



COUNTRY PRIVATE SECTOR DIAGNOSTIC

CREATING MARKETS IN THE DEMOCRATIC REPUBLIC OF CONGO

Putting Natural Resources to Sustainable Productive Use

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ABBREVIATIONS AND ACRONYMS

BCC	Banque Centrale du Congo
BPO	business process outsourcing
CDD	customer due diligence
COMESA	Common Market for East and Southern Africa
COPIREP	Comité de Pilotage de la Réforme des Entreprises Publiques
CPSD	Country Private Sector Diagnostic
CSP	Conseil Supérieur du Portefeuille
CTR	Comite Technique des Reformes
CVM	Congolaise des Voies Maritimes
DGRAD	Direction Générale des Recettes Administratives, Judiciaires, Domaniales, et de Participations
EAC	East African Community
FBO	faith-based organization
FDI	foreign direct investment
GDP	Gross Domestic Product
GÉCAMINES	Générale des Carrières et des Mines
ICT	information and communication technology
IMF	International Monetary Fund
KYC	know your customer
MNO	mobile network operator
NGO	nongovernmental organization
OHADA	Organisation for the Harmonization of Business Law in Africa
ONAPAC	Office National des Produits Agricoles
PPP	public-private partnership
REGIDESO	Regie de Distribution d'Eau
RVA	Régie des Voies Aériennes
SCTP	Société Commerciale des Transports et des Ports (ex-SONATRA)
SEZ	special economic zone
SME	small and medium enterprise
SNCC	Société Nationale des Chemins de Fer du Congo
SNEL	Société Nationale d'Electricité
SOE	state-owned enterprise
SONAS	Société Nationale d'Assurances
Telecom	telecommunications
TVET	technical and vocational education and training
USMCC	Union des Sociétés Minières Chinoises au Congo
VAT	value added tax

EXECUTIVE SUMMARY

A critical and fragile country in Sub-Saharan Africa, the Democratic Republic of Congo is a large, populous country (80 million people) and one of the poorest in the world (73 percent of its population lives in extreme poverty). It has been in a state of conflict and fragility for the better part of the past 40 years. Pervasive economic governance problems and various crises (national security and the COVID-19 pandemic that followed 10 previous Ebola outbreaks) continue to simmer throughout the Democratic Republic of Congo, partially brought on by issues with neighboring countries. Given its high population growth (3.3 percent annually), the Democratic Republic of Congo is faced with a population expected to reach 400 million in 50 years, making Kinshasa the largest city in Africa alongside Lagos. There is, therefore, an urgent need for the country to adopt a strong, sustainable growth path. This will require a growing private sector to meet the country's needs.

The worldwide demand shock following the COVID-19 crisis has added to the numerous challenges the country has been facing in recent years, underlining the urgent need for economic reform. One possible positive result should be the development of new, more resilient sources of foreign exchange other than copper: strategic raw materials such as rare minerals and cobalt, import substitution of food products, and carbon financing to leverage its forest resources. Another result might be the increase and formalization of the domestic sources of the Democratic Republic of Congo's fiscal revenues. The country should also mobilize and support the vast network of faith based organizations (FBO) to aid in helping the population get through the COVID-19 pandemic.

Private sector growth should be considered in this context as a potential response to strong drivers of fragility. The sources of fragility in the Democratic Republic of Congo are multiple, the most important ones being (a) volatile and undiversified sources of fiscal and foreign exchange revenues with extreme reliance on copper; (b) a legacy of a dysfunctional governance system that has been based on patronage and that has led to a lack of trust and cohesion at every level of society; (c) the fragmentation of the country's economy, which creates local vulnerabilities and spatial disparities that expose some regions to specific risks (the high number of poor people in the Kasai and Kivus regions, Ebola, the conflict in the Kivus, and 400,000 refugees coming from Angola); and (d) a financial system that is small and underdeveloped and is characterized by low financial inclusion, limited access to and high costs of credit, and almost a total lack of access to long-term loans necessary to finance productive investments.

The country's first peaceful political transition following the election of President Tshisekedi in January 2019 has created the opportunity to move away from the status quo. There is also an opportunity to build on the policy reforms of the past 10 years. These reforms include changes to the mining code; a liberalization of the power, water, and banking and insurance sectors; central bank law and investment code improvements as well as the passage of a new public-private partnership (PPP) law and the New Family Law that grants new rights to women; membership in the Organization for the Harmonization of Business Law in Africa (OHADA); a signing of the New York Convention on the enforcement of foreign arbitration awards; and the new telecom law.

