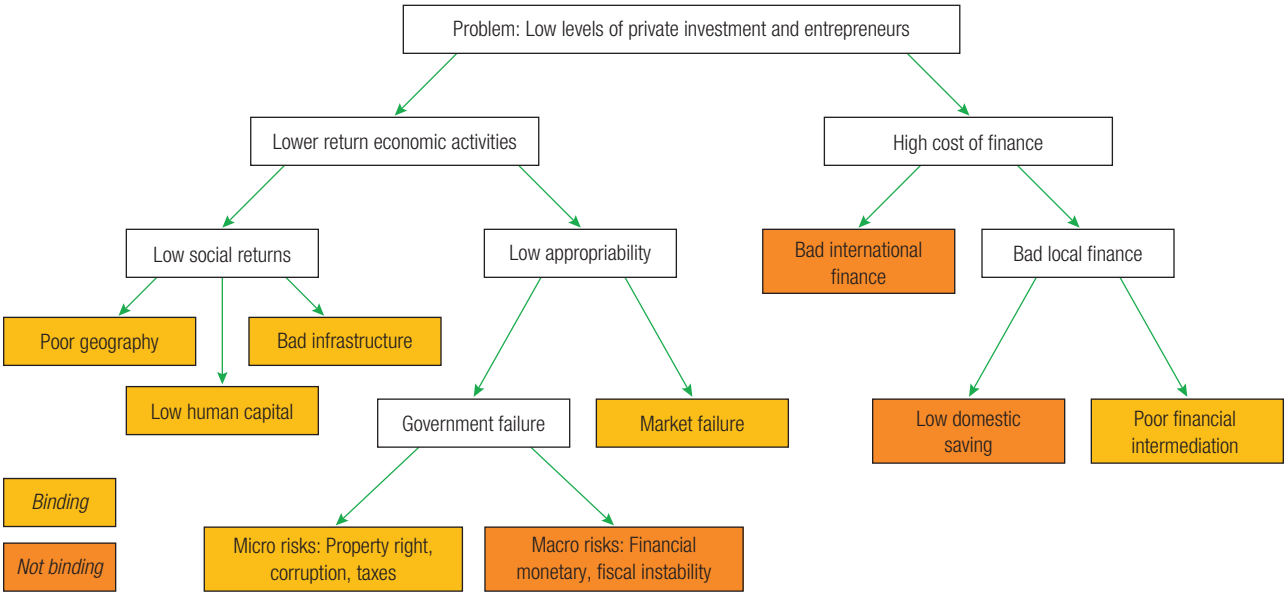
Important binding constraints on economic growth remain. While political instability has played an important role in the volatility of growth in CAR,

FIGURE 3 GDP per capita and population growth rates, 1960–2020



Source: World Bank staff estimates using data from World Development Indicators and World Population prospect.

FIGURE 4 Binding constraints on economic growth in CAR



Source: World Bank staff using the growth diagnostics methodology by Hausmann, Rodrik, and Valesco (2005).

it is not the only reason for the country's subdued economic and development performance. In CAR, the main structural binding constraints on economic growth are: (i) the poor quality of public infrastructure; (ii) low level of human capital; (iii) market failures; (iv) poor financial intermediation; (v) government failure in securing property rights; and (vi) corruption (Figure 4). Each constraint represents a critical bottleneck to private-sector development (Box 2).

1.2.2 BEAC has tightened its monetary policy

A tighter monetary and financial environment helped to avert a deeper crisis in the CEMAC zone, resulting in an increase in official reserves. The BEAC tightened its monetary policy stance by increasing its policy rate from 2.9 percent to 3.5 percent at the end of October 2018 in response to delays in external financing, mixed program performance, and slow repatriation of export proceeds. The tightening of monetary policy as well as progress in the implementation of CEMAC's new foreign exchange regulations—effective in March 2019 and supported by the Central African Banking Commission (*Commission Bancaire de l'Afrique Centrale*, COBAC)—contributed to a strong recovery of gross foreign assets, which increased from 2.7 months' worth of imports in 2018 to 3.3 months in 2019. However, CEMAC's official reserve coverage remained lower than the level appropriate for commodity exporting economies (5 months' worth of imports) to cushion terms-of-trade shocks.[6]

Inflation increased in 2019 but remains in compliance with the CEMAC convergence criterion. Following an increase in inflationary pressures due to a blockade of the main trade route between Bangui and Cameroon, inflation was contained at an average of 2.8 percent in 2019 (Figure 5). As a landlocked country far removed from international markets, CAR faces high transaction costs of accessing foreign markets, affecting its terms of trade and the price of imported goods. Since goods imports transit mainly through Cameroon, the blockade of the main trade route between Bangui and Cameroon in February and March 2019 resulted in an increase in the consumer price index, from an average of 1.6 percent in 2018 to 5.3 percent in February 2019. Improved security conditions eventually boosted the local food supply and contributed to lower inflationary pressure. While the level of inflation in CAR is below the average of SSA and countries affected by fragility, conflict, and violence (FCV), it is above the average of CEMAC.

[6] IMF Country Report No 19/383.

BOX 2

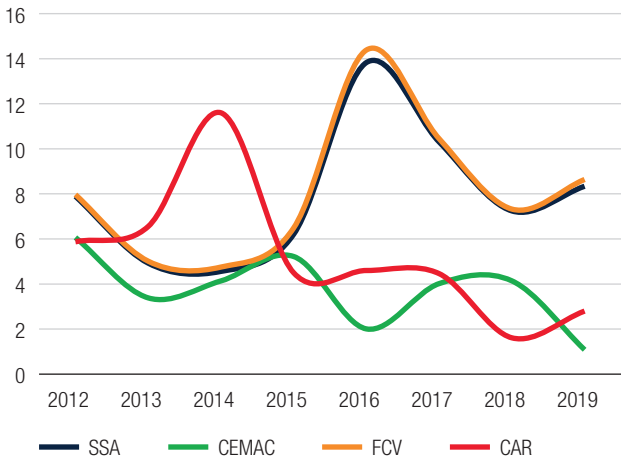
What are the binding constraints on economic growth in CAR?

The Growth Diagnostics methodology developed by Hausmann, Rodrik, and Valesco (2005) offers a framework that uses an evidence-based approach to prioritizing binding constraints on economic growth. It is based on the idea that there could be many reasons why an economy does not grow, and each reason generates a distinctive set of symptoms. In a typical low-income country with daunting developmental challenges, such as CAR, it is not unusual to assume that all of these challenges are constraining growth. However, it would be unjustifiable to assume that all problems in the economy are equally constraining.

The growth diagnostic for CAR reveals seven key messages:

1. **Access to finance is a binding constraint on private investment and growth in CAR.** A large proportion of loan applicant firms in the country are denied credit from local banks. Because of high information asymmetry, firms—particularly, micro, small, and medium enterprises—are requested to provide high collateral as well as pay high interest rates;
2. **Being a landlocked country makes it challenging to accelerate economic growth, although it is not a binding constraint.** Better infrastructure development in terms of roads, navigable rivers, and railways would address the costs associated with being landlocked and make an important contribution to CAR's trade expansion and economic growth;
3. **Poor infrastructure is a binding constraint to private-sector development and economic growth.** The country's road concentration is extremely low. Access to electricity, which is important for the production of goods and services, is extremely limited, discouraging investments in non-mineral and non-agricultural sectors. Moreover, CAR is ranked among the worst performing countries in the world in terms of international logistic performance;
4. **CAR's low-skilled labor force is a binding constraint to private investment and economic growth.** While the government has taken steps to improve education by providing free schooling and waiving school exam fees, the school systems suffers from: (i) an insufficient number of qualified teachers, (ii) lack of functional schools, (iii) schools damaged or destroyed by armed groups, and (iv) high overall security risks;
5. **Political instability, low tax collection, corruption, and insecure property rights are binding constraints on private investment and growth**, reflecting government failures to increase appropriability;
6. **With the regional currency pegged to the euro and CAR's macroeconomic framework backed up by the French Treasury, the country's macroeconomic risk is not a binding constraint on growth.** While macroeconomic challenges may appear in the future, it is unlikely that CAR's low economic growth rates in the past years can be easily explained in terms of macroeconomic instability; and
7. **An inability to identify and generate higher productivity activities is a binding constraint on private investment and growth.** CAR has experienced a sharp growth contraction in its traditional sectors (e.g., diamonds, cotton, and coffee) while it has been unable to generate new growth in other sectors. A lack of growth in non-traditional sectors partly explains the country's low growth and investment levels.

FIGURE 5 Inflation in CAR and comparator countries, 2012–19



Source: Authors' calculations with data from the IMF WEO database.

Credit to the economy declined in 2019. The growth of credit to the economy was negative at -1.6 percent in 2019, compared to 11.5 percent in 2018, due to the tightening of monetary policy by the BEAC in October 2018. Credit to the economy remains at a very low level of 13 percent of GDP. Due to economic and security concerns, financial institutions, particularly microfinance institutions, have concentrated their business in the capital. Microfinance firms account for only 1 percent of total credit facilities, serving 0.5 percent of the population. Mobile banking has recently been introduced, with the potential to help to overcome some of the country's geographic and infrastructure challenges. However, the penetration of mobile banking could be hampered by poor information and communication technologies infrastructure and low network coverage.

CAR's financial sector is performing well overall, in line with the gradual economic recovery and the growing optimism and confidence of the business community. The financial system is dominated by the banking sector, consisting of four banks: Commercial Bank Centrafrique, Banque Populaire Maroco-Centrafricaine, Banque Sahélo-saharienne pour l'Investissement et le Commerce, and ECOBANK-CENTRAFRIQUE, which holds close to half of all banking assets. Banks remain adequately capitalized, as average capital adequacy appears high. The banking system had a surplus of 11.7 billion CFA francs (CFAF) in permanent capital of over fixed assets at end-August 2019, indicating a sound financing structure. Capital represented 22.4 percent of assets in August 2019 (up from 21.5 percent in August 2018), which is very high (and signals low leverage, reflecting the small size of the banking system—as broad money represents 28 percent of GDP—and limited financial intermediation). As of August, 2019, three out of the four banks had sufficient net capital to comply with all prudential standards, an improvement from two banks in the same period in 2018. The prudential standards observed by the largest number of institutions relate to the transformation coefficient, the liquidity ratio, the limitation of the sum of large exposures, the coverage of risks by net equity, and the representation minimum capital.

Non-performing loans (NPLs) continue to decline. NPLs declined from 31 percent of all loans in 2015 to 22.7 percent in September 2018, before dropping further to 21.7 percent at end-September 2019. There are huge disparities across sectors, with the mining, manufacturing, and real estate sectors having the highest NPL ratios. NPLs are mostly due to the large stock of outstanding government payment arrears as well as arrears to government suppliers. NPLs have been provisioned to the tune of 85.8 percent as of September 2019. Banks have implemented key COBAC recommendations related to governance and compliance with prudential standards. However, there are some delays in implementing recommendations regarding internal controls and anti-money laundering, including the identification of mobile banking users and efforts to update banks' information technology systems.

The BEAC has implemented a complete overhaul of its monetary policy framework. Liquidity management is now based on autonomous factor forecasts and implemented through competitive auctions. Still, progress toward implementing neutral liquidity allocation remains slow. COBAC's new strategic plan 2019–2021 constitutes a guide for future reforms and work programs to strengthen risk-based supervision, but there has been limited progress in resolving small insolvent banks. A CEMAC commission has initiated work to strengthen the regional surveillance framework, including plans for an early warning system and a draft sanction scheme to deal with countries non-compliant with the regional convergence framework. So far, however, compliance with regional convergence criteria by member countries remains low.

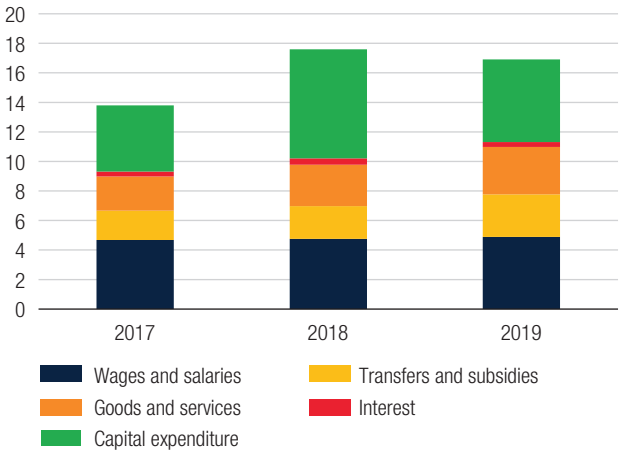
1.2.3 Fiscal stance improved

Public expenditure grew at a slower pace in 2019, mainly due to delays in public investment. CAR's total public expenditure increased by a mere 1.3 percent in value in 2019, amounting to 16.9 of GDP—down from 17.6 percent of GDP in 2018 (Figure 6). The implementation of the peace agreement has boosted spending on goods and services as well as transfers and subsidies, which increased by 17.9 percent and 41.5 percent, respectively, in 2019. Spending on wages and salaries remained under control and amounted to 4.9 percent of GDP in the same year (Table 2). Delays in public investments reduced capital expenditure from 7.4 percent of GDP in 2018 to 5.6 percent of GDP in 2019. Externally financed capital expenditure continues to represent a significant share of total capital expenditure, although domestically financed spending increased by 75 percent in 2019.

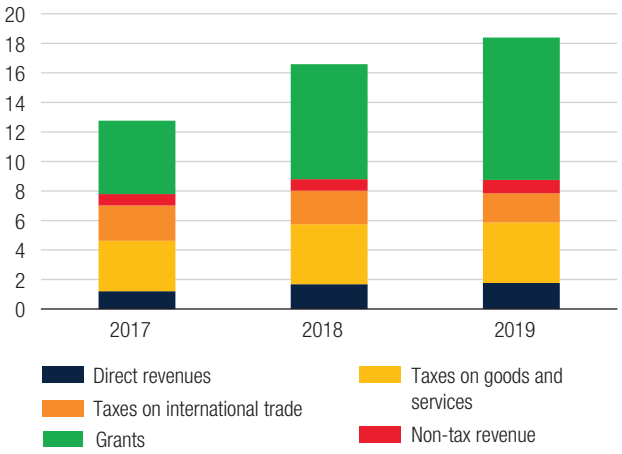
Government revenues reached 18.4 percent of GDP in 2019 due to a significant increase in official grants from international donors. Official grants from donor institutions to CAR amounted to 9.6 percent of GDP in 2019, up from 7.9 percent of GDP in 2018, representing more than half of total government revenues. Encouraged by the signing of the peace agreement in 2019, the donor community has returned to CAR, and official grants reached their second-highest level in a decade after reaching 10.8 percent of GDP in the aftermath of the 2013 crisis. Meanwhile, tax revenues declined from 8 percent of GDP in 2018 to 7.8 percent of GDP in 2019, primarily due to: (i) delays in the transfer of parafiscal taxes to the Treasury Single Account; (ii) the impact of derogatory tax exemptions; (iii) lower recovery of tax arrears; and (iv) delays in

FIGURE 6 Expenditure and revenue composition in CAR, 2017–19

a. Spending composition (% of GDP)



b. Revenue composition (% of GDP)



Source: World Bank staff estimates using data from WDI, IMF, and MoF.

TABLE 2 Financial operations of the central government, 2017–2022

	2017	2018	2019	2020	2021	2022	2020	2021	2022
	Actual		Est.	Projections					
				Pre-COVID			Post-COVID		
	In percentage of GDP								
Total Revenue (and grants)	12.8	16.6	18.4	18.5	18.3	17.8	17.5	17.9	18.6
Tax revenue	7.0	8.0	7.8	8.1	8.2	8.5	5.2	7.5	8.8
Taxes on goods and services	3.4	4.1	4.1	3.8	3.9	4.1	2.9	3.6	4.4
Taxes on profits and property	1.2	1.7	1.8	2.0	2.0	2.1	1.3	1.8	2.0
Taxes on international trade	2.4	2.3	2.0	2.2	2.3	2.4	1.0	2.1	2.5
Non-tax revenue	0.8	0.8	0.9	1.7	1.7	1.7	1.2	1.5	2.0
Grants	5.0	7.8	9.6	8.7	8.4	7.6	11.2	8.9	7.8
Expenditure	13.8	17.6	16.9	18.9	18.2	18.4	21.6	18.7	18.9
Current expenditure	9.3	10.2	11.3	11.0	11.1	11.2	13.0	11.1	11.3
Wages and salaries	4.7	4.8	4.9	4.7	4.8	4.8	5.0	4.9	4.9
Current transfers	2.0	2.2	2.9	3.1	3.3	3.3	3.9	3.1	3.3
Interest payments	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3
Goods and services	2.3	2.8	3.2	2.8	2.8	2.8	3.8	2.8	2.8
Capital expenditure	4.5	7.4	5.6	7.9	7.0	7.2	8.6	7.7	7.6
Domestic	0.7	0.8	1.3	1.6	1.7	2.0	1.7	2.1	2.3
Donor-Funded	3.8	6.6	4.3	6.3	5.3	5.2	6.9	5.6	5.3
Overall balance (ind. grants)	–1.0	–1.0	1.5	–0.4	0.1	–0.5	–4.1	–0.8	–0.3
Domestic primary balance	–2.0	–1.7	–3.5	–2.7	–2.5	–2.5	–6.1	–3.0	–2.5
Overall balance (cash basis)	–2.0	–3.6	–0.7	–2.9	0.2	–0.5	–5.0	0.0	–0.3
Financing	2.0	3.6	0.7	2.9	–0.2	0.5	0.6	0.9	0.8
Extenal (net)	1.0	1.4	0.3	0.7	0.1	0.1	0.9	0.8	0.7
Domestic (net)	1.0	2.2	0.4	2.2	–0.3	0.4	–0.3	0.1	0.1

Source: Authorities in CAR; IMF and World Bank estimates, August 2020.

recording revenues from provinces. Non-tax revenues increased from 0.8 percent to 1 percent of GDP over the same period.

As a result, the overall fiscal situation improved in 2019, and the debt-to-GDP ratio continued to decline. CAR is estimated to have generated an overall fiscal surplus of 1.4 percent of GDP in 2019, an improvement from a deficit of 1 percent in 2018, due to an increase in official grants (Figure 7). The fiscal deficit, excluding grants, narrowed but remained significant at 8.2 percent of GDP in 2019. Moreover, public debt declined from 50 percent of GDP in 2018 to 47.8 percent of GDP in 2019. Domestic debt continued to decline and is estimated at 10.6 percent in 2019, down from 14.9 percent in 2017, as the government made progress in clearing domestic arrears. External debt is also declining but at a slower pace as the government is implementing a new ECF program with the IMF, which will increase the stock of concessional public debt.

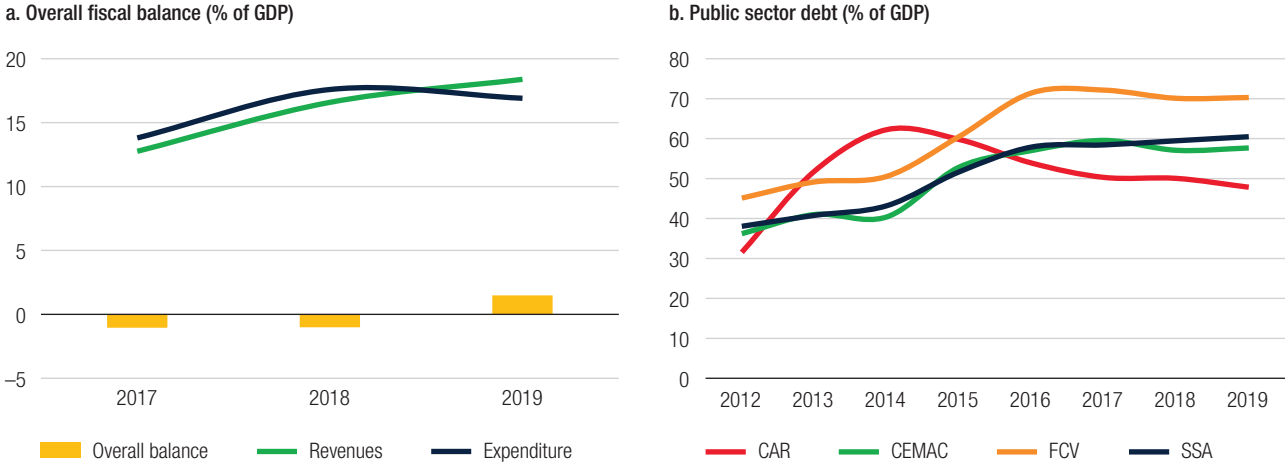
1.2.4 The external position improved

The current-account balance improved significantly in 2019. The current-account deficit narrowed from 8 percent of GDP in 2018 to 5.2 percent of GDP in 2019 (Figure 8). The improvement was mainly due to an increase in net official transfers and the implementation of the BEAC's new exchange rate regulation, which limits the repatriation of investment income, especially income from mineral industries (e.g., diamond and gold). Exports of goods and services grew at a limited rate of 1.9 percent in 2019, while imports increased by 4.9 percent. This contributed to a slight deterioration in the trade balance of goods and services, from 18.6 percent of GDP in 2018 to 19.4 percent of GDP in 2019.

The surplus in the capital and financial accounts narrowed. Improved security conditions have been critical to reducing uncertainty in the private sector, which in turn attracted FDI in 2019. FDI increased from an estimated CFAF 10 billion (0.8 percent of GDP) in 2018 to CFAF 15 billion (1.1 percent of GDP) in 2019. While FDI in CAR has been increasing since the 2013 crisis, when it totaled a mere 0.1 percent of GDP, it remains below the average of FCV and CEMAC countries. In 2019, the country's investment portfolio remained almost identical to that of previous years, while other investments declined significantly due to delays in executing public investments. As a result, CAR's financial account surplus declined from 3 percent of GDP in 2018 to 1.8 percent of GDP in 2019. Similarly, the capital account surplus declined from 4.8 percent to 3.6 percent of GDP over the same period, driven by a reduction in project grants.

Finally, the external position improved, and official reserves increased in 2019. The improvements in the current account led to a narrowing of the balance of payment deficit from 1.7 percent of GDP in 2018 to 0.7 percent of GDP in 2019. Additionally,

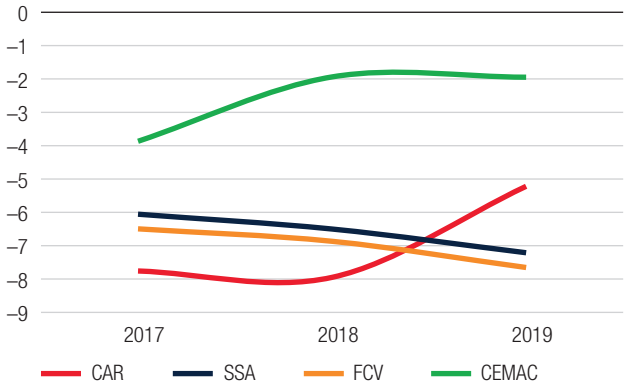
FIGURE 7 Overall fiscal balance and public sector debt, 2017–19



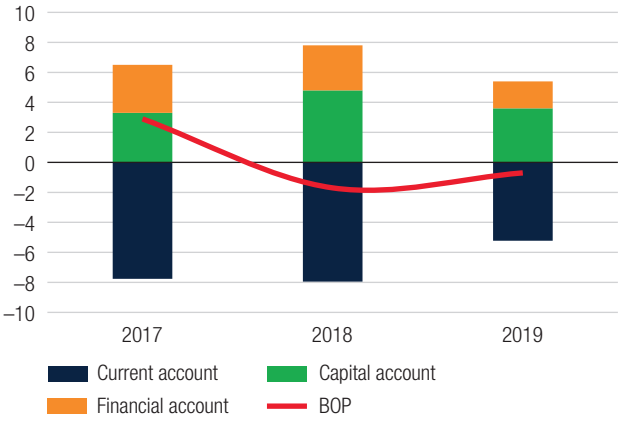
Source: World Bank staff estimates using data from WDI, IMF, and MoF.

FIGURE 8 Current-account balance and balance of payment, 2017–19

a. Current-account balance, CAR vs. peer countries (% of GDP)



b. Balance of payment (% of GDP), CAR



Source: World Bank staff estimates using data from WDI, IMF MoF.

official international reserves increased and reached 3.3 months' worth of imports in 2019, up from 2.7 months in 2018.

1.3 Economic outlook and risks

Global economic prospects: Worst economic downturn since the great depression

The COVID-19 pandemic is creating an unprecedented global economic crisis, which could reverse recent progress in economic development. Beyond its devastating health impact, the global economic effects of the pandemic are widespread, with rising economic uncertainty, highly volatile commodity prices, and interruption of production and global supply chains. With global GDP growth projected to contract sharply by 5.2 percent in 2020, the expected economic downturn is the worst since the 2008 global financial crisis. In emerging market and developing economies, the global pandemic is threatening to overwhelm weak healthcare systems and push economies into recession in 2020. Economic growth in these countries is projected to decline from 3.5 percent in 2019 to –2.3 percent in 2020. In SSA, economic growth is projected to contract by 2.8 percent in 2020—the first recession in decades. The pandemic has adversely impacted economic activity in the CEMAC region, where economic growth is projected to contract by 2.8 percent.

CAR's economic outlook: Positive but subject to significant downside risks

CAR's economic outlook remains positive but subject to significant downside risks. Its economic growth has been revised downward at –1.2 percent in 2020—5.6 percentage points below pre-COVID-19 projections (Table 3). Further improvements in the political and security situation are contingent on the effective implementation of the peace agreement, a peaceful democratic transition during the upcoming elections, and the progressive redeployment of public institutions in provinces. As the negative effects of the pandemic dissipate, CAR's economy is projected to grow at an average of 2 percent over 2020–22—3 percentage points below pre-COVID-19 projections. Downside risks relate to the peaceful democratic transition, security developments, and the country's ability to contain the socioeconomic impact of the virus.

On the supply side, a more favorable security environment is expected to support higher agricultural and industrial output. Timber and forestry activities are projected to increase as international prices rise and the authorities gradually resolve tensions within industries. Diamond exports—among the country's key commodity exports—are projected to resume,

TABLE 3 Key macroeconomic and financial indicators, 2017–23

	2017	2018	2019	2020	2021	2022	2020	2021	2022	2023
	Actual		Est.	Projections						
				Pre-COVID			Post-COVID			
	Annual percentage change, unless otherwise indicated									
National income and prices										
Real GDP	4.5	3.7	3.1	4.4	5.2	5.3	–1.2	3.0	4.1	4.6
GDP deflator	6.5	1.4	2.3	3.2	2.9	3.1	2.8	2.5	2.5	2.9
CPI (annual average)	4.1	1.6	2.8	2.5	2.8	2.8	3.5	2.9	2.8	2.8
External Sector										
Imports volume of goods	–2.0	–0.7	10.4	7.8	4.0	5.0	–8.7	0.8	2.5	3
Exports volume of goods	42.5	10.3	–6.7	14.9	6.0	7.0	–12.1	5.9	6.7	8.7
Terms of Trade (deterioration –)	–18.5	–12.4	13.6	3.5	2.2	0.5	–3.1	1.3	5.2	–0.2
	% of GDP, unless otherwise indicated									
Fiscal Accounts										
Expenditure	13.8	17.6	16.9	18.1	18.1	17.7	21.6	18.8	18.6	18.8
Revenue and grants	12.8	16.6	18.4	18.3	16.7	16.2	17.5	17.9	18.2	18.0
Overall fiscal balance (incl. grants)	–1.0	–1.0	1.5	0.2	–1.4	–1.5	–4.1	–0.9	–0.4	–0.8
	Annual percentage change, unless otherwise indicated									
Selected Monetary Accounts										
Base Money	10.3	14.0	1.9	14.9	5.8	8.9	10.3	1.7	5.6	5.8
Credit to the economy	1.4	11.5	–1.6	5.0	7.0	8.0	–3.0	6.0	8.0	8
	% of GDP, unless otherwise indicated									
Balance of Payments										
Current Account Balance	–7.8	–8.0	–4.8	–8.0	–8.7	–8.6	–5.6	–6.5	–6.3	–6.0
Imports of goods and services	–33.8	–35.2	–35.8	34.5	32.7	30.8	33.0	32.7	32.3	31.8
Exports of goods and services	16.6	16.6	16.4	15.7	15.4	15.4	14.6	15.2	15.6	16.2
Foreign Direct Investment	0.8	0.8	1.1	1.4	1.4	1.4	0.4	1.0	1.5	1.5
	% of GDP, unless otherwise indicated									
Public Debt										
Total government (end of period)	50.3	50.0	47.8	42.4	40.4	37.5	47.4	45.5	43.5	39.6
o/w Extern al debt	35.4	37.2	37.2	35.6	35.0	34.0	39.0	37.9	36.9	34.2
Memo										
GDP nominal (US$ millions)	1979.7	2181.4	2180.2	2323.8	2530.4	2761.5	2239.7	2356.6	2536.7	2729.8

Source: National authorities; IMF and World Bank estimates, August 2020.

with the expectation that the Kimberley certification process is fully reestablished. Cotton production and exports are also expected to increase as the government continues to clear public arrears accumulated to cotton producers during the 2013–14 crisis. Ongoing public investment projects, especially in the agriculture sector, are expected to ease the investment climate and facilitate the development of agribusiness in the Bangui area. Improved distribution channels and increased output in agriculture will also support growth and help keep inflation below the CEMAC target. Higher levels and increased efficiency of public investments that address infrastructure constraints should also support economic growth. The agriculture and industry sectors are projected to grow at a sustained pace of 5.9 percent and 4.3 percent, respectively, in the medium term.

On the demand side, private consumption and investment should continue to spur growth. Dynamic private consumption will continue to support the economic recovery, as the authorities have

adopted a comprehensive and time-bound plan to clear domestic arrears. Private consumption is projected to contract by 3.2 percent in 2020 due to the pandemic, before growing at an estimated average of 2.9 percent in 2021–22. On the investment side, recent business reforms affecting the regulation, entry, and exit of competition are expected to stimulate investment spending. Going forward, the authorities should implement business-friendly reforms, with a special focus on improving the justice system, protecting minority investors, and facilitating the acquisition of construction permits to attract investors.

While the fiscal stance is expected to deteriorate due to the COVID-19 crisis, it should improve in the medium term. The overall fiscal balance, including grants, is projected to transition from a surplus of 1.5 percent of GDP in 2019 to a deficit of 4.1 percent of GDP in 2020, as tax revenues decline and public expenditures rise as a result of the pandemic. Capital expenditure is projected to increase from 5.6 percent of GDP in 2019 to 8.6 percent of GDP in 2020, driven by capital spending in the health and other social sectors. As the economic impact of COVID-19 recedes, capital expenditure is projected to fall to 7.6 percent and 7.5 percent of GDP in 2021 and 2022, respectively. Similarly, current transfers and public spending on goods and services are expected to increase in 2020 and decline in the following years. On the revenue side, official grants are expected to increase and offset the fall in all types of tax revenues because of containment measures, the slowdown in economic activities, and the closure of the borders with neighboring countries due to the COVID-19 pandemic. The authorities are expected to make a concerted effort to streamline public expenditure and improve tax collection by limiting exemptions and enhancing the efficiency of tax administration and policy to contain the fiscal deficit in the medium term. Efforts to increase domestic revenue mobilization, streamline public expenditure, and improve debt management would help to strengthen CAR's fiscal position.

The joint World Bank-IMF 2020 Debt Sustainability Analysis shows that CAR remains at high risk of debt distress—unchanged from 2019. Solvency indicators[7] remain below their relevant thresholds, while the disbursement under the IMF's RCF is projected to accentuate the breaches of the liquidity indicators over the medium term. Additional considerations, including the sensitivity of debt indicators to standard stress tests, a highly uncertain macroeconomic environment, a volatile security environment, and sizeable contingent liabilities, support the high-risk assessment.

Nevertheless, the country's debt is projected to remain sustainable over the medium term, provided that the authorities continue to implement structural reforms once the effects of the COVID-19 crisis wear off. Public debt has been falling since 2013, when it peaked at more than 60 percent of GDP, mostly driven by the clearance of domestic arrears and the decline in external borrowing. With a new loan under the IMF's RCF to mitigate the effects of the pandemic, CAR's public debt is projected to reach 47.4 percent of GDP in 2020, up from 47.8 percent of GDP in 2019. Contingent liabilities related to debt held by the three largest state-owned enterprises (SOEs)[8] operating in the energy, water, and telecommunications sectors could exacerbate sustainability concerns. As comprehensive data on these contingent liabilities are not available, the government has committed to audit these enterprises to assess their financial sustainability.

The current account is projected to deteriorate slightly in the medium term. The current-account deficit is projected at 5.6 percent of GDP in 2020, slightly higher than preliminary estimates of 5.2 percent in 2019, as the global economic slowdown resulted in a decline in both exports and imports. As the impact of COVID-19 recedes and the global economy gradually recovers, exports from CAR are likely to increase and support a slight improvement in the current-account balance in 2021 and 2022 at 5.4 percent and 5.3 percent of GDP, respectively. The current-account deficit is expected to remain below pre-COVID-19 projections, primarily due to a sharp decline in oil prices.

The pandemic is expected to exacerbate existing vulnerabilities and reverse years of progress in poverty reduction. The crisis is likely to worsen the already precarious humanitarian situation, as

[7] Solvency indicators: the present values of the external public and publicly guaranteed debt-to-GDP and debt-to-exports ratios. Liquidity indicators: debt service-to-exports and debt service-to-revenue ratios.

[8] Central African Energy (*Energie Centrafricaine*, ENERCA); Central African Water Distribution Company (*Société de Distribution d'Eau en Centrafrique*, SODECA); Central African Telecommunications Company (*Société Centrafricaine de Télécommunications*, SOCATEL). Large contingent liabilities are due to existing domestic arrears, which are still to be audited, and limited information on SOEs.

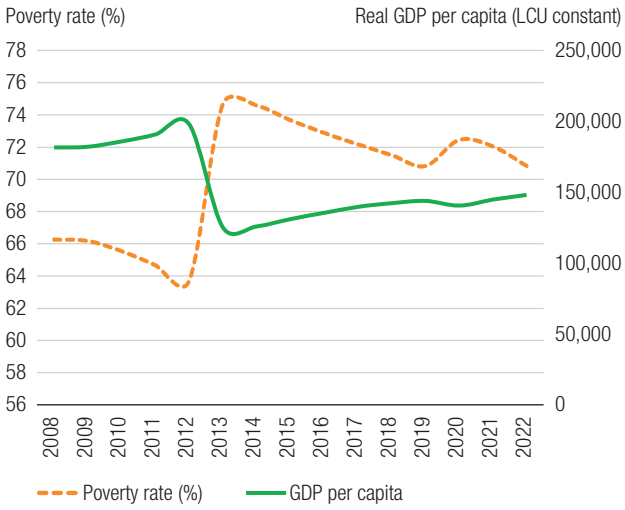
70.9 percent of the current population lived in extreme poverty in 2019, and half of the population is food insecure, requiring humanitarian assistance.[9] COVID-19 is expected to increase poverty, with an additional 140,000 Central Africans pushed into extreme poverty. CAR's extreme poverty rate, or the share of the population living below the international poverty line of US$ 1.90 per day (2011 PPP), is expected to reach 71.4 percent in 2020, which translates into an expected 3.5 million people living in extreme poverty.

The economic impact of COVID-19 is expected to be especially significant for poor and vulnerable groups. Among the groups most at risk are the 695,000 internally displaced persons currently in CAR as well as children, women, people with disabilities, and the elderly, whose vulnerabilities are expected to worsen in the current climate. An important share of the labor force, including youth and women, is self-employed in the informal sector. These workers are likely to be adversely impacted by reduced demand as a result of containment measures, as CAR does not have a national social safety net. For these workers, an inability to work due to illness will reduce earnings and increase vulnerability. Furthermore, the country relies heavily on imports for food and non-food products. Disruptions to supply chains following the partial closure of the borders with Cameroon and the Democratic Republic of Congo (DRC) have already led to food shortages and price increases, undermining the purchasing power of households and increasing the risk of social unrest. The impact will be most significant on the poor, who tend to have limited or no savings. With a progressive economic recovery in 2021 and 2022, the poverty rate is expected to decline and reach 70.4 percent by 2022 (Figure 9).

Downside risks hinge on a peaceful democratic transition, improved security, and a contained socioeconomic impact of COVID-19

The peace agreement signed in February 2019 represents a critical step toward peace and security in CAR, but risks remain, especially with the upcoming elections. The peace agreement has been sustained for more than a year, and security has

FIGURE 9 Actual and projected poverty rates and real GDP per capita, 2008–2022



Source: World Bank, Macro Poverty Outlook, August 2020.

improved. The armed groups have committed to respect the country's territorial integrity, constitutional order, and democratically elected institutions. Progress has been made on creating the mechanisms to implement the agreement, with the adoption of key legislation, efforts to combat impunity, and creation of local-level reconciliation mechanisms and special joint security units. However, there is also a risk that the COVID-19 crisis slows down the effective implementation of the peace agreement, disrupts the preparations for a peaceful democratic transition during the upcoming elections, and delays the progressive redeployment of the state throughout the country. A failure in implementing the peace agreement could result in an escalation of violence, which could deteriorate the humanitarian situation, curb the expected increase in investments, and slow the rise in the production and exports of wood products and diamonds as well as agricultural products. Increased insecurity could also result in a decline in both private and public investments and international trade, which could undermine government efforts to consolidate its fiscal position. Renewed violence would increase inflation due to the potential disruption of imports of goods and services along the Bangui-Beloko corridor, undermining the gradual redeployment of public administration and services and stifling business confidence.

[9] World Food Program 2018.

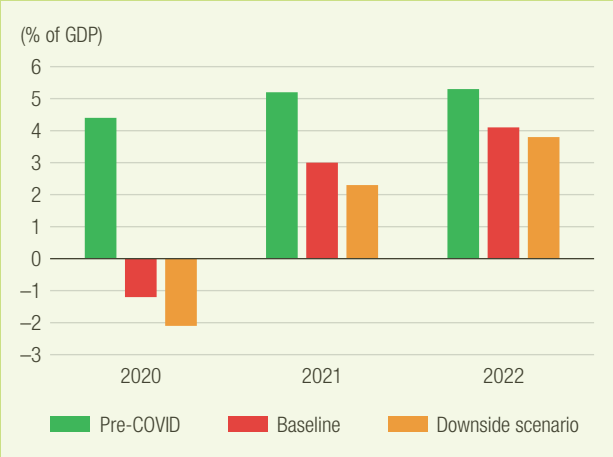
BOX 3

Estimated socioeconomic impact of COVID-19 under the downside scenario

Under the baseline scenario, economies will gradually recover and poverty rates will eventually fall in 2021 and 2022 as the COVID-19 crisis fades. Under the downside scenario, the outbreak lingers, and several countries are likely to face a second wave of infections, with renewed lockdowns, before end-2020. In this scenario, CAR's economy would shrink by 2.1 percent of GDP, compared to a contraction of 1.2 percent of GDP under the baseline scenario (Figure 10). The country's fiscal deficit is projected to be 4.9 percent of GDP in 2020, a significant deterioration from a surplus of 1.5 percent of GDP in 2019, driven by a sharp increase in public expenditure and a decline in tax revenues. The economic recession is expected to be driven by a further decline in private consumption and investment, exports, imports, and the services sector. COVID-19 could reverse years of progress in poverty reduction, and the loss of income or lower purchasing power would worsen the depth of extreme poverty.

The COVID-19 pandemic could have a long-term socioeconomic impact on countries around the world. Responding to the temporary shock will require appropriate policies to protect lives and livelihoods by flattening the curve of disease transmission while addressing the sudden fall in aggregate demand and income. However, the impact of the global pandemic could extend well beyond a temporary shock, as it is affecting social norms, with potential adverse effects on inequality. For example, the move to transition education online adversely effects countries and communities that lack digital development. Moreover, school closures deprive the entire student population—1.4 million students in CAR—of learning activities and would lead to learning losses, increased dropouts, and higher inequality. The demand and supply of education services are also likely to be depressed, harming households and inflicting long-run costs in terms of human capital development. Appropriate policy responses need to retrofit the education system and sustain the pace of recovery.

FIGURE 10 Estimated impact of COVID-19 on economic growth in CAR



Source: Authors' calculations using data from the World Bank's MFMod; and scenarios from the World Bank Global Prospects, August 2020.

The country's dependence on international aid represents a downside risk. External resources are critical to the stability and economic recovery of CAR, and they are expected to increase from an estimated 52 percent of total government revenue in 2019 to 56 percent in 2020, reflecting increased support from development partners in response to the pandemic. In this context, even a slight disruption in the flow of international assistance will weaken the country's fiscal and external position and economic growth prospects. To reduce its vulnerability to international aid flows, CAR need to strengthen domestic revenue collection, improve the management of natural resources, and prioritize productive investments.

2 Diversifying the Economy to Build Resilience and Foster Growth

2.1 Why CAR needs to diversify its economy

Several countries, especially commodity exporters such as CAR, have concentrated their economic activities around a couple of key products. Economic diversification involves adopting new products and services or entering new markets with existing products and services. It is often associated with economic transformation, which refers to a shift of domestic output across sectors, industries, and firms from low productivity to higher productivity activities, and involves structural transformation.[10] Limited product and export diversification create economic vulnerability through exposure to specific shocks, which can undermine the ability of a country to sustainably invest in its development. To achieve economic diversification, countries need to expand infrastructure, improve the business climate, and examine business models associated with their traditional areas of economic activities.[11] However, many LICs are heavily dependent on the production and export of minerals or primary products. Depending on a few products makes economies more vulnerable to adverse shocks and less adaptable to changes. Evidence shows that unstable commodity prices may expose LICs to serious terms-of-trade shocks, macroeconomic instability, and low economic growth.[12] Empirical evidence also shows that export diversification stimulates economic growth[13] and reinforces a country's resilience to crises.[14] Economic diversification is, therefore, one of the central priorities for many developing countries, in particular landlocked countries such as CAR, to expand export earnings, create jobs, facilitate structural transformation, and achieve sustainable economic development.

Despite its natural resource wealth and potential, CAR's economy remains poorly diversified compared to regional peers and countries in a similar fragile situation. The number of products exported by CAR is less than one-fourth of the average number of products exported from SSA. The country's main export products are coffee, cotton, diamond, and timber, representing about 90 percent of export revenues. CAR's lack of diversification is also reflected in its number of markets: it has access to twenty-eight markets, while the average number of markets are fifty and thirty-five in SSA and FCV countries, respectively. Rethinking economic diversification in CAR would help the authorities reduce the country's vulnerability to international price shocks, boost regional integration and cross-country trade, and strengthen the pace of the recovery. Economic diversification in CAR is critical to sustain economic performance, reduce poverty, and break the cycle of insecurity and violence.

2.1.1 Sustain economic performance and reduce poverty

CAR's economic performance has remained subdued. This is reflected in its low GDP growth, declining exports, and limited and declining participation in global value chains (GVCs) (Box 4). The country has faced severe difficulties in achieving sustainable economic growth for extended periods. Its average GDP growth rate barely reached 1.2 percent between 1960 and 2018, and the country has never experienced an episode of sustained growth since independence in 1960. After registering a peak of US$643 in 1977, CAR's GDP per capita fell to US$406 in 2003 (37 percent below the level in 1977), before gradually increasing to US$528 in 2012 (Figure 11).[15] With the 2013 crisis, real GDP per capita plummeted to US$335.

Over the past two decades, CAR's exports have declined substantially. The sharp decline in exports is mainly explained by a combination of political

[10] World Bank 2018.
[11] Freire 2019.
[12] Jacks 2011.
[13] Lederman and Maloney 2007.
[14] United Nations Development Programme 2013.

[15] World Bank 2019. CAR Economic Update. Sustained growth periods are identified under two conditions: (1) the existence of structural breaks that occur when a country time series abruptly changes at a point in time. The changes may be identified as "growth upbreaks" if they result in a period of higher growth than before the structural break. The opposite situation refers to "down-breaks," a situation in which growth is lower than before the structural break; and (2) periods of time that begin with a growth upbreak followed by a period with at least 2 percent average per capita income growth. Such periods are identified as growth spells.

BOX 4

The concept of global value chains

A GVC is a production process that embodies value added (foreign and domestic) from at least two countries (WDR 2019). *Foreign value added (FVA)* refers to the FVA embedded in a country's gross exports. *Domestic value added (DVA)* refers to the sum of exports that are absorbed in the destination country and exports that are used as intermediate inputs for exports to third countries (DVX).