Faced with low levels of resources, a vast number of challenges, and the need to achieve rapid results, the Democratic Republic of Congo needs focused government action that must concentrate on a handful of core sectors and issues before broader diversification and private sector growth kick in. We thus propose a private sector–led development strategy focused on the following three mutually reinforcing pillars:

- Improve the management of natural resource–based sectors (mining, forestry, and agribusiness)
- Promote private sector participation in key enabling sectors (infrastructure, finance, and human capital sectors)
- Improve governance and the investment climate (policy making, taxes, commercial justice and property rights, state-owned enterprises [SOEs], and PPPs)

With sustained growth, increasing fiscal revenues, and continued reforms, this virtuous cycle should expand to other parts of the economy where the private sector will be able to seize new opportunities, starting with the agribusiness, construction, and services sectors to serve rapidly growing urban markets. These reforms will also provide the financial resources for the government to invest more in the critical health and education sectors in partnership with the private sector, which is already very active in these sectors.

IMPROVE THE MANAGEMENT OF NATURAL RESOURCE SECTORS (MINING, AGRIBUSINESS, AND FORESTRY)

This is the most immediate way to produce added wealth and strengthen the fiscal base for public services. Most of these opportunities should survive the worldwide shock on commodity prices following the COVID-19 crisis. Specifically, the Democratic Republic of Congo has a dominant position in strategic minerals such as rare minerals and cobalt, can substitute large agribusiness imports, and could leverage carbon financing by using its forest resources. In focusing on these sectors, the country needs concomitant development of associated infrastructure, which will enable the growth of other sectors, and the promotion and enforcement of environmentally and economically sustainable practices. Next, we discuss each sector in turn.

Extractive industries

The Democratic Republic of Congo has an abundance of mineral resources, but these need to serve national economic development more effectively, and the management of the sector must continue to improve. The 2018 Mining Code is better aligned with international best practices than the previous mining code law because it now incorporates equal and transparent taxes on mining rents. Some operators complain that the cumulative effect of this new mining taxation is too heavy, however, especially considering other costs such as paratariffs and the presence of SOEs. While the good progress in the management of the mining sector is noteworthy, there remain a vast number of measures to improve the sector's performance and its contribution to the Democratic Republic of Congo's development:

• Financial issues

- Clarify how the windfall tax on “super profits” will be calculated, ensuring in particular that it includes such profits that accrue from the resale of mining licenses. The treatment of underground mining relative to surface mining should also be clarified (surface mining being best left to artisanal miners). So far, the former is encouraged and is conducted in areas where the latter can be easily implemented. Moreover, the use of security forces by industrial mining management to repress artisanal miners has often been reported.
- Review, once balance of payment constraints ease, the 60 percent repatriation requirement for mining export receipts (requiring that 60 percent of mining revenues be deposited into a commercial bank in the Democratic Republic of Congo), in line with the International Monetary Fund (IMF) institutional view on capital flows. It imposes unnecessary costs and risks on mining companies. These restrictions on the use of repatriated revenues introduce useless transaction costs and increase uncertainty for private investors.

• Sector governance

- Reform the main mining SOEs, the Générale des Carrières et des Mines (GÉCAMINES), which has been prone to serious governance and performance issues at high cost to the budget. The options for reforming GÉCAMINES include an in-depth reform of its governance and the limitation of its role to that of a government holding company.
- Improve the capacity of the government to negotiate licenses and monitor mining operations, including on issues of cross-border flows and transfer pricing, and rely on world-class third parties.
- Increase the transparency under which oil and gas exploration and exploitation licenses are awarded. If resolved, reforming licensing could increase government revenues by 5 to 10 percent.
- Invest in the development and monitoring of artisanal mining by preventing child labor, upgrading technology, improving labor safety, and ensuring environmental sustainability and traceability. Do so in partnership with the private sector and local communities with, for instance, concessions designed to allow artisanal miners to mine shallow deposits while industrial miners mine deeper deposits.
- Improve the management of environmental and social impacts of the sector, including a better assessment of the environmental liabilities of mining operations.

- **Develop additional information and analysis**, including (a) geological surveys to attract investors to poor regions (Kasai, Tshopo); (b) a strategic assessment of the worldwide cobalt value chain to ensure that the Democratic Republic of Congo benefits maximally from its unique endowment; and (c) feasibility studies for developing (through PPPs, some with major mining companies) the transport and power infrastructure needed to support the competitiveness and development of the sector (these would include targeted investments in key transport nodes, as well as the rehabilitation of dams).