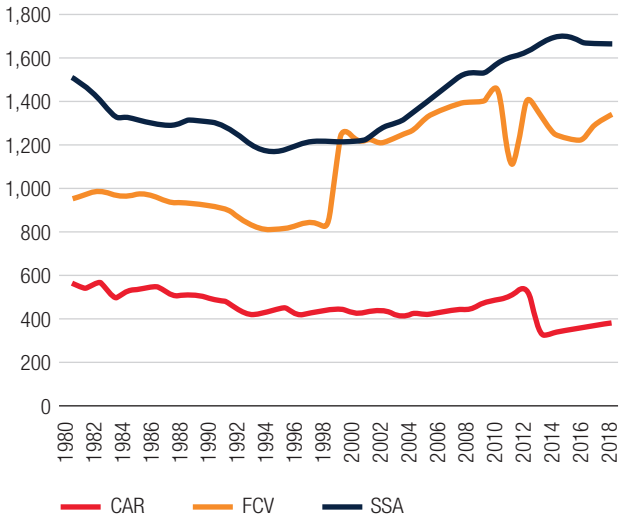
A country's level of participation in GVCs can be assessed by measuring backward and forward linkages. A *backward linkage* is the share of FVA embodied in the country's total exports. It is an approximate measure of the portion of imported intermediate inputs used for exports (i.e., the FVA content of exports). Backward linkages, particularly for developing countries, provide quality inputs, technology spillovers, learning externalities, and productivity gains. They are also usually linked with several measures of structural transformation. A *forward linkage* is the share of exports used by another country (indirect value added) in the production of export goods. It is an approximate measure of a country's share of value added embodied in another country's exports. Forward linkages result in technology spillovers, although their benefits, particularly for developing countries, depend on the nature of the export produces and where the country is located in the value-added chain. For example, for a typical developing country like CAR, a high level of forward integration can be associated with higher resource dependence and a low level of export diversification and structural change (Engel 2016).

The combination of backward and forward linkages provides a measure of a country's level of participation in GVCs. The larger the ratio, the higher the country's intensity of involvement in GVCs. However, countries with a high level of participation in GVCs also risk being stuck in low value-added tasks (i.e., loss of DVA) if there is no upgrading or accumulation of new capacity. The degree to which a country benefits from GVC participation also depends on the country's ability to upgrade and its location in the GVC.

The **GVC Position Index,** proposed by Koopman et al (2014), indicates whether a country specializes in the first or last stage of production. It captures values that facilitate sustainable growth and quality employment. CAR's position in GVCs can be measured with the following equation:

$$Position\ Index = \ln\left(1+\frac{DVX}{Gross\ Exports}\right) - \ln\left(1+\frac{FVA}{Gross\ Exports}\right)$$

FIGURE 11 GDP per capita, 1980–2018



Source: World Bank staff calculations based on WDI data.
Note: CAR: Central African Republic; and violence.

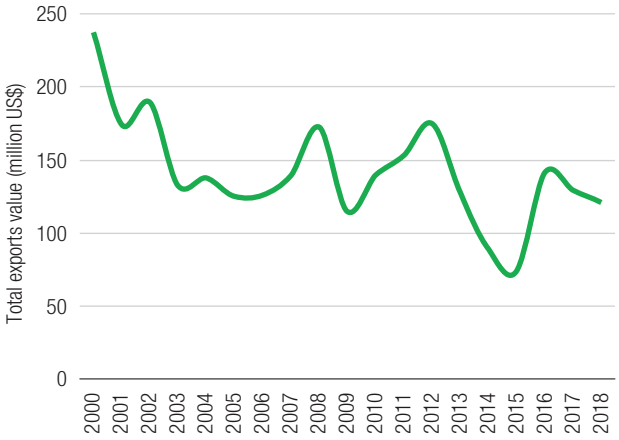
instability, the global economic crisis in 2008 (which led to a collapse of diamond prices in the global economy), and governance and transparency issues in the diamond industry. Between 2000 and 2018, CAR's total exports were reduced by half: from US$237.7 million in 2000 to US$121 million in 2018 (Figure 12.a). Its exports reached their lowest level in 2015 (US$74 million), as renewed insecurity inhibited economic activities. In parallel, CAR's total imports increased from US$79 million in 2000 to about US$235 million in 2018. Overall, the total trade deficit has been increasing and reached its all-time high in 2011.

The country's participation in GVCs is limited and has been declining over the years. GVCs offer developing countries a pathway out of having to specialize in a single industry, with all the associated costs and risks.[16] It allows them to specialize in simpler parts and tasks, making it easier for countries at an early

[16] Cheng et al. 2015.

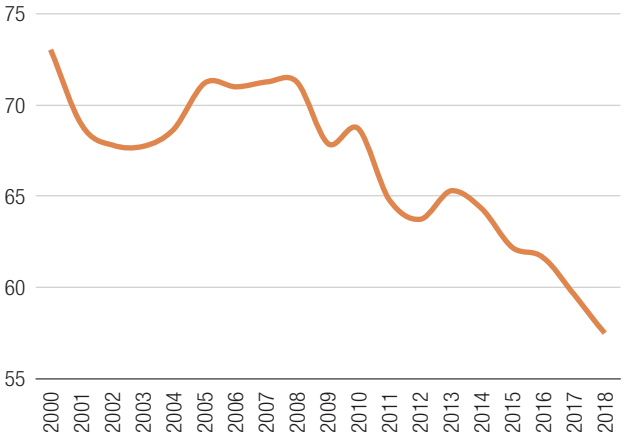
FIGURE 12 CAR's exports and participation in global value chains, 2000–2018

a. CAR's total exports, 2000–2018



Source: World Bank staff using data from UN COMTRADE, 2000–2018.

b. Global participation index



Source: World Bank staff calculation using Eora database, 2000–2018.

stage of development to participate in trade. GVCs also enable developing countries to take advantage of developed countries' advanced industries rather than having to build up their own industries.[17] Participation in GVCs can generate quality jobs, increase productivity (through scale effects from increased productivity and expanded output), and reduce poverty by boosting income and productive employment.[18] However, the share of CAR's exports involved in international production (i.e., sum of backward and forward participation, which is an indicator of the level of participation in GVCs) fell from 73 percent in 2000 to 58 percent in 2018 (Figure 12.b). While the country's level of participation in GVCs seems high compared to oil exporters in CEMAC, it is distorted by the short value chain of diamonds, which have been among CAR's top export products.

Economic diversification can further reduce poverty and vulnerabilities by accelerating export and economic growth. Poverty in CAR remains pervasive and elevated. While the share of the population living in extreme poverty fell from 71.5 percent in 2018 to 70.9 percent in 2019, it remains above the average of both FCV (46 percent in 2019) and CEMAC (37 percent) countries. In addition to political stability, CAR's poverty outlook can be improved by more economic diversification, as economic diversification is linked with export and economic growth (Figure 13). A dynamic export sector has an impact on the income of poor households through various channels: (i) economic growth, (ii) relative prices, (iii) macroeconomic stability, and (iv) an increase in government revenues.[19] Similarly, sustained economic growth is, on average, a powerful tool for poverty alleviation in developing countries. As such, in addition to political stability, CAR's economic outlook and ability to sustainably reduce poverty and vulnerability strongly hinge on increased economic diversification and participation in GVCs. Both economic diversification and participation in GVCs are associated with income growth and poverty reduction. As highlighted in the World Development Report 2020, export diversification and GVC participation have been able to drive pro-poor growth and reduce poverty over the past thirty years. However, the composition of exports matter, and policy interventions are critical to address related challenges, attenuate the costs for the most vulnerable, and ensure that the benefits of GVC participation are shared.[20]

Along with fiscal stability, economic diversification is critical to grow CAR's participation in international trade and achieve long-term sustainable development. Economic diversification is critical for CAR for at least two reasons. First, the high level of export concentration (i.e., diamonds and wood)

[17] World Development Report 2020. https://www.worldbank.org/en/publication/wdr2020

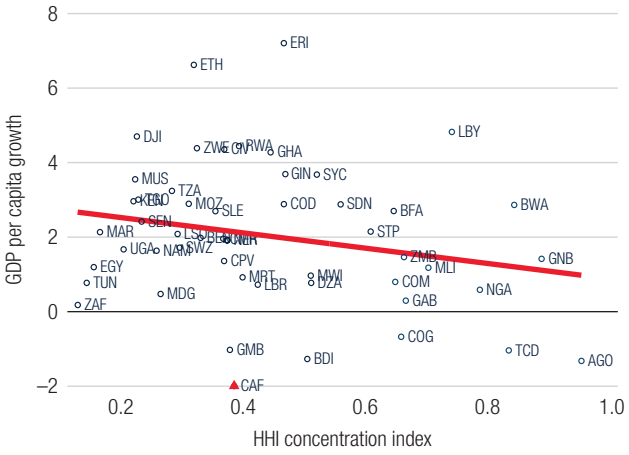
[18] See the World Development Report (2020) for extensive discussion between participation in GVC, quality jobs and productivity.

[19] Winters 2002 and Winters et al 2004.

[20] Among other challenges, participation in GVCs can lead to a reallocation of value-added from labor to capital within countries. Additionally, it can lead to inequality within the labor market, with growing premiums for skills, and limit opportunities to innovate, upgrade, and diversify, as some firms can be stuck in dead-end tasks. Source: World Development Report 2020.

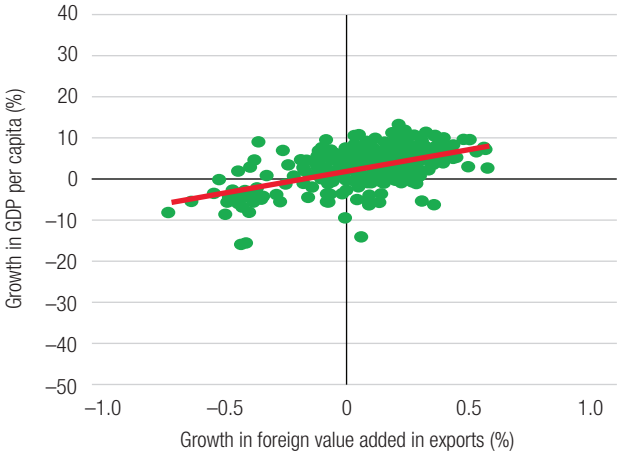
FIGURE 13 Economic diversification and participation in GVCs are associated with income growth and poverty reduction

HHI concentration index and GDP per capita growth



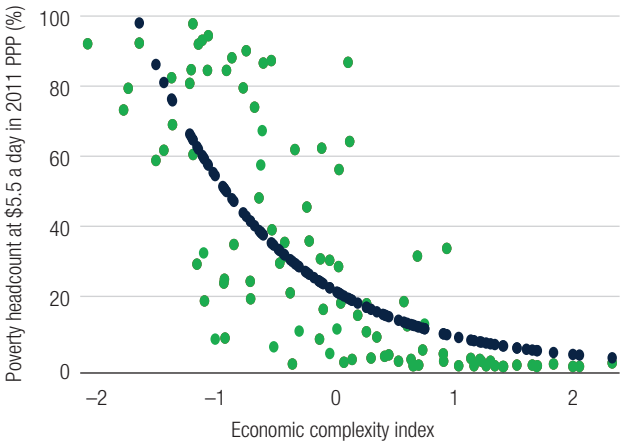
Source: World Bank staff calculations based on WDI data.

Foreign value added in exports and GDP per capita



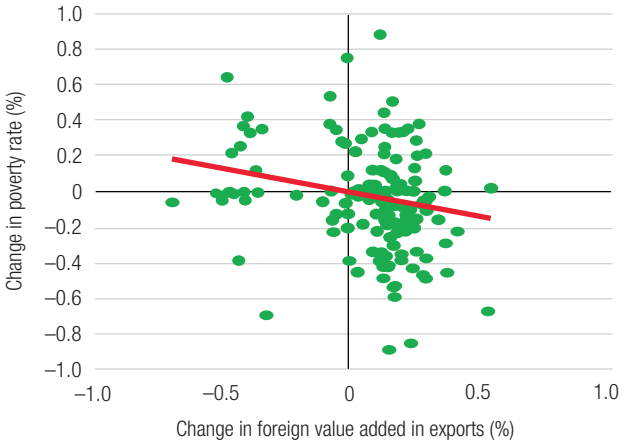
Source: World Development Report 2020.

Economic complexity index and poverty



Source: Adapted from World Bank 2018.

Foreign value added in exports and poverty rate



Source: World Development Report 2020.

makes the economy vulnerable to commodity price shocks that can create negative spillover effects on economic activities. Second, extractive sectors, such as diamonds, have weak links to the rest of the economy and provide limited opportunities for job creation in the formal sector. Therefore, investments in these sectors have a low impact on the growth and productivity of other industries, leading to a high concentration of GDP and a low impact on job creation.

2.1.2 Break the cycle of insecurity and violence

The country's economic performance has been marked by successive cycles of violence and conflict since independence. With a combination of seven coups d'état tat and only two peaceful transitions of power, CAR's economy has been characterized by successive episodes of political instability since 1960. Since the first coup that ousted President Jan-Bedel Bokassa in 1979, CAR has experienced political instability, ethnic conflict, coups, and state disintegration. In the late 1990s, rival national leaders were fighting each other by exploiting small local conflicts. Violence accelerated and reached its highest level in 2001, when the country experienced a bloody coup attempt. The lack of implementation of the peace agreement and the failure of the demobilization, disarmament, and reintegration process allowed armed groups to rally around their most hardline leaders. As a result, the Seleka rebel coalition was formed in

2012, and the Seleka faction took control over large swaths of territory and seized power in Bangui in 2013. The economy has been adversely affected by the political instability and social unrest, undermining various attempts to set the economy on a sustainable development path. Following the most recent conflict, the country's GDP dropped by about 36.7 percent in 2013, resulting in a collapse of both economic activities and state institutions, with the government controlling less than half of the national territory.

There are several factors behind the country's extreme fragility. The World Bank's fragility assessment[21] of CAR documents six main drivers of conflict and fragility. *First*, the lack of social cohesion at every level of the society aggravates many unresolved conflicts and intercommunal violence. *Second*, political power has been concentrated in a very small elite that has little legitimacy, which distorted the social contract and led to successive episodes of conflict and violence. *Third*, there are disparities between Bangui and the rest of the country, as policy decisions are focused on Bangui, where the provision of goods and services is concentrated. Several provinces have been economically and politically neglected, leading to deep-seated grievances and a conducive environment for the emergence of armed groups in peripheral states. *Fourth*, the elite capture of natural resources, like diamonds, has been a cause of conflict and a means to sustain rebel groups. *Five*, impunity has been ubiquitous in CAR, and the prosecution of criminals has been uneven, facilitating a favorable environment for violence and crime. *Last*, the country has experienced successive episodes of violence, which, along with weak defense and security forces, stimulated weapons trafficking, resulting in a vicious cycle of insecurity and violence.

Economic diversification could be one pathway to address CAR's fragility. In addition to the need for inclusive political settlements, the country needs to diversify its economy to escape the vicious cycle of violence. There is evidence to suggest that the structure of an economy influences the likelihood of conflict.[22] Less diversified countries that depend on the sale of minerals or natural resources, for example, are more likely to face successive civil wars. Access to natural resources provides a source of financing for rebel groups and lowers the opportunity cost of rebellion, undermines accountability and governance, and exacerbates regional fragmentation.[23] Countries with high levels of dependence on natural resources are also more likely to experience income inequality. Moreover, the revenues from natural resources are often seen as unfairly distributed, generating a feeling of exclusion among parts of the population. Also, changes in the value of natural resources can weaken other economic sectors such as manufacturing—an effect known as the "Dutch Disease"—that may result in lower economic growth and eventually conflict. Finally, economies that are dependent on a small number of products such as diamonds or oil may be more vulnerable to terms-of-trade shocks that affect their export earnings. The volatility of commodity prices, combined with a weak national social protection system, can lead to instability, dissatisfaction, and ultimately violence.

Efforts to successfully diversify the country's economy will support job creation and economic transformation, limiting the likelihood of conflict. Frustration and grievances among the population are often the main driver of conflict. By increasing the demand for labor and generating jobs, the opportunity cost of joining a rebellion rises.[24] The costs associated with armed conflict include the labor opportunity costs and economic disruptions caused by warfare. The opportunity cost of rebellion is expected to increase with income, but the high-income population has more to lose than the low-income population. Therefore, an increase in income per capita through economic diversification can lead to a more equal distribution of wealth throughout the society, reducing the likelihood of civil war.

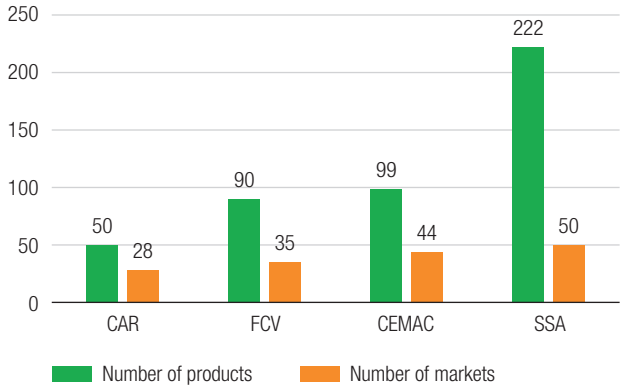
2.2 Measuring economic diversification

CAR is heavily dependent on a few commodities, increasing its vulnerability to shocks and price fluctuations. Its economy is not diversified and relies heavily on commodities such as diamonds and wood. This makes the country's export earnings vulnerable

[21] World Bank. 2016. Central African Republic Fragility Assessment.
[22] Collier and Hoeffler 1998 2000a, 2002a, and 2002b.
[23] Besley and Persson 2009; Fearon and Laitin 2003; Collier and Hoeffler 2004a.
[24] Collier and Hoeffler 1998.

FIGURE 14 Number of products/markets and export concentration

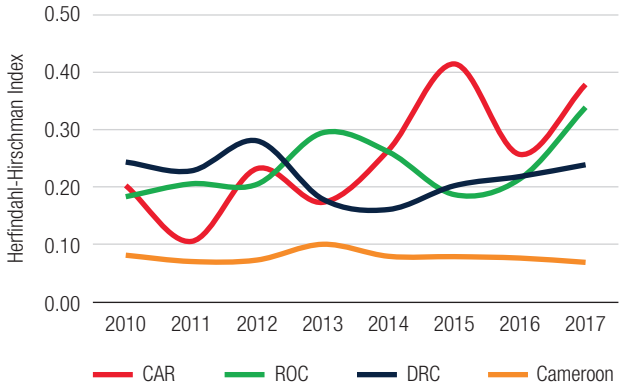
a. Number of products and markets, 2017



Source: World Bank's staff calculations using UN COMTRADE dataset.

Note: This indicator gives the number of partner markets and the number of products exported, counted at the 6-digit HS level. A market is counted if the exporter ships at least one product to that destination in the given year, with a trade value of at least US$10,000. A product is counted if it is exported to at least one destination in the selected year with a value of at least US$10,000. CEMAC: Central African Economic and Monetary Community.

b. Herfindahl-Hirschman index of export concentration, 2010–2017



Source: Calculation using the UN COMTRADE dataset.

Note: ROC: Republic of the Congo. DRC: Democratic Republic of the Congo. Herfindahl-Hirschman Index is on a scale from 0 (large number of firms) to 1 (monopoly).

to international market prices. The volatility of commodity prices has a direct impact on exports, employment, and fiscal revenues. CAR needs to pursue diversification strategies to address the adverse effects of commodity price volatility, sustain the pace of recovery, and reduce poverty.

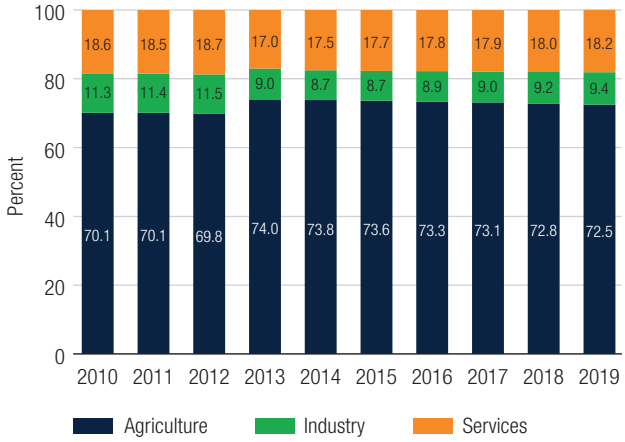
2.2.1 Export diversification

The country's exports are among the least diversified in the world. The level of export diversification can be measured by two indicators: (i) the number of trade partners and (ii) the number of products exported. CAR's performance on these indicators show that its level of economic diversification is below the average of SSA, CEMAC, and FCV countries (Figure 14.a). The number of products exported, measured by the 6-digit Harmonized System level, was 50 for CAR in 2017—less than one-fourth of the average of SSA. CAR's export products go to twenty-eight countries—nearly half of the average of SSA and seven markets less than the average of other FCV countries.

CAR has become less diversified during the last decade. The country's performance on the Herfindahl-Hirschman Index (HHI) of export concentration, which is a measure of the dispersion of trade value across an exporter's partners, shows that its level of diversification has declined over time. In 2010–17, CAR's value on the HHI increased, which is an indication of the country's failure to diversify the range of products it produces and exports (Figure 14.b). The low level of diversification is also an indicator of the country's dependency on its trading partners. At the product level, CAR's vulnerability to trade shocks is high, particularly as the vast majority of export products are going to a limited number of markets.

The society relies heavily on subsistence agriculture and forestry, which remain the backbone of the economy. The agriculture sector is vital for both the economy and people's livelihoods, as the sector accounted for about 42 percent of GDP and 73 percent of total employment in 2019 (Figure 15).

FIGURE 15 Employment by sector, 2010–19



Source: ILOSTAT, Key labor market indicators.

FIGURE 16 Conceptual framework for economic diversification in CAR

Source: World Bank.

However, the sector is underdeveloped, relies primarily on traditional practices, and suffers from a lack of diversification. Agricultural exports represent a small share of the country's GDP and have declined dramatically since 2000. Main agricultural products include the cash crops cotton and coffee, which represent less than 2 percent of GDP. Crops and livestock production are well below pre-crisis levels, and the sector is in dire need of investment and growth-enhancing policies.

Conflict, violence, and instability have had a negative impact on the ability of the agriculture sector to meet domestic food needs. Before the 2013 crisis, 75 percent of all food consumed in the country was produced locally. Between 2013 and 2018, the production of food crops, livestock, and forestry and fishery products fell by 46 percent, 55 percent, and 33 percent, respectively. The industry sector, mainly artisanal diamond mining, breweries, and sawmills, contributed less than 20 percent of the country's GDP in 2019, and services accounted for about 50 percent of GDP, mainly due to the influx of aid and staff from international organizations, humanitarian aid groups, and other non-governmental organizations. CAR needs to rethink its policies aimed at accelerating economic growth (which is barely exceeding population growth), especially in the agriculture sector. Limited growth restricts fiscal space for investment in basic public services and efforts to sustainably reduce poverty, which remains pervasive and elevated.

The country needs to urgently improve the economic resilience of vulnerable groups and escape the fragility trap by diversifying the economy. Economic diversification in CAR will involve shifting the economy away from a single income source and limited products, promoting economic transformation, and boosting productivity, especially in the agriculture and forestry sectors (Figure 16). Effort to diversify the economy should aim to boost productivity, increase agricultural output, and stimulate exports. Diversification will support job creation, especially for youth facing high unemployment or underemployment, and lay the foundation for sustained economic growth and structural transformation. Diversifying CAR's economy will provide a pathway out of poverty for millions of people and help the country escape the fragility trap.

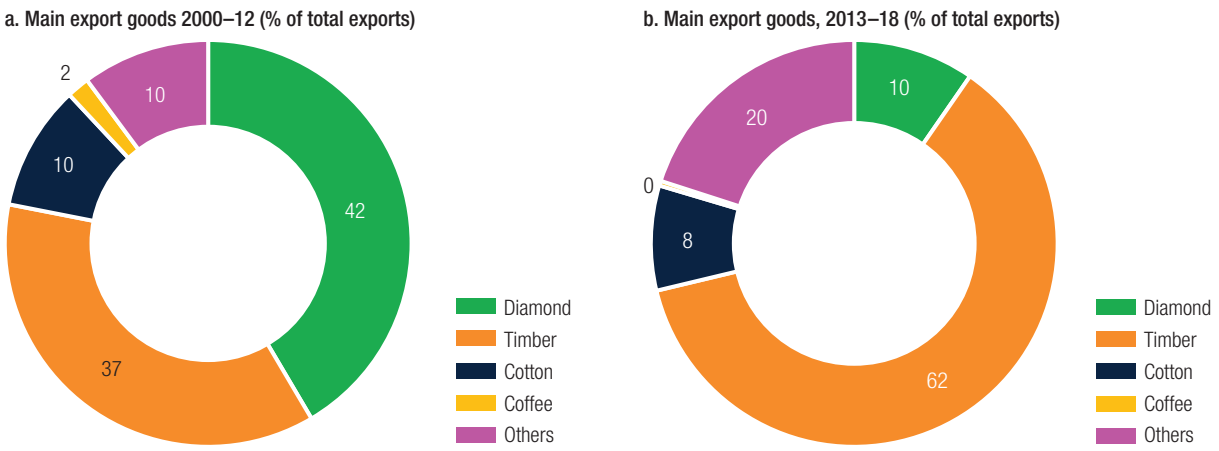
2.2.2 Export profile

The civil war in 2013 reshaped the composition of CAR's exports. While only four products account for about 90 percent of the country's exports (same as in 2013), the relative weight of exports has changed dramatically. Diamonds were the country's main exports in the period before the civil war, but their share of total exports plunged from an average of 42 percent in 2000-12 to an average of only to 10 percent in 2013-18 (Figure 17). By contrast, the share of timber exports increased from 37 percent to 62 percent of total exports over the same period.

The decline in the export of diamonds started several years before the civil war. While diamonds were the most significant contributor to CAR's total exports from 2000 to 2004, their export value declined by 70 percent during this period—from US$169 million in 2000 to US$47 million in 2004 (Figure 18). Since 2005, diamonds have been replaced by timber as the country's main export product.

The country sells its products in only a few overseas markets. Belgium was the top destination for CAR's

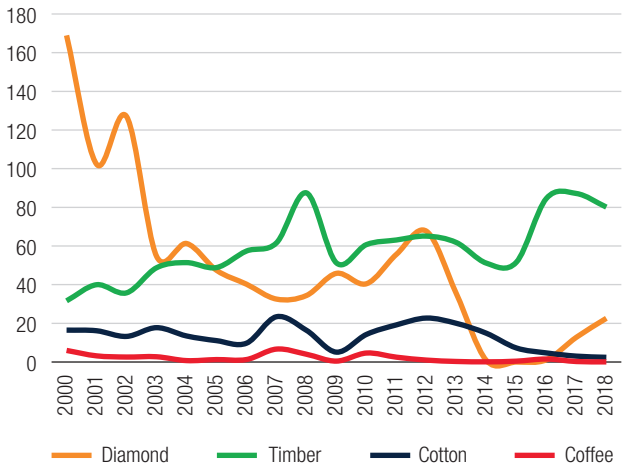
FIGURE 17 Main export goods, 2000–18



Source: World Bank staff calculations using UN COMTRADE dataset, 2000–18.

exports before the civil war: its exports to Belgium represented an average of 40 percent of total exports between 2000 and 2012 (Figure 19). As diamond exports fell during the civil war, the country's exports to Belgium fell to an average of 8 percent of total exports in 2013-18. Since 2012, China has been the main importer of CAR's products, as timber became the country's main export product. Total exports to China have increased steadily, from US$0.3 million in 2000 to US$28.3 million in 2017. France, Indonesia, and Spain are also among the top five export destinations, and cotton and coffee are exported primarily to France and Indonesia, respectively.

FIGURE 18 Trend of top export products, 2000–18



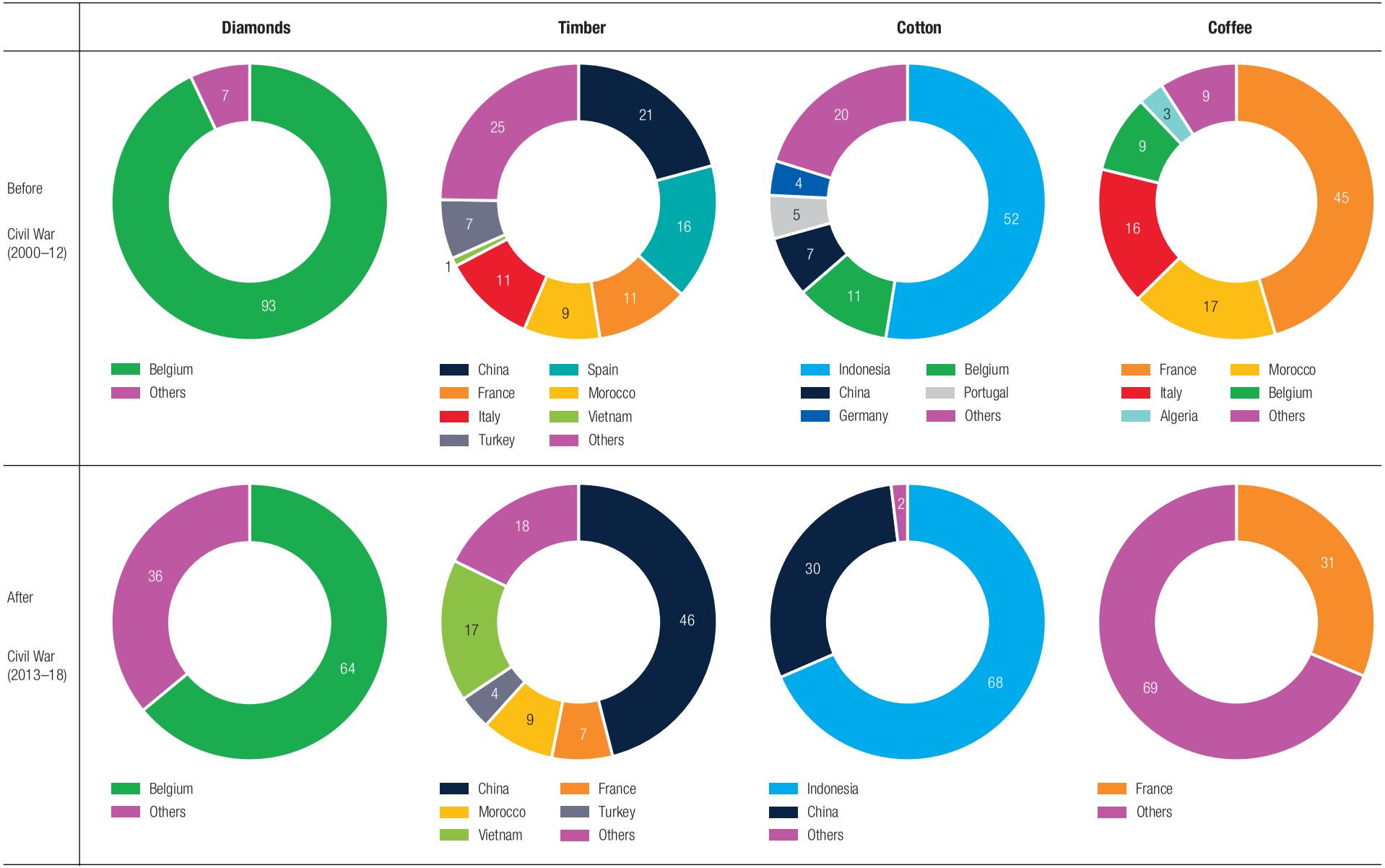
Source: World bank staff using the UN COMTRADE dataset.

2.2.3 Engagement in global value chains

Forward integration represents a large share of CAR's participation in GVCs, which creates relatively little value added for the country. The country had a higher level of forward than backward linkages in 2000-18, reflecting the negative impact of its dependency on natural resource exports such as diamonds and raw wood products. CAR's high level of forward linkages is also an indicator of a low level of structural transformation and diversification. The share of value added embodied in other country's exports (forward linkages) declined from 61 percent in 2000 to 42 percent in 2018 (Figure 20.a). This is related to the decline in diamond exports, mainly to Belgium, which were re-exported to third countries. By contrast, the country's low level of backward linkages (i.e., foreign value content of exports) reflects the country's limited use of foreign intermediate inputs in the production of export goods and services. Despite its low share, CAR's backward integration is, on average, growing. Backward linkages grew from 12 percent in 2000 to 16 percent in 2018, equivalent to a 33 percent increase, implying that firms in CAR have, on average, increased their use of foreign inputs in their production.[25]

[25] Evidence shows that imported inputs play a significant role in boosting firms' productivity. See, for instance, Amity and Konings (2007); Kasahara and Rodrigue (2008); and Helpern (2015).

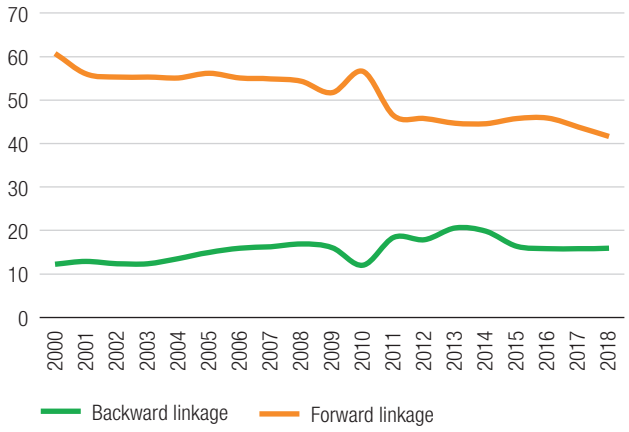
FIGURE 19 CAR's top export destinations before and after the 2013 civil war



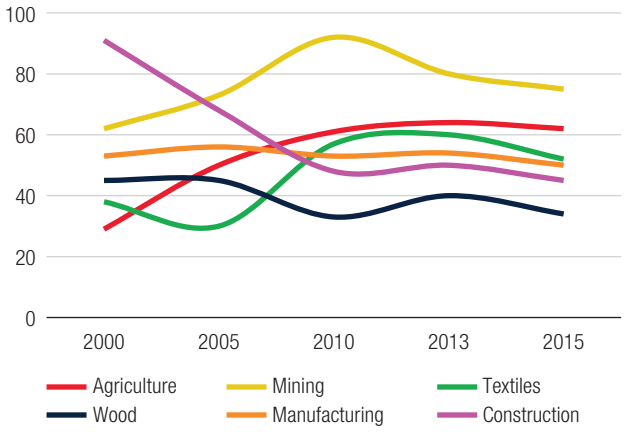
Source: World bank staff calculations using UN COMTRADE dataset, 2000–18.

FIGURE 20 CAR's participation and integration in global value chains by sector

a. Backward and forward linkages, 2000–18



b. Integration in global value chains by sector, 2000–15



Source: World Bank staff calculations using the Eora database.

The mining sector has the highest level and the wood sector the lowest level of GVC participation in CAR. Mining is the sector with the highest level of GVC participation, although its share has been declining recently due to restrictions imposed by the Kimberley Process Certification Scheme (Figure 20.b).[26] The wood sector has the lowest level of integration in GVCs in CAR, while the agriculture sector is becoming more integrated, highlighting the potential of agricultural exports in efforts to diversify the economy. GVC participation in the construction sector has declined over time.

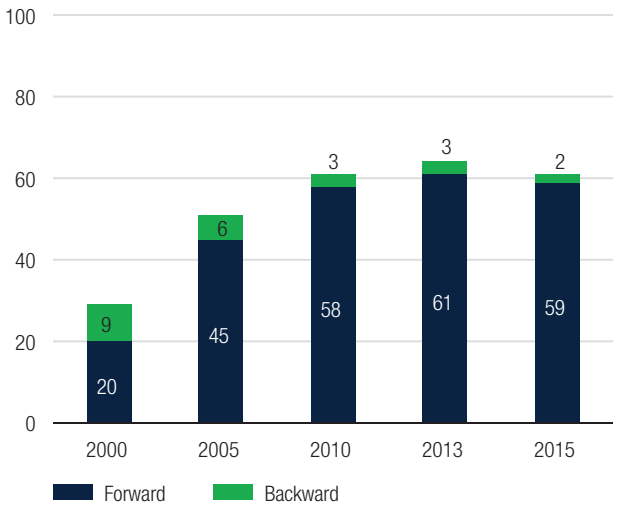
The manufacturing and textile sectors show the highest level of backward linkages, while agriculture shows the lowest. Sectors vary substantially in their backward and forward linkages (Figure 21). Among the twenty-six sectors, firms in the textile sector make relatively heavy use of imported intermediate inputs, accounting for 30 percent of the total value of exports in 2015 There is also a relatively high share of foreign value added (FVA) embedded in the country's manufacturing exports. By contrast, there is very low use of modern foreign inputs in the agriculture sector, accounting for a mere 2 percent of the total value of export. Over the past two decades, the share of foreign content in exports increased by more than 50 percent in the textile sector, while it declined by 70 percent the agriculture sector. The share of foreign content was relatively stable in other sectors, such as wood and construction, in the same period. A higher share of FVA (backward linkages) in exports accelerates productivity growth and facilitates structural change. It is also strongly linked with structural transformation and the discovery of new exports.

To improve its participation in GVCs, CAR needs to reinforce agricultural value chains and transition from commodities to simple manufacturing. The participation of the country's agriculture sector in GVCs has been uneven over the past two decades because of the succession of conflict, structural governance issues, large arrears, and limited access to finance and oversight, especially in the cotton and coffee sectors. CAR could tap into its abundant water and land resources to reinforce agricultural value chains by: (i) restructuring the cotton sector to facilitate and stimulate investment in the sector and related products such as carded cotton, wool yarn, and yarn of textile fibers; and (ii) developing commercially attractive yields such as cassava, groundnuts, sorghum, millet, maize, sesame, plantains, tobacco, and palm oil. Moreover, CAR could transition from exporting raw commodities to developing value-added goods and services by improving the manufacturing sector, especially in relation to agribusiness and wood processing. According to latest available data, only 23 percent of wood production takes place in the country, even though the law states that at least 70 percent of production must be in-country. Policies aimed at improving the wood processing sector could increase CAR's participation in GVCs while facilitating the emergence of industries focused on plywood, cork, simply shaped wood, and fertilizer.

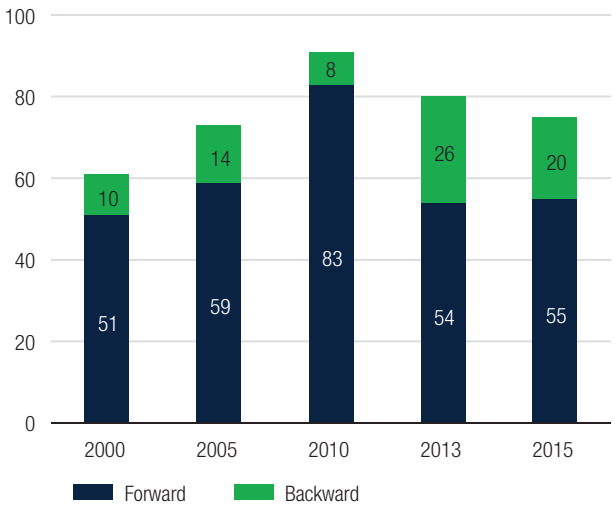
[26] The Kimberley Process Certification Scheme was established in 2003 to prevent the spread of so-called "conflict diamonds."

FIGURE 21 Backward and forward linkages by sector, 2000–2015

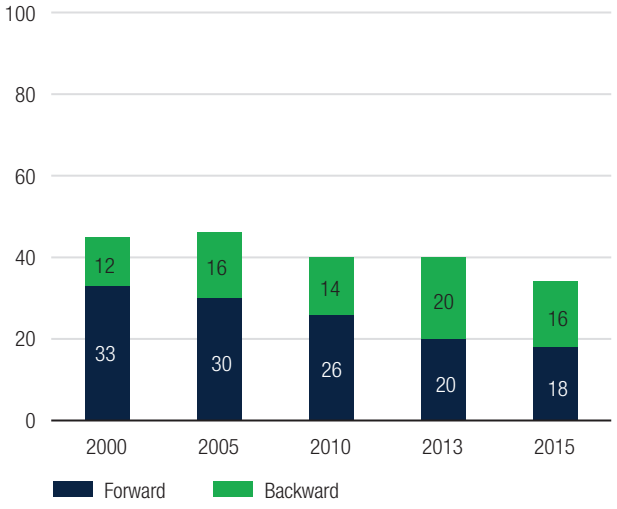
a. Agriculture



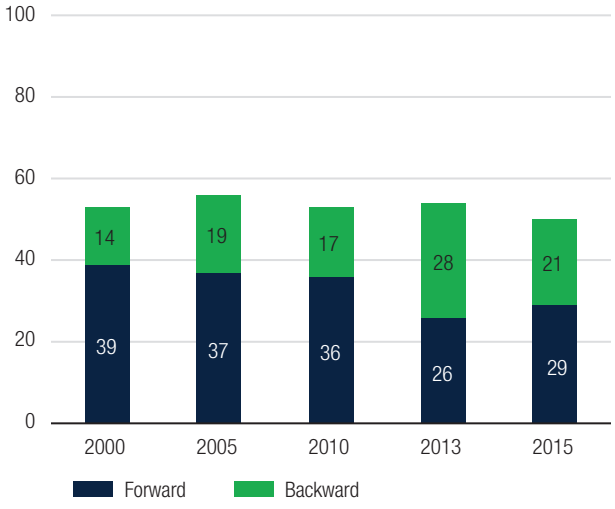
b. Mining



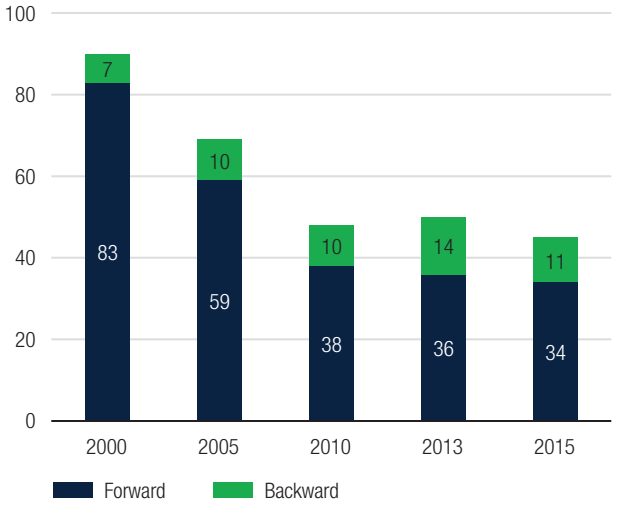
c. Wood



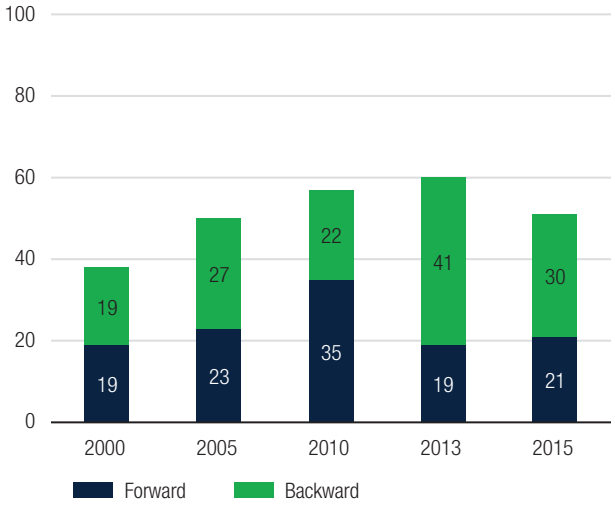
d. Manufacturing



e. Construction

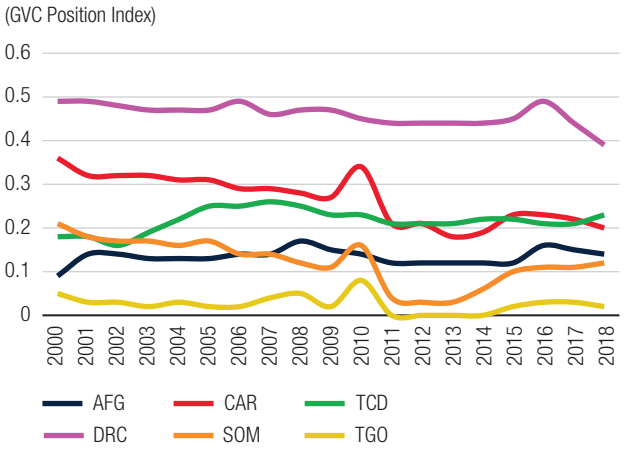


f. Textile



Source: World Bank staff calculations using the Eora database.