Agribusiness

In the face of both immense natural potential and extremely difficult conditions that hinder agribusiness, more immediate opportunities to develop markets should focus on three sectors: horticulture, livestock, and fisheries, for supplying fast-growing urban markets, and a well-developed agricultural system with large tracts of land on which established players in need of financial and technical assistance can grow industrial and export crops.

Cash crops (rubber, palm oil, coffee, tea) are concentrated in Nord-Kivu, Equateur, and Kivu and could be competitive in domestic or selected export markets. Following improvements in river and road connectivity, existing large players are looking for financial and technical support and partnerships to develop more than 50,000 hectares of land that they already own. Development would create thousands of badly needed jobs in the short term and benefit households in some of the poorest areas through improved education and health care services provided by these large players, and further has the potential to create outgrower schemes (plantations villageoises) over time.

Horticultural, livestock, and fishery products could supply rapidly growing urban markets, which currently rely largely on imports of these goods, if concerted effort is made to partner public support with private initiatives along each value chain. Such support will include river and road connectivity, security, agriculture innovation services (leveraging information and communication technology; ICT), seed development, food safety, animal and plant health services, and industrial zones for agriprocessing such as the PPP Maluku Special Economic Zone near Kinshasa.

There are two necessary short-term policy reforms that will produce higher levels of investment: (a) the removal of the Office National des Produits Agricoles (ONAPAC)¹ decree, which levied a two percent sales fee on 15 key agricultural commodities and (b) the removal of the restriction on foreign investment (article 16 of the 2011 Agriculture Law).

Forestry

The existence of the Democratic Republic of Congo's forests, which constitute the second largest swath of rainforest in the world, is threatened: 1.3 million hectares disappear each year.² The country has an opportunity to take pressure off of natural forests by improving agricultural productivity (the growth of traditional intensive agriculture being the main cause of deforestation) together with developing agro-forestry plantations on bare savannah and degraded land to provide cities with more sustainable food and with forest products such as charcoal and lumber. Additionally, carbon finance mechanisms could be leveraged to provide results-based incentives for

preserving forest lands and developing carbon storage by plantations. This would take advantage of the increasing interest from international companies seeking to finance “carbon sinks” to help reduce their carbon footprint. Results-based financing such as carbon finance requires capacity and tools for measuring and monitoring the emission reductions generated and for ensuring that carbon payments reach the intended beneficiaries, such as local communities.

Finally, there is a potential for the country to conserve its forests by addressing illegal logging and the export of illegal lumber and by promoting sustainable forest management practices that balance the country’s short- and long-term economic goals, improve income security for forest-dependent communities, and enable the conservation of wildlife and biodiversity. This effort will require both improving the government’s capacity to govern forest lands, such as by efficiently and effectively enforcing and monitoring sustainable management plans in forestry concessions, and encouraging sustainable forest management as an economically viable land use option using, for instance, private sector mechanisms like third-party voluntary certification. This may in turn allow the Democratic Republic of Congo to tap the potential to develop the export of high-value sustainable woods. Incentivizing in-country wood processing could also help develop markets and capture greater value and the related benefits in terms of jobs and income. As for agribusiness, this process will require concerted actions that draw on lessons learned from relevant international experience.

REFORM AND PROMOTE PRIVATE PARTICIPATION IN KEY ENABLING SECTORS (INFRASTRUCTURE, FINANCE, AND HUMAN CAPITAL SECTORS)

There are tremendous gaps in the provision of key infrastructure, and not all can be addressed in the short term. Very high transportation costs trap entire regions in poverty and severely limit the Democratic Republic of Congo’s connection with world markets. The need to transship cargo, for instance, from the deep-sea port of Pointe Noire in the Republic of Congo to Kinshasa through the Matadi River port and then further onward down the Congo River toward Kisangani brings transport costs that are many times what other countries face. The Democratic Republic of Congo has one of the most extensive rail networks in Africa, but the rail freight sector has collapsed. Only six of the 26 new provincial capitals can be reached by road from Kinshasa. Logistics infrastructure at the main port of Matadi, at Kinshasa, and along the Congo River suffers from severe maintenance problems that limit circulation.

Likewise, the electrification rate is among the lowest in Africa at 15 to 20 percent and, except for in a few large cities, most of the country does not have any access. Only 50 percent of the installed hydroelectric capacity is operational and the vast potential (13 percent of the world’s potential) is largely untapped. Manufacturing firms source almost half of their electrical power from generators (US\$1 per kilowatt-hour), which is not unusual for the country because of transportation costs that can double the cost of fuel (US\$0.20 is considered an average cost of electricity in most countries), and firms lose on average 11 percent of annual sales because of electrical outages.