FIGURE 22 CAR's participation in global value chains has declined



Source: Authors' calculations using the Eora database.
Note: DRC: Democratic Republic of the Congo; TCD: Chad; AFG: Afghanistan; SOM: Somalia; TGO: Togo.

CAR's economy is focused on the first stages of the production process. The country's positive GVC Position Index suggests it is placed in the upstream position of GVC participation. However, its score on the index declined significantly following the 2013 crisis, indicating a progressive switch from the upstream to downstream, driven by limited backward linkages (Figure 22). Compared to a selective number of FCV countries in SSA, CAR's position in production chains has deteriorated over the two past decades.

2.2.4 Export competitiveness

An understanding of structural economic characteristics can inform CAR's diversification strategies. To develop a sound diversification strategy, the authorities need to measure the country's export competitiveness. There are several different measures that can be used to assess the competitiveness of a country's exports, including an evaluation of export quality, economic fitness, and product space.

Export quality

Economic diversification is achieved not just through new products and trading partners but also through quality improvements to existing products. Improving the quality[27] of existing export products (i.e., upgrading) can improve the country's comparative advantage, boost export earnings, and facilitate successful structural transformation. Upgrading is also critical to close the gap with the world quality frontier.[28] The export quality gap between CAR and the world quality frontier widened between 2002 and 2013 (Figure 23.a). Yet, the overall quality of CAR's exports was relatively higher than that of its peers in 2000-10. The country's export quality has, however, been below the average of SSA and FCV countries since 2010, although it remains above the average of CEMAC countries.

Efforts to upgrade exports are often more successful in manufacturing and agriculture than in the mineral and natural resources sectors. The potential for upgrading exports and narrowing the gap with the world quality frontier depends on the country's development path as well as on the products' quality differentiation (i.e., quality ladder). Manufacturing goods and some agricultural products have long quality ladders, which means that economies with a high share of manufacturing and agricultural products tend to have higher potential for quality upgrading than economies heavily dependent on natural resources and minerals.[29] For countries like CAR that are at the early stages of socioeconomic development, diversifying into products with long quality ladders, such as agro-processing, garments, and simple machines, is crucial to reap the benefits from quality upgrading.

The quality of the country's wood-based products is relatively far from the world quality frontier. Wood has been CAR's top export product since 2005, and it accounted for 68.7 percent of total exports in 2017. However, the unit value of wood-based products is relatively low and far from the world frontier: 0.5 for shaped wood, 0.35 for manufactured wood, 0.3 for rough wood, and 0.18 for plywood and veneer.

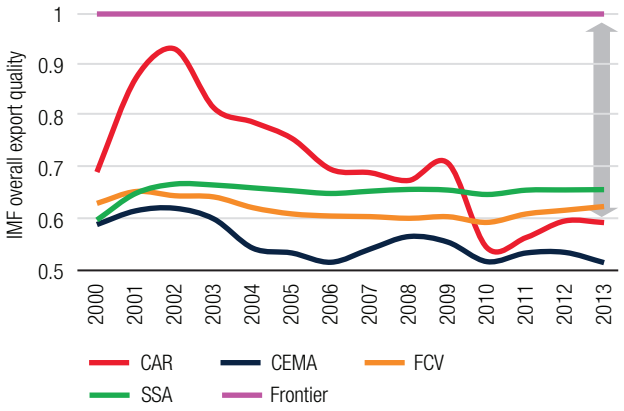
[27] Export quality cannot be directly observed and needs to be estimated. This can be done by using unit values for average export prices for each product category as the closest observable proxy. However, prices may be changed by factors other than quality, such as production cost differences or firms' pricing strategies. The database developed by the IMF considers these other factors and makes some important adjustments. For example, for any given product, the trade price (unit value) is adjusted for the exporter's GDP and product complexity index to capture cross-country variations in production. The distance between trading partners is also accounted for using gravity equations to accommodate selection bias.

[28] The world quality frontier is defined as the 90th percentile of quality in each product-year combination. An increase in a country's measured quality means its quality is increasing relative to the world frontier.

[29] Khandelwal 2010.

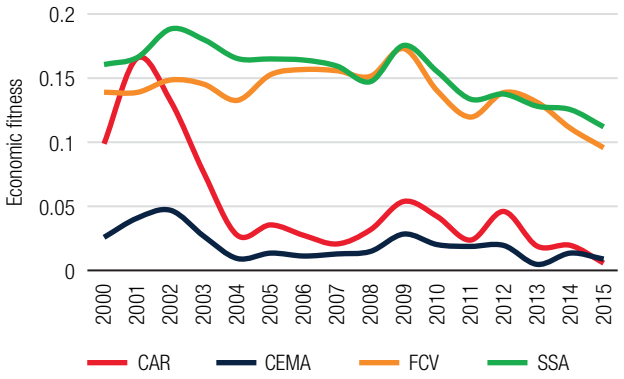
FIGURE 23 Export quality and economic fitness

a. Export quality and distance to world quality frontier, 2000–13



Source: Authors' calculations using the IMF Quality Index, 2015.

b. Economic fitness index, 2000–15



Source: Authors' calculation using World Bank, Economic Fitness Project (2018).

This suggests that CAR may gain considerably from upgrading the quality (i.e., intensive diversification) of its wood-based products by transitioning to higher value-added products such as pulp and paper, medium-tech engineered wood products, and medium-tech furniture.

Economic fitness

CAR's score on the Economic Fitness Index (EFI) is relatively low. The EFI[30] is a measure of a country's diversification and capacity to produce sophisticated goods or innovate in a complex field that is critical for diversification efforts. CAR's EFI score of 0.05 is below the average of 0.15 in SSA and 0.14 in FCV countries (Figure 23.b). This suggests that the country is not using its access to raw materials to develop its industrial capacity and improve its competitiveness. Moreover, CAR's level of competitiveness has been declining since 2002 due to a combination of political instability, ineffective private-sector development policies, and the ongoing civil war that started in 2013.

Product space

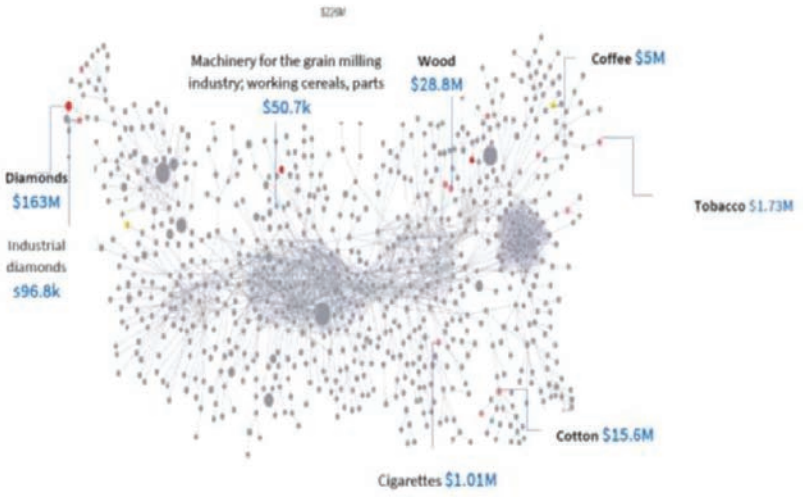
The country's product space[31] is relatively sparse, peripheral, and scattered, but there are possible paths to economic diversification. An analysis of a country's product space can identify products that have strong linkages to the production of other products, and it can show which exports have a comparative advantage. Focusing on upgrading these products would have a significant impact on improving domestic capacity. In the visualization of the product space, complex and highly networked products are located in the middle. In Figure 24, the colored nodes represent export products with a comparative advantage that can be qualified as "revealed" (>1 in both years). In 2000, CAR had relatively few revealed products in the middle of the product space, as diamonds represented 72.5 percent of total exports. Diamonds have a peripheral location in the product space, meaning that they do little to facilitate diversification into other

[30] The EFI is calculated based on the diversity and reach of a country's exports. Countries that score high on the EFI have the capability to produce a diverse portfolio of products, upgrade their exports into complex goods, and attain a good competitive position relative to other countries (Tacchella et al. 2012). By contrast, countries that score low on the EFI tend to have a low capability to upgrade and diversify their exports. The index was developed by the World Bank using data from the United Nation's COMTRADE list of export products. This dataset constitutes a bipartite network of countries and products, goods, and services. A suitably designed mathematical algorithm applied to this network produces a measurement of economic fitness and the complexity of products. A comparison of economic fitness and GDP reveals insights into the development and growth trajectory of countries (Techhalla et al. 2012).

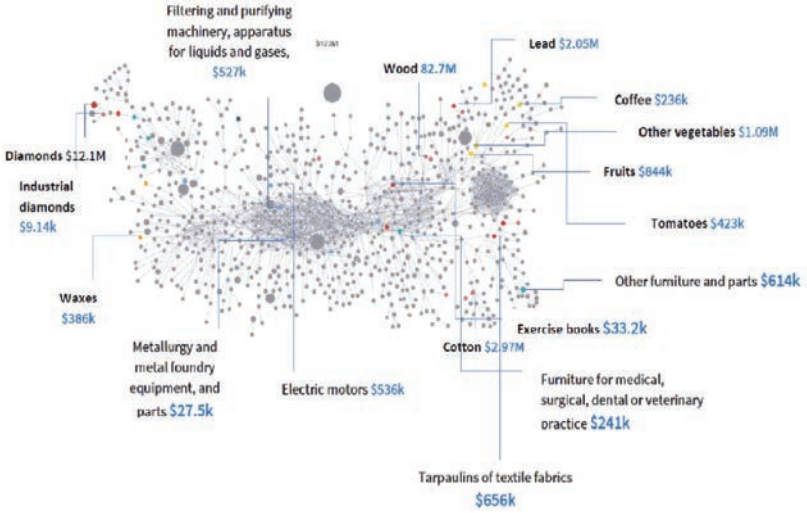
[31] The product space represents the connection between products based on the know-how required to produce them. It helps to visualize the location of a country's export products with revealed comparative advantage (RCA > 1). In the visualization of the product space, products that require similar production knowledge, technology, institutions, and infrastructure are positioned together and have same color in the product space. Complex and highly networked products are located in the middle. For example, machinery, electronics, chemicals, and textiles that are central to the production of many other goods are located in the middle of the product space. By contrast, agricultural and mineral products are usually positioned at the periphery of the product space, suggesting that the inputs required for the production of these goods are less central to the production of many other goods. As such, countries that have few exports in the middle of the product space have fewer opportunities for diversification than countries with more export products in the middle of the product space.

FIGURE 24 Product space: CAR vs. Rwanda, 2000 and 2017

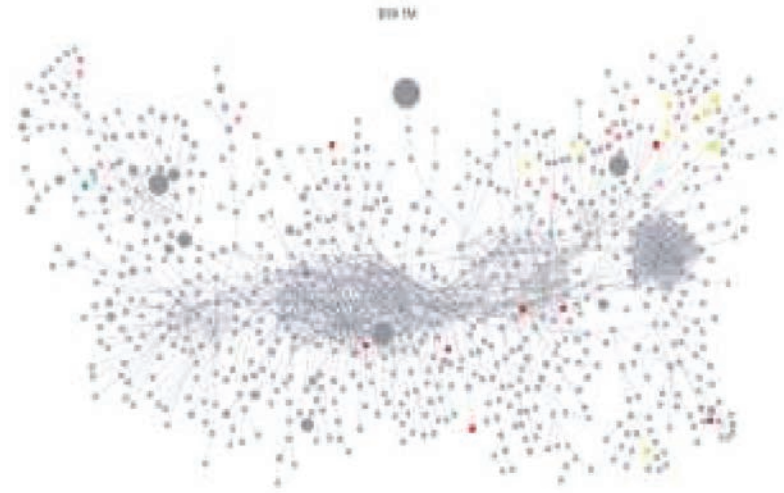
a. CAR's product space, 2000



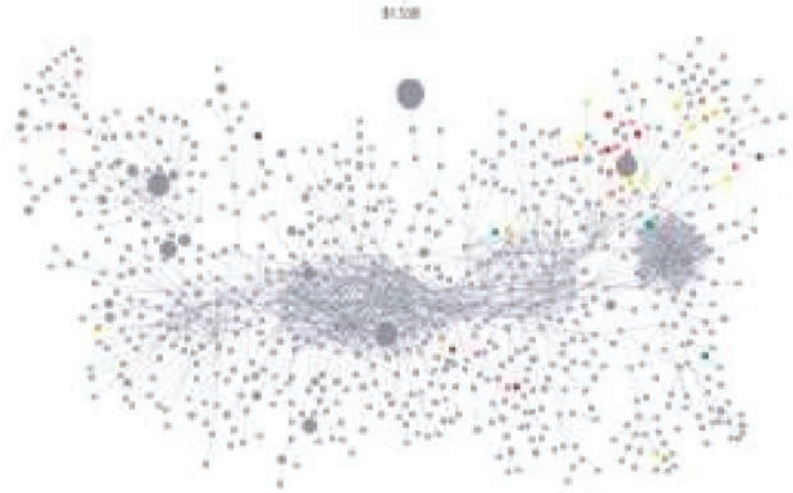
b. CAR's product space, 2017



c. Rwanda's product space, 2000



d. Rwanda's product space, 2017



Source: Atlas of Economic Complexity. Exports data at the SITC4 level.

products. Other products with a high comparative advantage in 2000 included wood, raw cotton, and coffee, and they were also located at the periphery of the product space. CAR's product space in 2017 provides some signals to the country's emerging activities and possible paths to economic diversification. As of 2017, CAR had revealed comparative advantage (RCA) in more than forty product "communities" (i.e., groups that require related productive knowledge), more than double the number of product communities in 2000. Some of the main export products include wax; furniture and related parts; machines for working minerals; metallurgy; paint and varnish; centrifuges; and various agricultural productssuch as tomatoes, carrots and turnips, legumins, avocados and pineapples, and mangoes. However, an increase in export products between 2000 and 2017 should not be strictly interpreted as an improvement in economic diversification, as the value associated with these products remains very low.

Rwanda is often referred to as a post-conflict success story in export growth that CAR could learn from and potentially emulate. Rwanda and CAR are similar in term of several characteristics, including both being landlocked countries and having endured civil wars. Yet, Rwanda achieved an impressive growth rate of above 8 percent in 2018. Moreover, the country demonstrated enormous export growth and a considerable level of diversification between 2000 and 2017 (Figure 24.c and .d). Its exports have increased by more than 2,000 percent, from $59.1 million in 2000 to $1.53 billion in 2017, while CAR's exports fell by 47 percent in the same period. Rwanda is exporting products that have a lot of primary connections with other products. For example, the country exported overcoats in 2017 that had a primary connection with more than thirty-five other products. Studies show that political stability; liberalization; improved education and social protection; women's empowerment; and the use of SOEs to intervene in strategic sectors have been some of the reasons for Rwanda's success.[32]

[32] Wicks 2014; Behuria and Goodfellow 2016.

2.3 Opportunities for diversification

CAR can diversify its economy by upgrading existing exports and investing in emerging products. This section assesses the opportunity for export diversification in CAR by improving existing export products and leveraging high-potential products. Aside from existing exports, it examines the role of products with recently acquired comparative advantage in diversifying the country's economy. The feasibility analysis is based on the proximity of high-potential products to CAR's existing exports.

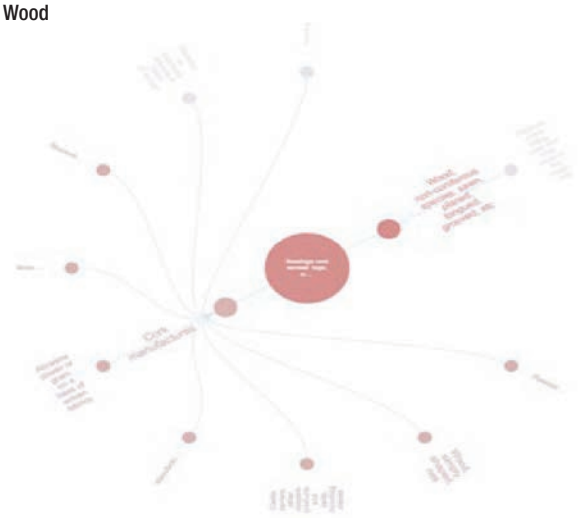
2.3.1 Export diversification based on existing exports

Wood and cotton are key export products that have a high potential for new specializations. Targeting products that are connected to other products opens a path for broad-based diversification. Wood is connected to more than ten other products such as plywood, cork-related products, simply shaped wood, fertilizers, and decorative wood products (Figure 25). Therefore, a specialization in wood may lead to the discovery of other products that are positioned in the middle of the product space. For example, cork and furniture for medical, surgical, dental, or veterinary practices are connected to more than fifty other products, with potential for broad-based diversification. Raw cotton is another key product with potential for CAR's export diversification, as it is connected to more than ten other products, including carded cotton, wool yarn, and yarn of textile fibers. Cotton is also the most commonly used raw material for fabric and garments, which are central to the production of many other products.

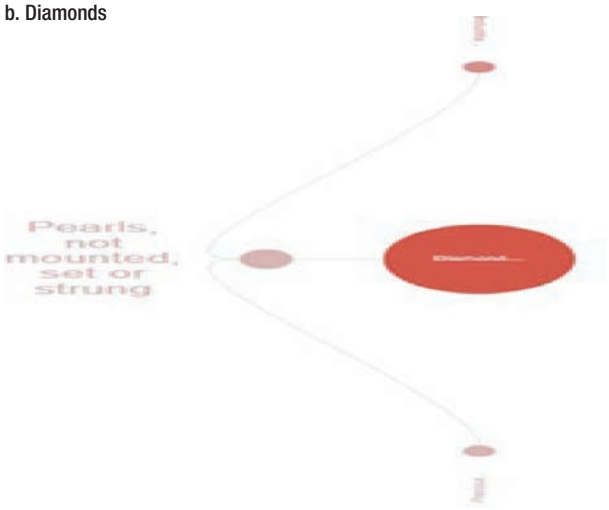
While diamonds and coffee are only related to a few other products, they may offer valuable opportunities for niche markets. These products may not offer an optimal diversification strategy, but CAR's diamond exports could be improved by developing a niche market for small diamonds. The country could also build on its comparative advantage in diamonds by deeper participation in

FIGURE 25 The proximity of diamonds, wood, textile, and coffee

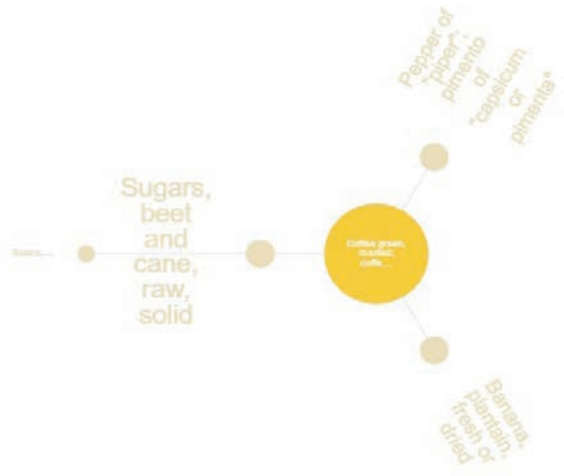
a. Wood



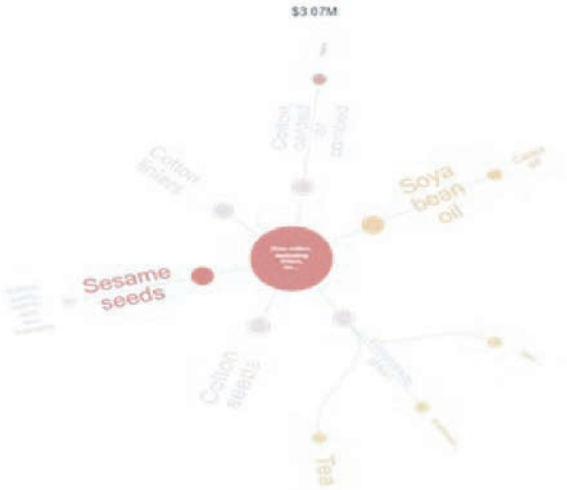
b. Diamonds



c. Coffee

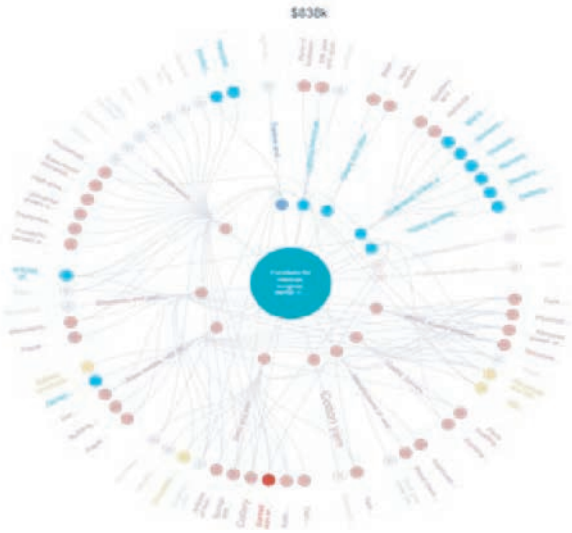


d. Raw cotton



e. Garment made of textile

f. Furniture



Source: Atlas of Economic Complexity. Exports data at the SITC4 level.

the GVC of diamonds, including diamond trading, cutting, polishing, and retailing. Similarly, CAR could invest in market strategies that help coffee producers and related businesses and stakeholders understand the growing demand of niche markets and build on the country's reputation as a source of specialty coffee.

2.3.2 Export diversification based on emerging exports

Emerging products with a high RCA[33] represent an opportunity for diversification. Based on the latest available data, CAR appears to have a high RCA in vegetable oil (i.e., wax and fixed vegetable oil), fruits (i.e., carrots, tomatoes, oranges, and mandarins), and manufacturing products (e.g., textile fabrics, exercise books, fencing wire, electric motors, wigs, and lead). However, most of these products represent a small share of total exports. For example, CAR has a high RCA in wax and wigs, but their share of total exports is below 1 percent (Table 4). The authorities should consider expanding the markets of products with a high RCA.

A recovery of the cotton industry may complement diversification efforts. The northern part of CAR used to be a cotton-producing region, and cotton was the highest revenue-generating crop for farmers in this region. However, most of the main factories were destroyed due to frequent conflicts. Restoring cotton factories and restarting the industry would benefit the country's efforts to diversify its exports, as cotton is connected with many other product lines, from oil to cotton liners.

TABLE 4 CAR's exports with revealed comparative advantage (RCA > 1), 2017

Export product	Export (US$1,000)	Export share (%)	RCA
Emerging Products			
Waxes	386,000	0.32	159
Wigs	1,014	0.95	49
Lead and lead alloys	2,050	1.7	38.9
Carrots and turnips	335	0.28	28.1
Legumes	248	0.21	22.6
Tarpaulins of textile fabrics	656	0.55	22.3
Fencing wire	20	0.02	16
Munitions of War	702	0.58	14
Prefabricated buildings	482	0.4	8.98
Plastic sanitary and toilet articles	223	0.18	8.21
Baths, sinks	223	0.18	8.13
Tomatoes	423	0.35	6.84
Other fresh or chilled vegetables	1	0.9	5.02
Medical or surgical furniture	124	0.1	4.75
Oranges, mandarins,	303	0.25	4.59
Fruit, fresh or dried	844	0.7	2.8
electric motors	536	0.45	1.55
Exercise books and book covers	33	0.1	1.06
Top Exports			
Wood	82,700	68.7	32.7
Diamonds	12,700	10.0	13
Raw Cotton	2,970	2.46	33.1
Coffee	236	0.2	1.08

Source: World Bank staff using Atlas of Economic Complexity. Exports data at the SITC4 level.

2.3.3 Discovering new markets

Opportunities in neighboring countries

Countries in Europe and Asia are among CAR's top export destinations. For the last two decades, CAR's main export destinations have been Belgium, France, Spain, and Germany in Europe and China, Indonesia, and Vietnam in Asia (Table 5). This orientation toward distant markets naturally constrains the type of goods that CAR can profitably export to goods that have relatively low transport costs. Moreover, given the high level of competition in these markets, CAR's advantage as a low-income country is in ubiquitous and relatively fewer complex products.

Within Africa, CAR's top export destinations are not neighboring countries. Contrary to what the gravity model[34] would predict, physical proximity

[33] RCA is a measure of the relative advantage or disadvantage of a country or product in terms of its trade flows. A country is an effective exporter of a product if its exports are at least equal to the share of the world trade that the product represents (RCA > 1). RCA is calculated as the ratio between the share of a product in the export of a country and the share of the product in the export of the world (Hausmann and Hidalgo 2011).

[34] The gravity model stipulates that bilateral trade flows between two countries are based on their economic size and distance. For example, there is research that shows that trade tends to fall with distance.

TABLE 5 Five main export destination (in order of importance)

Year	Destination countries	Share is total regional export (%)
2000	Morocco, Tunisia, Burkina Faso, Nigeria, Benin	76
2001	Algeria, Morocco, Tunisia, Nigeria, Ethiopia	86
2002	Sudan, Tunisia, Mauritius, Nigeria Algeria	89
2003	South Africa, Tunisia, Algeria, Morocco, Kenya	77
2004	Morocco, Tunisia, South Africa, Senegal, Egypt	96
2005	Morocco, Tunisia, Sudan, Senegal, Ethiopia	95
2006	Nigeria, Morocco, Algeria, Mauritania, Madagascar	99
2007	Morocco, Congo, South Africa, Algeria, Cote d'Ivoire	98
2008	Morocco, Algeria, South Africa, Sudan, DRC	98
2009	Morocco, Sudan, Congo, Egypt, Algeria	94
2010	Morocco, Nigeria, Sudan, Tunisia, Congo	95
2011	Morocco, Tunisia, Congo, Sudan, Senegal	94
2012	Morocco, Egypt, Sudan, Tunisia, Cameroon	93
2013	Morocco, Nigeria, Cameroon, Tanzania, Kenya	97
2014	Morocco, Congo, Egypt, Niger, Cameroon	99.9
2015	Morocco, Sudan, Cameroon, Egypt, Burundi	99.9
2016	Morocco, Mauritius, Egypt, Cameroon, Rwanda	95
2017	Burundi, Morocco, Sudan, Cameroon, Algeria	97

Source: World Bank calculations using data from UN COMTRADE, 2000–2017.

has not been the most relevant factor in explaining the destination of the country's exports. Until recently, neighboring countries such as the DRC, Chad, and Cameroon have not been among the country's top export destinations. Instead, countries in North Africa were among its main export destinations between 2000 and 2017. In this period of eighteen years, Morocco and Tunisia were among the country'stop five export destinations for seventeen and nine years, respectively, while Egypt and Algeria were among the top five recipients of the country's exports for five years and Nigeria and South Africa for four years. Among neighboring countries, Sudan was among CAR's top five exporting destinations for seven out of the eighteen years.

CAR could expand its exports to neighboring countries. While the country is a member of the Economic Community of Central African States (ECCAS), it has not exploited trade opportunities in the region. Nine other Central African countries are members of ECCAS, including Angola, Burundi, Cameroon, Chad, the Republic of the Congo (ROC), the DRC, Equatorial Guinea, Gabon, Rwanda, and São Tomé and Príncipe. Except for Cameroon and Sudan, which have been among CAR's main export destinations since 2012, most ECCAS countries are not large importers of the country's products. Therefore, increased trade with ECCAS countries represents an unexploited opportunity for CAR, if non-tariff and regulatory barriers to trade in the economic community are addressed. In 2017, the regional market with population of more than 175 million, which is made up of Cameroon, the DRC, the ROC, Sudan, South Sudan, and Chad, represented more than US$184 billion in total trade flows, including close to US$31 billion in annual imports (Table 6). This market more than doubled its volume of imports during the 2010s, and it is likely to continue to grow as the population

TABLE 6 Regional imports in 2017: Wood, diamonds, cotton, and coffee

			Net import (import – export)			
Neighboring country	Total imports (US$ Billion)	Population (million)	Cotton (US$ million)	Wood (US$ million)	Coffee (US$ million)	Diamonds (US$ million)
Cameroon	8.38	24.5	–54.9	–914.95	–58.16	—
Chad	0.58	15.1	–16.47	1.40	0.10	—
DRC	6.34	81.4	36.12	–62.72	–17.6	–371
ROC	3.83	5.1	40.28	–421.11	–11.92	–101
Sudan	11.5	40.8	–26.35	56.6	81.1	—
South Sudan	0.56	10.9	0.20	0.70	0.38	—
Total	31.2	177.8	–21	–1340	–6.1	472

Source: Calculations based on data from the World Bank and UN COMTRADE, 2017.

TABLE 7 Regional Imports by selected products, 2017 (US$ million)

	Products that CAR has RCA (RCA > 1)							Products that CAR is not yet exporting			
	Exercise book	Tarp of textile	Legumes	Fruits	Tomatoes	Waxes	Lead & lead alloys	Bakery	Eggs	Milk	Cereal
Cameroon	14.1	4.12	7.83	0.393	0.023	0.0073	0.184	8.76	3.51	4.00	481
Chad	0.292	0.230	0.027	0.072	0.017	—	0.0009	5.09	0.013	0.77	8.60
DRC	8.82	4.17	1.39	0.741	0.052	0.00216	0.278	11.1	0.394	1.27	76.0
ROC	6.44	1.45	1.70	0.391	0.120	—	0.016	10.1	1.75	1.50	62.8
Sudan	3.7	6.26	94.5	6.06	—	0.144	0.0003	7.81	3.7	1.33	695
South Sudan	0.965	2.86	14.6	0.379	0.229	—	—	2.67	0.005	1.69	83.1
Total	34.32	19.09	120.05	8.04	0.44	0.15	0.48	45.53	9.4	10.6	1406.5

Source: Calculations based on data from the World Bank and UN COMTRADE 2017.
Note: The product selection was based on RCA (RCA > 1) and a product space analysis.

increases and regional income rises, which will fuel demand for consumer goods.

The country's major export products in global markets also have promising potential in regional markets. An analysis of the net imports of wood, diamonds, cotton, and coffee in neighboring countries provides insights into the regional demand for these products. The DRC, ROC, and South Sudan are net importers of cotton, totaling close to US$77 million, which represents a large export opportunity for CAR. In terms of coffee products, Sudan, South Sudan, and Chad are potential export destinations, as these countries are net importers of coffee.

There are unexploited regional markets for some agricultural and food products. There is regional import demand for some agricultural and food products in which CAR appears to have a high RCA. For example, CAR has an RCA greater than one for exercise books, tarps of textile, legumes, and fruits, and the total regional import of these products totaled US$181.5 million in 2017 (Table 7). This means that these products are strategically important for CAR in its efforts to increase exports to the region. There is also regional demand for some of CAR's frontier products (i.e., products that are sufficiently close to the country's current product knowledge) such as eggs, milk, and cereal. Therefore, Central African policymakers should consider appropriate agricultural and agro-industrial policies to broaden the range of agricultural goods produced and exported to neighboring countries.

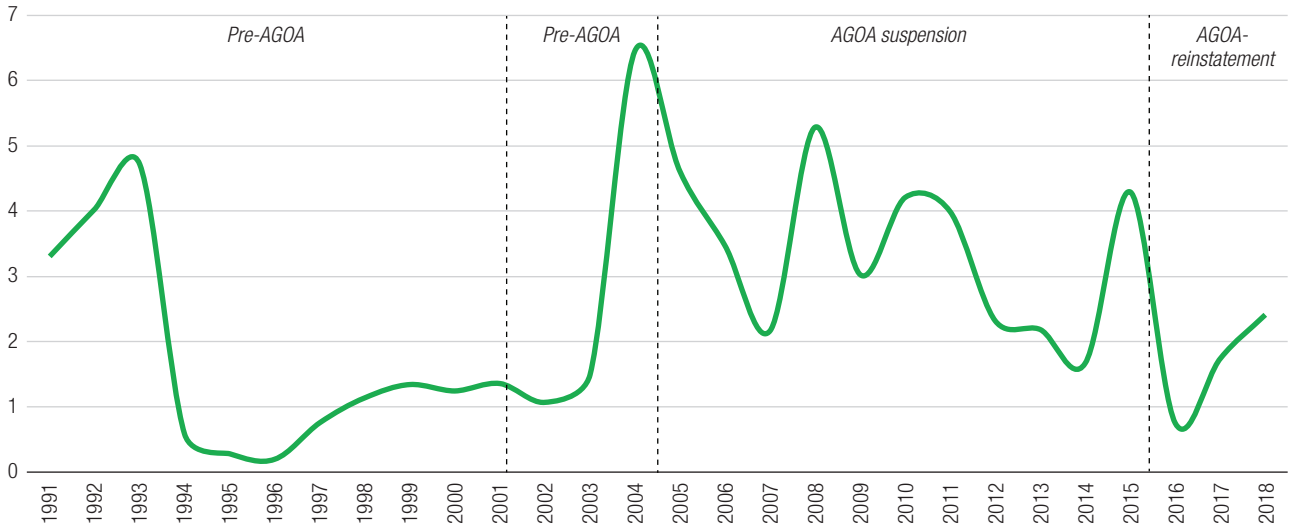
Opportunities in the global market: AGOA reinstatement

For the last two decades, most SSA countries have benefited from the African Growth and Opportunity Act (AGOA). AGOA was enacted by the United States Congress in May 2000 to provide duty-free market access to the United States for qualifying products produced in select SSA countries. It also offers duty-free access for textile and apparel products, subject subject to relevant apparel requirements and associated rules of origin. Following this privileged access to the US market, African exports to the United States have grown over the last decades.[35]

Having been suspended from AGOA in December 2003,[36] CAR's reinstatement in December 2016 opens up new export opportunities. As such, the country has not benefited much from AGOA, while many other SSA countries gradually increased their exports to the United States during the last two decades. CAR's exports to the United States has been smaller and much more volatile than the average exports from the SSA.[37] Following the reinstatement of AGOA benefits in 2017, CAR's total exports to the United States grew by more

[35] Frazer and Van Biesebroeck 2010.
[36] Military coups, other unlawful seizures of power, or gross human rights violations have been the primary rationale for revoking AGOA eligibility.
[37] In 2008, there was a surge in CAR's export to the United States, primarily due to an increase in world commodity prices. In 2007 and 2009, the average world commodity price index was 129 and 117, respectively, while it was 163 in 2008 (IMF 2018).

FIGURE 26 CAR's exports to the United States, 1991–2018



Source: Calculations based on data from UN COMTRADE.

than 100 percent, from US$1.05 million at the end-2016 to $2.2 million at end-2017 (Figure 26). There is potential for the country to further improve its exports to the United States, especially in terms of wood products, in which CAR has a comparative advantage.[38]

2.3.4 Unlocking the potential of the agriculture sector

The agricultural sector is both economically and socially important to CAR, but it remains focused on traditional subsistence activities. Out of a population of 4.9 million people, 4 million depend on agricultural activities for their livelihood, and agricultural products account for about 42 percent of CAR's total exports. The country's agricultural activities include crop production (i.e., cassava, groundnuts, sorghum, millet, maize, sesame, plantains, cotton, coffee, and tobacco) livestock rearing, and fishing, and they remain dominated by traditional practices. Affected by the succession of crisis and insecurity, agricultural production remains below their pre-crisis levels, and the sector is in desperate need of investment and forward-looking policies.

Poor road conditions and the absence of a maintenance strategy, especially for rural roads, weaken the potential of the agriculture sector. Out of 24,137 km of national, sub-national, and rural roads, only 855 km (3.5 percent) are paved. The road network is relatively small and suffers from limited maintenance, constraining farmers' access to markets and the potential development of the agriculture sector. There is no rural road maintenance strategy, resulting in extended periods of poor maintenance. The National Road Fund is hampered by weak governance and inadequate resources. Only an estimated 5 percent of all road maintenance funds go to rural roads. Agricultural exports represent a low share of GDP, and their share has declined dramatically since 2000, especially cotton and coffee, which comprise less than 2 percent of GDP.

Policies and plans to improve agricultural practices have failed to produce results. Agriculture sector development has been guided by a number of strategic planning documents that have existed in a policy vacuum. Despite the existence of these plans, resource allocation to the agriculture sector has remained insignificant. Productivity growth in the sector has been limited and constrained by outdated land laws. Research and development as well as specific training related to the agriculture sector are quasi-inexistent, limiting the potential for expanding the sector.

Limited access to finance and financial services also undermines the potential of the agriculture sector. The small and underdeveloped financial sector

[38] About sixty-six types of HS-8 level wood products are AGOA eligible.

negatively affects the financing instruments available to farmers. Agriculture suffers from weak market infrastructure and an inadequate legal and judicial framework. For example, *Fond de Développement Agropastoral*, created to support the development of agribusinesses, is not operational. Moreover, microfinance accounts for 1 percent of total credit facilities, serving 0.5 percent of the population. Unlike several other African countries, mobile phone penetration in CAR remains low at about 30 percent, which limits the opportunities for bundling mobile banking services to farmers and workers in the agriculture sector.

Agricultural value chains can be particularly powerful to achieve poverty reduction by integrating rural households and smallholder farmers into supply chains. CAR cannot improve the resilience of vulnerable groups and the overall economy without developing the agriculture sector. In the short and medium run, the authorities need to diversify agricultural outputs, promote the development of agri-business, and boost productivity. Also, complementary policies for skills development and job creation may be needed, especially for youth, to help households escape the poverty trap and break the vicious cycle of violence.

Leveraging the cotton value chain for economic diversification and job creation

The cotton sector has the potential to contribute to economic diversification in CAR. Cotton is directly connected with at least twelve other products, from oil to cotton liners. For example, cottonseeds, along with other residues produced when seed cotton is ginned, are processed into animal feed and cottonseed oil. Also, the sector is indirectly linked to the garment and textile industries. The value and potential of these by-products are significant, although the sector faces important production and exportation challenges. In the 1990s, cotton was one of CAR's main exports. While its importance to CAR's economy was significant, cotton was never produced at levels approaching those of SSA's largest producers. Cotton production and exports deteriorated steadily since their peak during the 1997/98 season, when just over 46,000 metric ton (MT) of cotton was purchased from producers and exported.

Over the past thirty-five years, the production of cotton has been erratic due to unpredictable weather, disruptions due to conflict, external market shocks, and sector mismanagement. Production dropped from its highest level at 46,037 MT purchased by the state company during the 1997/98 season to 14,150 MT purchased during the 2017/18 season. The civil war destroyed the remaining industrial capacity, which was already suffering from insufficient investments. Prior to the conflict, CAR had six industrial ginneries at Ndim, Pendé, Guiffa, Bossangoa, Grimari, and Bambari. Three of these, Ndim, Pendé and Guimari, were destroyed by conflict, while the other three were already suffering from insufficient investments. The ginnery at Bossangoa was built with an original capacity to process 90 MT of seed cotton per day, but it can only process 60 MT per day in its current condition. The Bambari ginnery was built to the same capacity as the one in Bossangoa but is in disrepair. With a moderate investment in new parts, it could process 45 MT per day. The Guiffa ginnery, built to process 90 MT per day, was heavily damaged by conflict and requires significant investments to make it operational.

The cotton sector can also play a critical role in the country's spatial transformation and economic recovery. Cotton cultivation is widespread in two of the three priority agricultural basins (Ouham/Ouham-Pendé and Nana-Gribizi/Kémo/Ouaka) identified by the government and the World Bank as key to the recovery of the sector. Insecurity in cotton growing regions, as a result of current and past crises, has resulted in the periodic destruction of capital, including animals needed to plough fields, warehouses, machinery, transport equipment, and ginneries. Cotton farming has ceased in the producing regions of Ouham Pendé, Kémo, Nana Gribizi, Ouaka, and Basse-kotto because of security challenges. However, cultivation has continued throughout the crisis in the Ouham prefecture.

There is an urgent need to restructure the cotton sector. A recent audit of the sector identified arrears amounting to CFAF 11 billion at end-February 2019. The state has been mainly responsible for managing the sector since independence, with some private participation. Crises, episodes of mismanagement, and external shocks bankrupted successive public companies and agencies responsible for managing the sector. The restructuring of the cotton sector should include clearing the arrears of the legacy state company, rebuild the ginning capacity, and replace looted assets. The government's lack of capacity to manage the sector is one of the reasons for creating a state-owned cotton company. The government could even consider creating two regional SOEs—one for each

production region: the East and Centre-east region and the Northwest region. In doing so, Geocoton can play a critical role in restructuring the sector because of its regional connections and local producers.

Improving the cotton value chain would require implementing risk-mitigating mechanisms to minimize exposure to world commodity price shocks. Excessive exposure to world commodity price shocks can bankrupt small producers or dissuade them from producing cash crops. CAR can follow the example of Burkina Faso—one of the major producers of cotton—by implementing risk-mitigating mechanisms. In Burkina Faso, the mechanism consists of a floor price paid to farmers at the delivery of cotton and a potential additional windfall paid at the end of the season if the earned export price is above the negotiated floor price. A smoothing fund also exists to partially compensate producers if export prices during the season drop below fixed national producer prices. The government may also need to learn from other African cotton producers regarding their interaction and bargaining power with commodities such as Olam. CAR's authorities could engage transaction advisors that possess specific knowledge of African cotton companies to assist them in their negotiations with private investors.

Achieving a more dynamic cotton sector would also require the authorities to address financial constraints to increase access to financing and working capital. Like in several other sectors in CAR, there is limited access to financing in the agriculture sector, limiting the capacity of producers to finance inputs and acquire capital. There are no financial institutions like a public agricultural bank or fund that provide or facilitate access to finance in the agriculture sector and, more specifically, cotton value chains. The authorities could make an arrangement with a local bank to finance inputs and working capital for producers. Such an agreement could involve credit coordinated by ginning companies and secured via purchasing contracts between companies and producers. Production and borrowing commitments can be aggregated at the communal level through producer associations or their local chapters. Local chapters of producer associations could help manage commitments and ensure repayment. Coordination among producers, ginning companies, and financial institutions needs to be facilitated to accurately determine credit needs, the timing of disbursements, and a fair apportioning of the risk, as well as to rebuild the financing mechanism of the value chain.

Agribusiness: Palm oil

The development of palm oil presents several advantages for CAR. The crop is attractive for low-resource environments and economies dependent on agriculture. Worldwide, the palm oil sector generates more jobs per hectare than other large-scale farming operations.[39] In addition to the worldwide trend of replacing petroleum-based oil with renewable oil, palm oil has a longer shelf-life than comparable vegetable oils, which is an advantage in countries such as CAR with poor infrastructure and poorly performing supply chains.[40] It is also cost competitive to produce in comparison to other vegetable oils and animal fats. Palm oil has among the lowest pesticide and fertilizer requirements among oil crops, and its plant biomass can be used to power crushing and processing factories, an advantage in regions with poor energy infrastructure. Moreover, the industry can generate several palm-based products, such as consumer retail food, personal care and cosmetics, and animal feed, as well as by-products of palm oil production, such as laundry detergent, soap, fat, and margarine. This means that the palm oil sector can generate a range of related industries and opportunities for the private sector.

As with several agricultural products, the production of palm oil dropped over the past two decades. In CAR, traditional palm oil covers approximately 18,000 hectares and is harvested directly for domestic consumption. Despite a history of producing oil palm and industrial-scale processing, production has dropped precipitously over the past several years, mainly due to crises, commodity price shocks, and lack of organizational capacity.[41] Between 2005 and 2013, worldwide oil palm fruit production dropped while imports increased, according to the Food and Agriculture Organization.

As the demand for palm oil is growing, other countries in SSA are successfully attracting private investors to develop and grow their industries. Palm oil production in SSA is growing, as many countries have been successful in attracting investors, operating plantations, and organizing out-growers. For example, there are large concessions in operation in

[39] The World Bank Group Framework and IFC Strategy for Engagement in the Palm Oil Sector.
[40] Sime Darby, Palm Oil Facts and Figures.
[41] The Palme d'Or Feasibility Study written by CIRAD provides a detailed history of the palm sector in CAR, particularly concerning the legacy state-owned companies, recapitalizations and restructurings.

Cote d'Ivoire, Cameroon, the DRC, Gabon, Liberia, Nigeria, and Sierra Leone.