Mobile usage is on the rise in the country, the penetration rate of mobile subscribers having almost doubled since 2011 to an estimated 47.3 percent in 2018. The broadband infrastructure, however, remains weak and its usage expensive because the public company, Societe Congolaise des Postes et Telecommunications (SCPT), is the regulatory monopoly provider of the country's telecommunications (telecom) backbone. Therefore, mobile telephony remains the main way to access internet services, the development of which remains limited in the Democratic Republic of Congo. Only 7 percent of firms use internet or cell phones for productive purposes.

The demand is highest in the energy sector because of the present opportunities to develop on- and off-grid renewable solutions linked with mining for the largest projects. Transport and ICT should also be considered because of the important economic spillovers these types of infrastructure generate in other sectors: the facilitation of the delivery of key services and information to the population related to trade, transport, financial technology (fintech), agricultural technology (agtech), educational technology (ed-tech) and e-health. PPPs in the energy, transport, and ICT sectors should be sought only if there is improved transparency and accountability within the government and the poorly performing SOEs that still dominate these sectors. Although the legal framework of these sectors has been liberalized, the new telecom law has only recently been published, and the regulatory agencies have yet to become operational.

The retrenchment of the state and sector liberalization have opened the door for the private sector. The emergence of the still-timid private sector as a provider of infrastructure services has arisen through concessions for developing roads and the Matadi port terminal, a rail concession on the Société Commerciale des Transports et des Ports (SCTP) network, and numerous licenses in the electricity sector for production and distribution in the North Kivu region and in the Copper Belt. The private sector has expressed interest in increasing its presence in regions with strong economic potential (Bas Kongo, Kinshasa, ex-Katanga, and Kivus). The contribution of the private sector could help address transport challenges, improve the country's connection to global markets, and reduce the cost of importing and exporting for businesses (especially minerals) and goods for the population. Examples of possible PPP projects include rail and port operations, hydropower in ex-Katanga that supports the mining industry, mid-sized hydro or solar generation for supplying cities, an expansion of the broadband network for promoting the digital economy, and small-scale water supply systems. Another area where more private sector participation can reasonably be expected is in the provision of water services.

Similar opportunities to involve the private sector exist in the human capital sectors (education and health), where the private sector (including faith-based organizations) has greatly increased its presence to compensate for failing public sector providers. In addition to clarifying the PPP framework in these sectors, the government should leverage new technologies (e-health and ed-tech), increase the training and certification of doctors and teachers, and facilitate access to finance by, for instance, leveraging the proposed multipartner skills fund in support of technical and vocational education training (TVET).

The government should increase access to finance by enabling and promoting fintech (digital money and payments), improving collateral markets (property rights, leasing, and credit bureaus), and providing partial credit guarantees and long-term credit lines.

IMPROVE GOVERNANCE AND BUSINESS ENVIRONMENT (POLICY-MAKING GOVERNANCE, TAXES, COMMERCIAL JUSTICE AND PROPERTY RIGHTS, SOE REFORMS, AND PPPs)

The Democratic Republic of Congo presents one of the most challenging governance and business environments in the world for investors. The 2019 Transparency International Corruption Index ranked the Democratic Republic of Congo 168th out of 180 economies. In addition to these cross-cutting constraints, the country also, as discussed previously, presents a multiplicity of sector-specific constraints that preclude productive private investment. In this context of weak institutions, it would be unrealistic to hope to address all the cross-cutting and sector-specific constraints. The government should, then, focus on reforming the key sectors discussed as well as critical cross-cutting business environment reforms through improved policy-making governance. These reforms are fully aligned with the 26 reforms of “DRC’s Ambassadors” published in 2019.³

Policy-making governance

Weak institutions and poor governance create high policy uncertainty for private investors, which considerably increases the risks and cost of doing business in the Democratic Republic of Congo. There was, for example, no consultation on the 2011 Agriculture Law, which required a 51 percent ownership of agricultural ventures by locals, and this effectively stopped foreign direct investment (FDI) in the sector. It is also common for ministries to issue decrees tilting the level playing field by, for instance, giving import duty exemptions to individual players.