Authorities should, however, be aware of the risks and competitive environment associated with the palm oil sector. Cultivating palm oil, processing palm, and marketing palm oil products are not without risks. The industry is facing important competition from Indonesia and Malaysia, which produce over 80 percent of the world's supply of palm oil. The production in these two countries is more efficient and competitive than that of the majority of SSA countries because of a range of government-sponsored facilitation measures. Also, there are often restrictions and non-tariff barriers related to the trade of palm oil products. Finally, there are risks related to deforestation that the authorities need to consider before growing the palm oil industry.

2.3.5 Unlocking the potential of the forestry sector

CAR's forestry sector has significant economic potential. CAR has an estimated 5.4 million hectares of dense humid forest split into a massif in the southwest (3.8 million hectares) and the Bangassou forest (1.6 million hectares) in the southeast. The southwest massif is almost entirely under management and operating permits (PEAs), which are concession licenses with an overall production potential of 3.65 million m^3. The sector generates about 4,000 direct and 6,000 indirect jobs, with an important social and economic impact, especially in rural areas. The sector is critical for the development of rural communities in southwest CAR, where taxes derived from forestry activities can contribute up to 1 CFAF billion per year to the budget of municipalities.

Forestry is attractive because of its capacity to generate revenue, create wage jobs, and support inclusion and spatial transformation. According to the International Tropical Timber Organization, the CAR's forestry sector produced about 550,000 m^3 of logs in 2017. Timber exports are primarily based on the export of logs and, to a lesser extent, sawn wood, accounting for 40 percent of the country's export earnings. Due to its landlocked location and relatively poor transportation infrastructure, CAR's export costs are relatively high. Transporting timber by road to Cameroon or by river and rail to Pointe Noire in the ROC is costly. These high transportation costs create incentives to process forestry products in the country instead of exporting them. Commercial harvesting of forestry resources is carried out by private companies under PEAs. As of 2019, there were fourteen PEAs, of which eleven were attributed to timber companies and the remaining three were inactive.[r]

Despite an existing regulatory framework, there are important challenges in processing wood products. The regulatory framework for logging, which dates back to 1990, was modernized with the Forestry Code enacted in 2008. One of the main innovations in the Code was a stronger ban on log exports. Forestry enterprises must ensure at least 70 percent of logs from first-grade species are processed on-site, and only finished and semi-finished products (2nd and 3rd processing stages) may be exported. The average processing ratio fell from 60 percent in 2008 to 43 percent in 2015 and a mere 20 percent in 2017. The economic crisis in 2008, as well as the civil war in 2012-13, contributed to the decline in the average processing ratio. With improved security starting in 2016, wood production has steadily increased, although the rate of industrial transformation continues to decline. The current policy is to require forestry enterprises to install new units to undertake the second and third processing stages locally. Also, CAR has eight primary processing plants for sawing, peeling, slicing, and drying and a secondary processing plant for plywood. The country's total processing capacity is estimated at around 450,000 m^3 of input, well below the current level of transformation.

Promoting transformation in the forestry sector

There are market requirements for timber products set by China and the European Union (EU). China is the leading export market, followed by the European Union. In 2012, CAR signed a voluntary partnership agreement with the European Union on the application of forest law, governance, and trade in timber and derived products. Buyers from China tend to prefer low prices and large volumes. They are also generally less concerned with specific varieties and the quality of logs than EU buyers, and they are less likely to demand or enforce environmental compliance standards.

Direct and indirect costs of exports reduce profits and can be a barrier to business growth. The

following duties and taxes are levied on exports of forestry products: (i) an export tax of 8 percent of the free on truck (F.O.T) value for rough wood and 4 percent for sawn wood; (ii) a 2 percent flat-rate minimum tax; (iii) 0.5 percent levy on computer equipment for finance (REIF); (iv) CFAF 1,500 per load for the certificate of origin; (v) CFAF 3,000 per load for the phytosanitary certificate; and (vi) CFAF 500 per load for the environmental tax. Operators complain that these taxes and other fees, which are collected at the time of export via the Port of Douala, reduce their profits. Their complaints include: handling charges for placing goods on board the ship (free on board charges); subcontracting commission charges: CFAF 15,000 per delivery note; customs fees: CFAF 10,000 per delivery note (BL); GUCE endorsement costs: CFAF 10,000/BL; IT tax: CFAF 15,000/BL; delivery note fee: CFAF 20,000/BL; certificate of origin fee: CFAF 10,000/BL; phytosanitary certificate fee: CFAF 10,000/BL; EUR1 certificate fee: CFAF 5,000/BL; the cost of storing wood with *Société d'Exploitation des Parcs à Bois of Cameroun*; commissions on disbursements; equipment rental fees; and parking fees after eleven days (demurrage).

The wood processing industry has the potential to create value-added products and generate new jobs. In CAR, at least 70 percent of the production of logs from first-grade species must be processed in the country. The volume of logs processed in the country as a share of the total volume produced has fallen significantly, from approximately 49 percent in 2001 to 23 percent in 2016. Close to thirty species of wood are processed in CAR, with Sapelli (Entandrophragma cylindricum), Ayous, Dibétou (Lovoa trichilioides), and Kossipo (Entandrophragma candollei) accounting for more than half of the total volume produced. Also, one company, SEFCA, does more than half of all the wood processing in the country. Activities along the forestry value chains have enormous potential to support CAR's economic diversification and local development. However, unlocking the potential of the forestry sector would require accounting for the impact of the sector on climate change, which could further exacerbate economic, social, and environmental challenges and increase vulnerabilities. The development of the sector should be strongly aligned with efforts to reduce the impact of deforestation and forest degradation and increase forest carbon stocks. CAR could tap into the potential of the forestry sector for the country's socioeconomic development while addressing the drivers of deforestation and forest degradation (Figure 27).

Biomass power plants are becoming an increasingly important component for the energy supply of a number of developing countries. Biomass is especially well suited to provide small-scale power in remote areas. In CAR, logging and wood-processing waste could be used either alone or in conjunction with other biomass fuels to provide energy to small towns and communities in forestry regions, or even to supplement the energy needs of Bangui. The design and construction of a biomass power plant would require access to sophisticated technical expertise, and a plan to develop biomass power would need extensive technical and economic feasibility studies. Strong public-private partnerships will be particularly important to the development of such innovative activities in CAR.

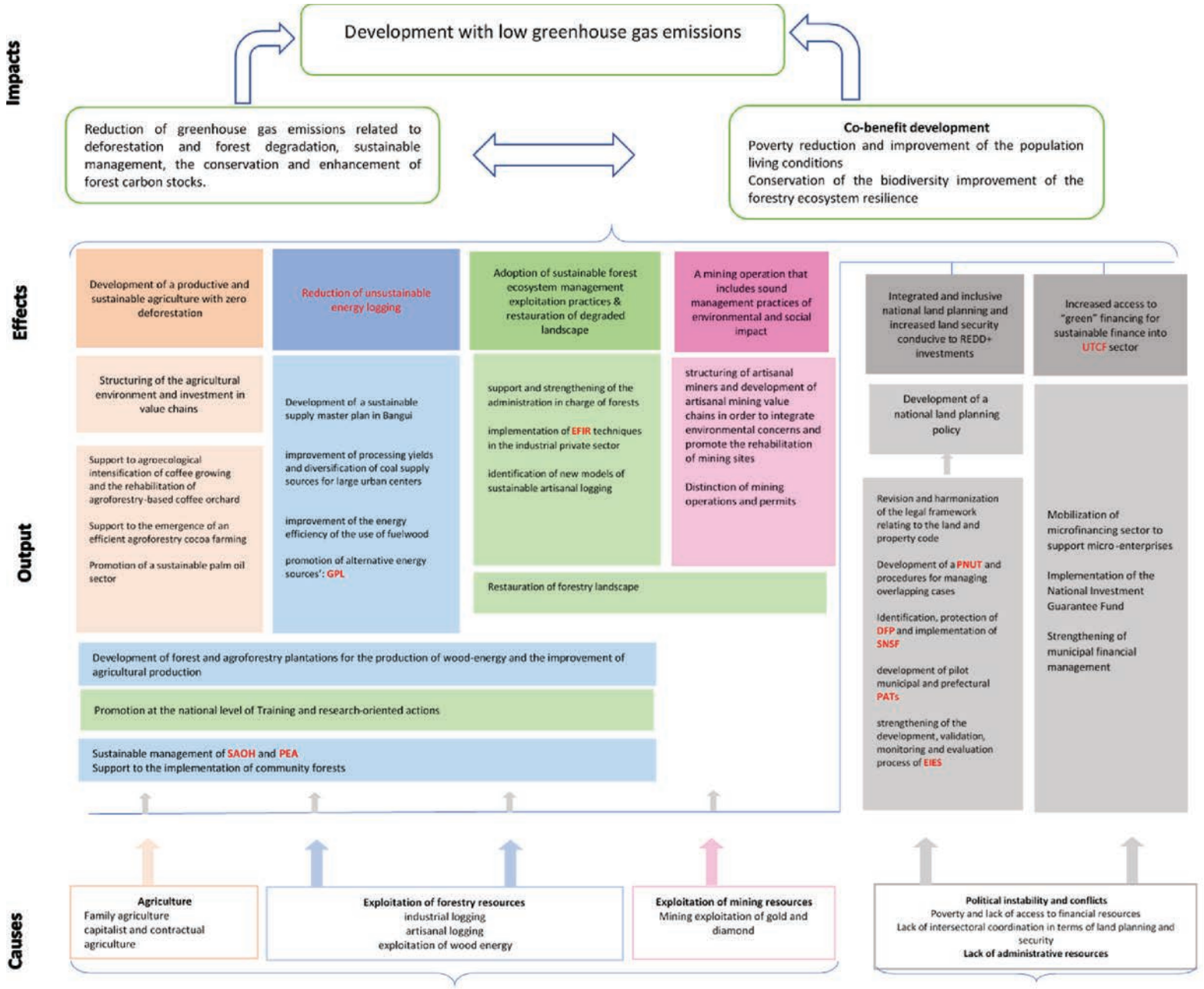
2.4 Addressing key cross-cutting issues

2.4.1 Institutions, security, and enabling business environment

CAR will be unable to implement any diversification strategy without addressing its political and institutional fragility. Stability is a prerequisite for sustainable growth and development. However, CAR has had a long history of political instability and institutional weakness that has affected its ability to achieve sustainable growth since independence. The country has experienced seven coups d'état, with the most important one in 2013, which accelerated the collapse of state institutions. Institutions that provide basic services have been especially affected by the recurrence of conflict and violence. The combination of insecurity and weak state legitimacy in areas controlled by armed groups has intensified social polarization, making it vital to rebuild trust between citizens and the state. Addressing political and institutional fragility will foster social inclusion, which is essential for economic diversification and sustained growth.

To strengthen institutional resilience and foster social cohesion, the authorities need to reestablish the rule of law, build a capable bureaucracy, and establish effective public institutions. In CAR,

FIGURE 27 Theory of change for the sustainable development of the forestry sector



Source: REDD+2020-25 National Investment Framework.

certain groups and organized crime networks leverage significant power over specific constituencies, and they sometimes utilize public institutions, resulting in corruption and rent seeking. In certain areas, some armed groups are essentially organized in crime networks to seek financial gain or defend the interests of a specific ethnic group. This deteriorates the legitimacy of state institutions and undermines policies aimed at achieving social cohesion. In this context, efforts toward economic diversification are condemned to fail, as the state is unable to: (i) design and implement a sound diversification strategy; (ii) attract private investments; and (iii) establish market-oriented policies.

The new peace agreement is an opportunity to pacify armed groups to promote social cohesion, although its implementation will be challenging and require significant resources. Under the leadership of the African Union, the Government of CAR signed a peace agreement with fourteen armed groups in February 2019. The peace accord has led to a sharp decline in violence in the more densely populated North-West region, where demobilization, disarmament, and reintegration efforts have made progress in reducing tensions. Conflict-related incidents and civilian deaths declined from 1,842 and 721, respectively, in 2018 to 1,172 and 339, respectively, in 2019. Projections based on an extrapolation of data from January to April 2020 indicate a further decline to 789 conflict-related incidents and 210 civilian deaths in 2020. Despite this progress, the successful implementation of the peace agreement will require a steadfast commitment from all parties and a pragmatic, multifaceted response to ending the violence, combining coercion, sanctions, containment, and cooptation. The government needs to redeploy civil servants, provide public goods and services, and accelerate decentralization efforts, especially in remote areas. These measures will help to accelerate the reconciliation process and address grievances and mistrust by ensuring an equitable representation in the civil service and institutions.[42]

The quality of governance needs to be improved. Although the quality of governance in CAR has gradually improved since the first democratic elections in 2016, it continues to lag its peers in Africa. All global indicators assessing the quality of governance, including the Worldwide Governance Indicators, Bertelsmann Stiftung's Transformation Index, and Doing Business, show a downward or stagnant trend for CAR over the past decade, with no major improvements in recent years. Because of the security situation, the presence of the state, including law enforcement entities and courts, is quasi-inexistent beyond the capital city. Access to courts and lawyers is extremely low due to a lack of professional capacity and a small number of legal professionals. Property and contract rights are fully recognized in the Constitution and should be enforced by registries and notary services. However, weak implementation of the rule of law makes it difficult to safeguard private property and enforce contracts. Although efforts to improve institutions and the quality of governance is a long-term process, the government's commitment to improving the institutional and governance framework could yield positive economic results in the near term. Recent progress in the governance area, such as the adoption of the law on local authorities, the creation of the High Authority for Good Governance, and the enactment of the law on good governance in public financial management in line with CEMAC directives, must be maintained and strengthened.

The country's poor business environment constrains the development of the private sector. Compared to peer countries, CAR underperforms on the ease of doing business.[43] The country's Doing Business score was 34.2 in 2018, lower than 47.0 for Cameroon, 39.5 for the ROC, and 36.2 for the DRC (Figure 28.a). Its overall Doing Business ranking was 183rd out of 190 countries in 2018. Taxes, getting electricity, and getting credit are the top three obstacles to doing business in CAR (Table 8). The country also performs poorly on the ease of trading across borders, though it performs relatively better than peers (Figure 28.b).[44] To improve CAR's business environment, the authorities need to adopt institutional reforms that address issues related to the ease of doing business. This is in line with the World Bank's Country Private Sector Diagnostics

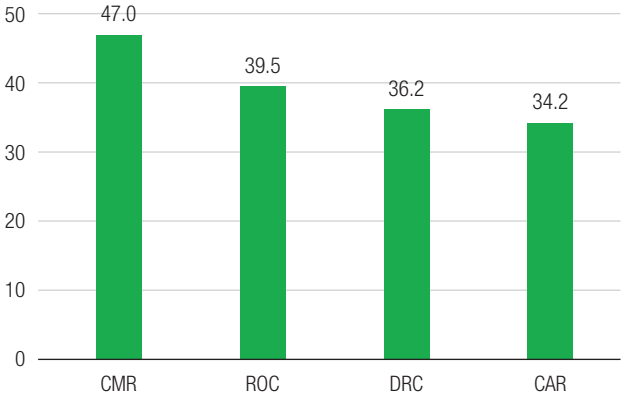
[42] These measures are extensively discussed in the new World Bank Group Country Partnership Framework.

[43] Over the past couple of decades, studies have shown that the business environment plays an important role in firm performance as well as the country's economic growth. The World Bank's Doing Business measures the ease of doing business and trading across borders.

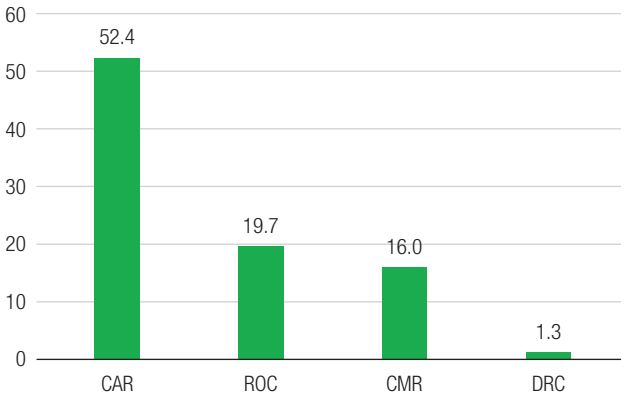
[44] The ease of trading across borders captures the time and cost to prepare documents and comply with border procedures to export and import goods. One explanation for CAR's relatively better performance on trading across borders is that its top exports are minerals and not agricultural products. It is well known that complying with export requirements is less costly and takes less time in countries whose top exports are nonagricultural products than in countries that rely mainly on agricultural exports.

FIGURE 28 Ease of doing business, 2018

a. Ease of doing business score



b. Trading across border score



Source: World Bank Doing Business report 2018.
Note: CMR: Cameroon; ROC: Republic of the Congo.

for CAR, which discusses options for private sector development.

Raising the quality of governance will also require efforts to improve the transparency, oversight, and financial management of SOEs. Several of CAR's SOEs and parastatal entities operate in key sectors such as agriculture, forestry, and transport. The new law on state-owned enterprises was promulgated on February 13, 2020 and the implementing decree signed in October 2020. This law defines a mode of management of these entities in accordance with the principles of results-based management while clarifying the division between administrative, technical and financial supervision. Improving the governance of the SOE sector will not only benefit the economy but also reduce associated fiscal risks and the public financial burden. Reforms could include the dissolution of non-performing SOEs to increase the overall competitiveness of the private sector. The authorities have taken some steps toward improving the management of SOEs and parastatal entities, but additional steps and policies are needed.

Policymakers also need to implement institutional reforms that can enable market-oriented policies to stimulate private sector activities. To achieve economic diversification, countries need incentivize investors to enter new markets and link up with GVCs.[45] While CAR is among the worst performing countries on the ease of doing business, there are several potential new markets for its exports that can increase the country's participation in GVCs. Institutional reforms should focus on strengthening the justice system, protecting minority investors, and facilitating the acquisition of construction permits. In CAR, judges and prosecutors are too often subject to political interference, which send a negative signal to the private sector regarding the transparency of the justice system. Market-oriented reforms will require the government to reduce the burden of regulation and establish a fair and transparent justice system, allowing investors to operate in a dynamic market environment. The recent creation of a public-private dialogue framework (*Cadre Mixte de Concertation pour l'Amélioration du Climat des Affaires*) is a step in the right direction, but it needs to be reinforced to ensure it can adopt market-oriented policies and improve the business environment.

TABLE 8 Doing business score, 2018

	CAR	Cameroon	ROC	DRC
Paying taxes	18.89	36.34	26.79	39.40
Getting electricity	24.64	60.35	28.42	34.67
Resolving insolvency	28.13	36.73	37.98	0.00
Getting credit	30.00	60.00	35.00	30.00
Enforcing contract	30.46	38.99	43.07	32.35
Starting a business	37.02	82.39	63.83	89.78
Dealing with construction permits	38.86	59.74	63.90	52.26
Protecting minority investors	40.00	41.67	40.00	36.67
Registering property	41.92	37.33	36.04	45.44
Trading across borders	52.36	15.99	19.68	1.26

Source: World Bank Doing Business report 2018.
Note: A high ranking on the ease of doing business means that the regulatory environment is more conducive to starting and operating a local firm. A country's ease of doing business score is reflected on a scale from 0 (lowest performance) to 100 (best performance).

[45] Mahood 2017.

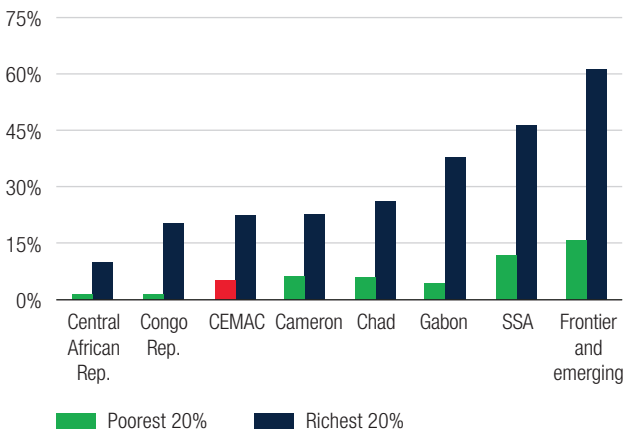
2.4.2 Access to finance and financial inclusion

CAR's financial system is dominated by the banking sector, which consists of four banks that provide limited credit to the private sector. Domestic credit to the private sector is low and declined from 13.3 percent of GDP in 2013 to 11.3 percent of GDP in 2018. The level of access to finance in CAR remains below the average of regional peers and SSA countries. Moreover, NPLs remain high at 23 percent of total gross loans in 2017, about 10 percent above the average of regional peers. Weak financial intermediation in CAR prevents the efficient allocation of available finance.

Vulnerabilities in the financial sector worsened after the crisis in 2013, but the sector has gradually improved in recent years. NPLs have steadily declined but remain above their pre-crisis level. NPLs reached their highest level in 2015 at about 31 percent of total gross loans. Since then, they have declined and reached an estimated 22 percent in 2018, with substantial sectoral disparities. Critical sectors for the economy, such as mining, manufacturing, and real estate, appear to have the highest NPL ratios, reaching more than 50 percent of total gross loans. The country's NPLs are mostly due to the large stock of outstanding government payment arrears and government arrears to its suppliers. While the authorities have implemented the main recommendations of COBAC, there have been delays in addressing recommendations related to internal controls and anti-money laundering. A recent COBAC assessment highlights the need to strengthen governance, internal controls, and compliance with prudential standards, which should reduce financial sector vulnerabilities.

Financial soundness indicators suggest that the country's banks are moderately resilient. Banks in CAR remain adequately capitalized, as the average capital adequacy is about 32 percent, and liquidity assets are 27.1 percent of total assets and 186 percent of the short-term liability, according to the latest estimates. Deposits increased by an estimated 23.6 percent in 2016-18, although they increased by 6 percent in 2018-19. One subsidiary of a pan-African group (Ecobank) dominates the sector, with close to half of all banking assets.

FIGURE 29 Financial inclusion, 2012



Source: World Bank staff calculations using Finstats database.

Financial inclusion and access to financial services have increased but remain at very low levels. The Global Financial Index shows that 13.7 percent of Central African adults had access to a bank account in 2017, up from 3.3 percent in 2011. Despite this impressive improvement, the level of access to finance remains low and— below the average of CEMAC countries (36 percent). Limited access to finance hampers the ability of CAR to sustainably grow the economy and reduce poverty and inequality. In terms of financial inclusion, CAR ranks at the bottom of CEMAC countries, with only 0.7 percent of the population in the bottom 20 percent of the income distribution having access to a bank account at a financial institution in 2012 (Figure 29). In SSA, CAR's level of financial inclusion is only above that of the DRC.

CAR's current level of financial development is below the level expected given the country's structural characteristics.[46] The financial system is small and undeveloped and remains concentrated in Bangui. Its payment systems are weak and not well integrated with regional and international systems. According to the Doing Business report, the credit registry covered a mere 3.3 percent of adults in 2018. Limited access to finance in CAR is a binding constraint on economic growth, as it undermines the development of the private sector. Improving the financial sector and promoting access to financial services are vital to the country's socioeconomic development efforts.[47] However, CAR's financial

[46] Alter and Yontcheva (2015) define the expected level of financial development as the level of financial development corresponding to the structural characteristics of the country. The financial gap is, therefore, defined as the difference between the expected and current level of financial development.

development gap—the difference between the expected and current level of financial development—is among the highest in SSA.

The use of digital payments and technology in the financial sector is increasing throughout Africa, with little progress in CAR. The country's use of digital payments remains low, as only 27.4 percent of the population has access to a mobile phone. Only 9.3 percent of adults made or received a digital payment in the past twelve months, significantly less than 34.4 percent of adults in SSA. Moreover, a mere 2.2 percent of adults use a mobile phone to access their bank accounts, which is about 10 times below the average of SSA countries. The low access to mobile banking dampens the potential of expanding financial services. As a result, access to financial services, including by small and medium-sized enterprises, is extremely limited, and microfinance is poorly developed.

To increase access to finance, the authorities need to increase the capacity of farmers and firms in in the forestry and agriculture sector. Given the relatively low capacity in the forestry and agriculture sector, boosting access to finance will require building the capacity of farmers, firms, and related enterprises to prepare loan applications and other financial documents. Meanwhile, it will require raising awareness among local banks on the opportunities offered in these two sectors while encouraging corporate social responsibility in investment decisions.

2.4.3 Infrastructure bottlenecks

Being a landlocked country limits CAR's options to increase market access, foster regional integration, and accelerate spatial transformation. The country's road network—its main transport system—is underdeveloped and poorly maintained, and most roads are surface treated, with only 3.5 percent of roads (855 out of 25,235 km) paved. About 80 percent of internationally traded goods pass through the Douala-Bangui corridor, the roads of which are not fully paved and very expensive to maintain due to both direct and indirect costs.[48] The country's rivers offer an alternative route to connect CAR to the rest of the world and reduce trade costs. The decline in trade costs, along with an improvement of trade logistics, was critical to the success of East Asian countries in diversifying their economies, increasing their participation in GVCs, and advancing regional integration. To reduce trade costs and facilitate diversification, CAR needs to invest in the Ubangi river infrastructure and relevant policy reforms.

The country's limited transportation infrastructure is one of the major obstacles to increasing cross-border trading and connecting CAR to global markets. It only has one international airport, located in Bangui, and its runaways are in poor condition. The country does not have rail infrastructure. The roads in the southwest region are in relatively better condition than roads in the South East and North East regions. However, the overall road network is small, consisting of 25,235 km of roads, of which 63 percent are paved and 34 percent are made with gravel. The national network is about 4,500 km, while regional networks cover about 3,900 km. The remaining 16,853 km (more than 60 percent) of roads are made up of tracks or rural roads across villages. Traffic levels are extremely low, making it difficult to justify heavy road engineering. Traffic, mainly concentrated in the Bangui-Douala and Pointe Noire–Brazzaville–Bangui corridors, consists of 200 vehicles per day on the paved segments for both routes.

The main trade corridor between Bangui and Douala has the highest shipping costs in the region, limiting CAR's trade options. The World Bank performed a detailed study on transport and logistics in CEMAC in 2013. Almost all of the problems identified in the study persist, and its recommendations remain pertinent.[49] Shipping costs along the Douala-Bangui corridor (1,472 km) are the highest for any major transport corridor in Central and West Africa, regions with some of the highest transport costs in the world. The rail corridor is multimodal, with rail connecting the Port of Douala to Ngaoundéré in Cameroun (884 km), and the remaining distance is connected by road. By analyzing various scenarios of cargo and rail/road combinations, the World Bank determined that transport costs range from US$195 to US$298 per MT, with cargo value and handling requirements being the main cost drivers. The freight time from Douala to Bangui is seventeen days, as quoted by Maersk, with no refrigerated containers (Table 9).

[47] This has been extensively documented in the past two decades. King and Levine (1993) and Rajan and Zingales (1998) argue that financial development can predict long-term economic growth, capital accumulation, and productivity growth.

[48] The World Bank, "The Cost of Being Landlocked."

[49] The World Bank, Logistics Cost Study of Transport Corridors in Central and West Africa, 2013.

TABLE 9 A comparison of road indicators

Indicator	Unit	Fragile states	CAR	DRC	Low income countries
Road network density	km/1000 km^2 of land area	145	41	1	132
GIS rural accessibility	% of rural pop within 2 km from all-season road	30	58	29.3	23
Classified paved road network condition	% in good or fair condition	80	62	70	86
Classified unpaved road network condition	% in good or fair condition	72	2	42	56
Classified paved road traffic	AADT	843	200	257	1,288
Classified unpaved road traffic	AADT	31	14	20	39

Source: AICD Road Sector Database. Road network density data for the DRC are from The Democratic Republic of Congo's Infrastructure: A Continental Perspective (2011).
Note: Total network includes primary, secondary, and tertiary networks. Classified roads are those that have been included in legislation as public roads. GIS: geographic information system; AADT: average annual daily traffic.

CAR does not have an all-weather road corridor to its coastal port gateways. Most of CAR's imports and exports are transported along the Douala-Bangui road corridor, which covers 1,500 km of road, of which only 392 km are sealed. CAR relies heavily on its regional corridors for the efficient movement of goods and people, but its neighbors have not prioritized the maintenance of these corridors. The Douala-Bangui and Pointe Noire–Brazzaville–Bangui corridors are still not completely paved. Some sections of the Douala-Bangui corridor (about 250 km in Cameroon and 210 km in the CAR) are being upgraded as part of the Economic and Monetary Community of Central Africa Transport Transit program.

The Ubangi river has the potential to integrate CAR with the DRC and ROC (Figure 30). CAR has three river ports: Bangui (upstream port), Kolongo (oil port), and Salo.[50] Among its rivers, Ubangi is the country's main waterway. However, navigability is limited throughout the 5,000 km waterway network—only 2,067 km is navigable for four months out of the year, mainly along the Bangui-Brazzaville corridor (1,200 km). Downstream traffic covers 1,200 km in six to seven days (Bangui-Brazzaville) and upstream traffic in seven to twelve days (Brazzaville-Bangui). Goods are then transported to Pointe Noire in the ROC via the Congo Ocean railways or Kinshasa (DRC). The Congo and Ubangi rivers are the traditional routes for exporting products, and they once provided a cost-effective transport option for timber from CAR. Because of the civil wars in CAR and ROC over the past decade, the impact of climate change, and lack of maintenance, routes through Cameroon have become preferred by importers and exporters alike.

Improving the navigability of the Congo and Ubangi rivers would make the port of Pointe Noire an alternative to the Port of Douala for trade going to and from CAR. This could be achieved through a combination of river and rail transport using the Chemin de Fer Congo Ocean line from Brazzaville to Pointe Noire. Similarly, CAR could also utilize the Ubangi and Congo rivers to transport goods between Bangui and Kinshasa, before utilizing paved roads from Kinshasa to Matadi (the DRC's main seaport).While it takes longer to use a combination of road and river transport to reach Matadi (roughly 55.5 hours), the costs are about one-third less than relying solely on the DRC's road network (Table 10). River transportation remains a highly competitive mode of transport: costs average US$0.09 per ton-km. For imports, the river route from Brazzaville or Kinshasa is longer (12–15 days) but transport costs are 20 to 60 percent less than using the

TABLE 10 Estimated costs and travel time required to travel from Bangui to seaports

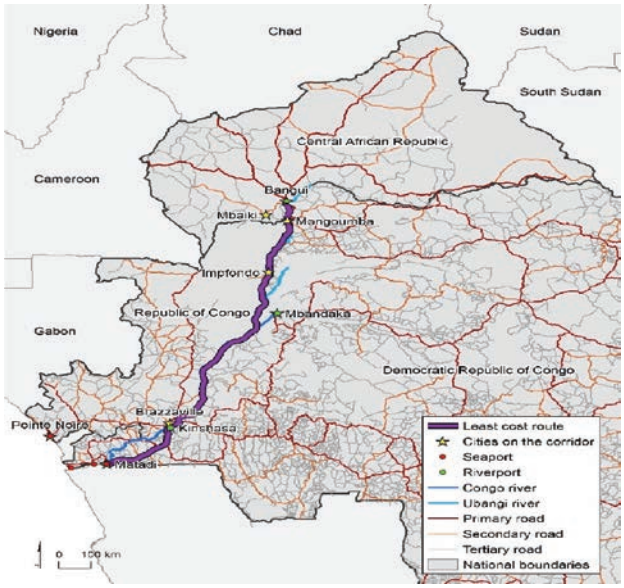
Route	Cost (US$ per ton)	Travel time (hours)
Cheapest: to Matadi Using Ubangi river	**151.25**	126.41
Quickest: to Douala (Cameroon)	171.82	**20.88**
Alternative: to Matadi using roadways in DRC	464.81	70.94

Source: Calculations using data from World Bank 2016.
Notes: The cheapest option is to use the Ubangi river from Bangui to Kinshasa (DRC) and highways from Kinshasa to Matadi. Due to data availability, road user costs and average speed for the road segments of the Bangui–Douala corridor (CAR and Cameroon) were derived from estimates for the DRC. See Box A.1 in appendix for details on the methodology.

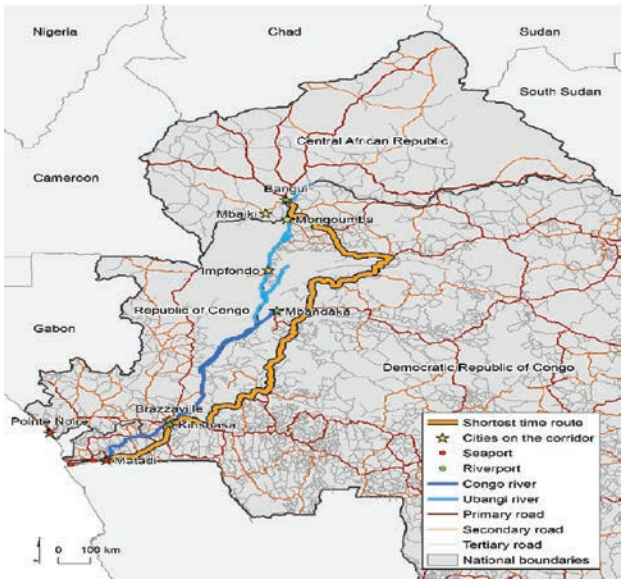
[50] The Central African Republic's infrastructure: A continental perspective, Carolina Domínguez-Torres and Vivien Foster.

FIGURE 30 CAR's access to seaports and related costs and time

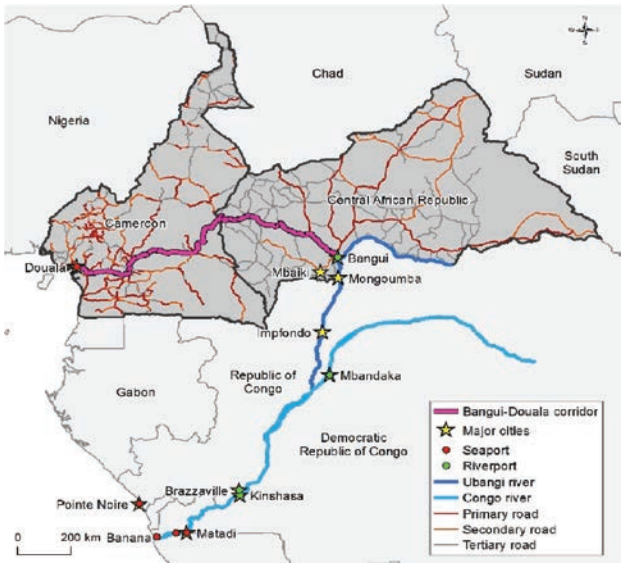
a. Cheapest route from Bangui to Matadi: using the Ubangi River



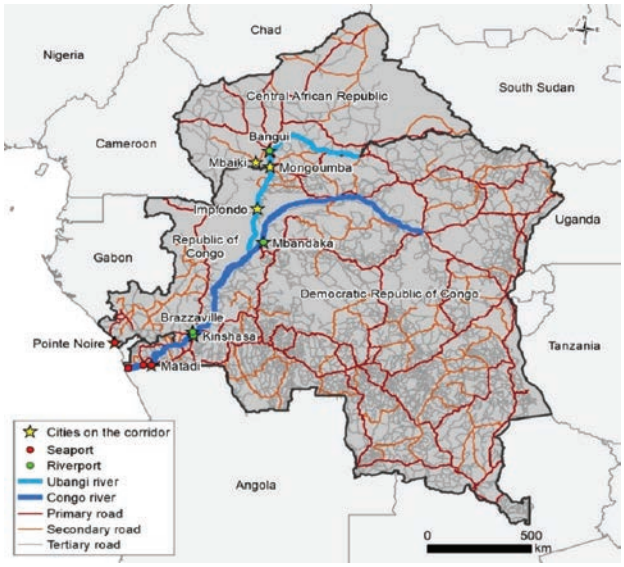
b. Alternative route from Bangui to Matadi: using the DRC's road network



c. Actual primary corridor from Bangui to Douala: using the road network



d. A potential integration vector for CAR, DRC, and ROC



Source: World Bank staff calculations based on the application of Network Analyst in ArcMap 10.6 to estimated cost and time data from World Bank 2017.
Note: Panel c shows the route using N10 between Bertoua and Yaounde. Panel d shows river networks (both Ubangi and Congo rivers) and road networks for CAR and the ROC from OpenStreetMap, downloaded from The Humanitarian Data Exchange (https://data.humdata.org/) and the DRC's road network from DeLorme.

road network.[51] Compared to using the road corridor from Bangui to Doula, the transport costs associated with using the Ubangi river are also lower. CAR can boost its competitiveness and reduce import costs by using the Ubangi river, which is about US$20 cheaper per ton than the Bangui-Doula road corridor (although it is takes roughly 4.4 days longer). The Ubangi river is a competitive option for CAR to access global markets, increase its participation in GVCs, and boost exports.

The Ubangi river is the most optimal trade corridor to integrate the economies of Central Africa. In addition to having a common language, CAR, the ROC, and the DRC share water borders. The Ubangi River constitutes a transport route between the capital cities of Bangui, Kinshasa, and Brazzaville, and

[51] World Trade Organization 2007.

it is important for all three countries in terms of economic development and population mobility.

Accelerating regional integration can unlock opportunities, improve domestic and cross-border trading, generate jobs, and reduce income inequality. The vast distances and extreme variations in the spatial distribution of GDP in the region call for efforts to improve intra-provincial as well as interprovincial connectivity to promote trade and economic cohesion. Increased regional integration also has the potential to reduce income inequality within and between the three countries. It can be used as an instrument to redistribute economic activities, which are currently concentrated in the major cities of Kinshasa, Brazzaville, Bangui, Matadi, and Pointe Noire, and reduce income inequality (Figure 31).

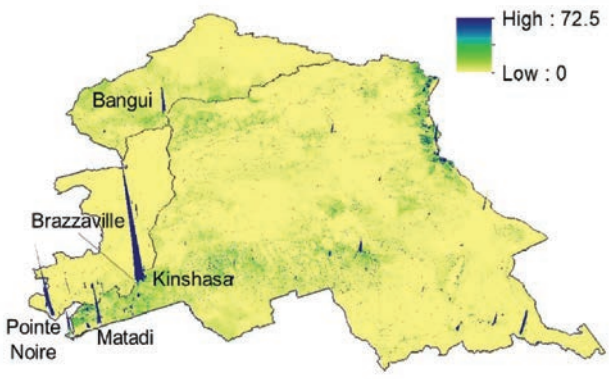
Being a landlocked country, CAR will especially benefit from increased regional integration. CAR is among the sixteen landlocked countries in Africa, and it is bordered by Chad in the north, Sudan in the east, the ROC and DRC in the south, and Cameroon in the west. There are four possible routes for CAR to access the sea. The first and most suitable access point to the sea is Douala in Cameroon. The Port of Douala is located over 1,450 km from Bangui and is CAR's main trade port, handling about 80 percent of the country's international trade. The main advantage of Douala is that both Cameroon and CAR belong to the same economic zone (CEMAC). However, the transit time at the Port of Douala remains high (over two weeks), and it can take more than twenty days for a truck to reach the port from Bangui. The second access point is Port Sudan in eastern Sudan on the Indian Ocean, although CAR has not utilized this port, mainly due to the poor state of the roads in the Vakaga prefecture. The roads to the port are only passable for six months during the dry season. The third and fourth access points to the sea are via Pointe-Noire in the ROC and through Matadi in the DRC. The last two corridors could be cost-effective options for CAR, although the use of a combination of transport modes (i.e., rail/river from Pointe-Noire and road/river from Matadi) increases the risk of food commodity loss, and the road and rail links have proved to be unreliable for non-oil traffic.

Further development of the region's trade corridors is vital to boost CAR's trade and economic growth. Studies show that CAR's trade corridor was the least efficient in the world in 2008-13.[52] Therefore, CAR needs access to an efficient and reliable transport and logistics network to improve regional integration and diversify the economy. Three main regional trade corridors could integrate nine major cities in CAR, DRC, and ROC: Bangui-Mbaiki-Mongoumba, Impfondo-Brazzaville-Pointe Noire, and Mbandaka-Kinsasha-Matadi. Trade flows along these corridors include: (i) international trade, including products passing through maritime gateways to final inland destinations; (ii) intra-regional trade flows between neighboring countries; and (iii) domestic trade flows between economic and commercial centers within the same country. Table 10 summarize key policy recommendations to diversify CAR's economy.

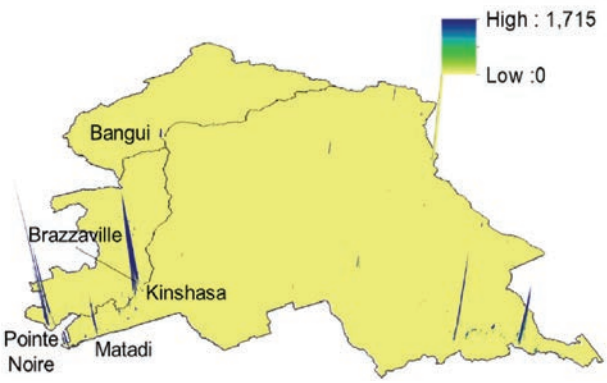
[52] Fanou and Wang 2018.

FIGURE 31 Distribution of economic activities

a. Local GDP, 2006



b. Nighttime lights, 2015



Source: Panel a is from Ghosh et al. 2010. Panel b is based on nighttime lights data from the 2015 VIIRS (Visible Infrared Imaging Radiometer Suite) annual composite product.
Note: GDP is expressed in US$ million per 10 sq. km.

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4 Appendix

BOX A.1

Geospatial analysis to evaluate the Central African Republic's options to access seaports

This analysis uses cost and time estimates for traveling along road and river networks originally estimated for the DRC. Vector-format geospatial data for river networks, notably for the Ubangi and Congo rivers, were obtained from the Food and Agriculture Organization and the DRC's *Ministere des Infrastructure, Travaux Publics et Reconstruction*. The unit cost of US$0.09 and the average speed of 10 km/hour for traveling along the river network were obtained from the World Bank (2014). Estimates of road user costs in the DRC's were based on the Highway Development and Management Model (HDM-4), which were used to calculate the cost per ton-km of operating vehicles while considering the road segments (e.g., width, surface type, ruggedness, speed limit, average annual daily traffic, etc.) as well as country-specific factors (e.g., vehicle price, fuel price, maintenance labor cost, cargo delay cost, etc.). Geospatial vector data that represent the DRC's road network were provided by Delorme,[a] and data on road characteristics were obtained from the Africa Infrastructure Country Diagnostic. The travel time for each road segment was calculated by dividing the length of each segment by an associated speed limit.

Equipped with estimated costs and time associated with using the transport networks, a network analysis was conducted to determine the best route between a set of locations in the DRC—from Zongo to Matadi through Kinshasa.[c, d] Depending on the *impedance attribute* chosen between cost and time, the analysis yielded the route characterized by either the lowest cost or the least travel time between locations.

For CAR and Cameroon, it was infeasible to run the HDM-4 model due to limited data on road characteristics. To calculate the cost and time to operate vehicles on the transport network that connects Bangui, CAR, to the seaport in Douala, Cameroon, the DRC's data were used, with the assumption that the three countries share the same level of operating costs and speed limits for the same type of road segments. In doing so, road segments were classified based on the following factors: 1) road type (primary, secondary, or tertiary); 2) surface type (paved or unpaved); and 3) surface condition (good, fair, or poor).

Some caveats in the methodology require caution in interpreting the results. First, the results represent, at best, lower-bound estimates, as the estimated cost and time do not reflect any additional cost or time that may be incurred by, for example, delays at ports, check points, or country borders. The use of river networks can take much longer than the real travel time due to reasons related to facilities or operations (among many others) at ports. The Bangui–Douala road corridor is also notorious for many check points and weighing stations, each of which imposes extra costs on truckers to pass. Again, the methodology does not take these costs or opportunity costs of delays into account.

Second, the cost and time that were estimated for the Bangui–Douala corridor should be viewed with great caution, given the assumption that CAR and Cameroon share the same level of operating costs and speed limits as the DRC for the same type of road segments. The analysis could not account for differences in country-specific factors, and only three factors were considered in the classification of road segments. To increase the reliability of speed limits, and in turn, estimated travel times, the analysis included a comparison of total travel time between Bangui and Douala with the estimated travel time based on Google Maps.

Source: World Bank 2017; World Bank 2016.
Note: a) Delorme is a software company that specializes in global positioning system (GPS) mapping product. b) The analysis used the route analysis tool available in ArcMap version 10.6. c) Zongo is a city in DRC that lies on the south bank of the Ubangi river, which is across from Bangui, CAR. d) Zongo, instead of Bangui, was used as the origin because the cost and time estimates were available only for the DRC's transport network. Hence, our cost and time estimates for the Bangui and Matadi network are lower-bound estimates that do not take account of the border situations between the CAR and the DRC.

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