To improve policy-making governance, the government should strengthen the capacity of the *Comité Technique des Réformes* (CTR), an organization with a good track record and technical capacity that was set up by the Ministry of Finance to implement IMF programs. The CTR should steer the identification, design, and implementation of priority reforms. It should advocate for new essential reforms, exercise quality control by assessing reform proposals, and support and monitor reform implementation. The experience of successful countries shows the importance of having such highly skilled, dedicated, and empowered “reform teams,” such as the deputy prime minister’s team in charge of reforms in Georgia and the Rwanda Development Board, itself inspired by the Singapore Development Board. The CTR should leverage the financial and technical resources made available by development partners and maintain regular contact with the private sector and civil society. A large proportion of implementation could be outsourced to specialized agencies with the support of the private sector, especially for one-off critical activities for which there is no capacity in the country. One example is the large-scale privatization program carried out in Mexico by world-class private sector firms under the supervision of an elite team of seven government officials. Such a program would involve recommended SOE and PPP reforms and is of particular relevance to the operations of the *Comité de Pilotage de la Réforme des Entreprises Publiques* (COPIREP).

Fiscal reform to increase revenues, level the playing field, and terminate fiscal harassment

The private sector's main complaint is the predatory behavior of and harassment by the government, especially with respect to taxes and nontax and parafiscal payments. These payments are for most firms abusive and discretionary, they don't reflect public services rendered, and they lead to very high costs and a nonlevel playing field, which destroys entrepreneurship.

Taxation targets a portion of the formal private sector in a country where informality is widespread. The overall level of revenue collection as a percentage of gross domestic product (GDP) in the Democratic Republic of Congo is therefore low.⁴ This low level of revenue collection also suggests that a large share of these payments does not find its way into the government's coffers. Furthermore, large segments of the formal private sector benefit from generous and numerous exemptions (there are more than 12 special regimes) that are a source of significant revenue shortfall and unlevel playing fields.

According to the Fédération des Entreprises du Congo (FEC), there are 246 different taxes and other forms of payments made to the government at the central level, most of which are administered by the Direction Générale des Recettes Administratives, Judiciaires, Domaniales, et de Participations (DGRAD) within the Ministry of Finance. In addition, there are hundreds of taxes and other levies collected by provincial government. Some of these taxes can be particularly onerous and unjustified, such as the 2 percent levy on turnover that the ONAPAC collects on most of the main agriculture products despite the dubious and even occasionally nonfunctional nature of the services provided by the organization.

The authorities should (a) aggressively streamline revenue collection using tools like e-payments, (b) reduce the number of taxes and levies (several hundred of which have already been eliminated), and (c) diminish and rationalize the exemptions. In addition, a review of parafiscal levies under the purview of DGRAD and taxes and levies collected by subnational authorities (starting with the main economic centers) should lead to the clarification of the reasons they are collected, who is subject to them, who is collecting them, and how they are calculated, as well as what is their legal status. This process should lead to a significant rationalization of the fiscal landscape for the private sector, a consolidation of collection, and a significant reduction in the amount of taxes and cost-recovery fees paid for public services.

Commercial justice and property rights

Private sector players try to avoid using the unreliable and slow courts to resolve disputes. Most are land-related disputes that result from poorly maintained manual urban land registries. One leading housing developer estimates, for instance, that only 20 percent of titles are "clean" in Kinshasa (in other words, they require long and costly investigations and a 100 percent price premium on prices that are already very high).

Resolving disputes takes a long time (610 days on average) and can be very costly (80 percent of the value of the claim on average)⁵. The signing of the OHADA Treaty and the New York Convention together with the law requiring arbitration is a key step forward.

Going forward, the government should accelerate the reform of commercial courts by promoting mediation, arbitration, training of judges, and the publication of court cases. It should also accelerate the digitalization and securitization of land registries, starting with the land areas of highest value.

SOE reforms and PPPs

As discussed, SOEs dominate many of the Democratic Republic of Congo's key sectors and are failing. Even with strong support from the World Bank, a 15-year reform effort has failed to improve the performance of most SOEs. The reform strategy was pursued in three main phases: (a) the corporatization of SOEs by subjecting them to private company law and OHADA rules; (b) the stabilization of their operations, mainly by introducing international expertise through services contracts, audits, and signing performance agreements; and (c) a restructuring through the implementation of several retrenchment plans and private participation schemes (management contracts). The services contracts essentially helped keep the SOEs afloat and, except at the Régie de Distribution d'Eau (REGIDESO), their impact in terms of management and governance improvements was limited.

PPPs have been established in the Democratic Republic of Congo, but their management must improve and be streamlined if the needs of the country are to be met. This effort will require a clarification of the roles of the existing SOEs in relation to the private sector; an assurance that the PPP process is transparent, inclusive, and competitive in accordance with the new PPP law; and an establishment of centralized structures at the national and provincial level overseeing the engagement of public resources in such partnerships.

Reforming SOEs and promoting economically efficient PPPs will require reinforcing the capacity of government agencies, including that of COPIREP. Reformed SOEs and effective PPPs must go hand in hand with the reforms of the sectors in which they operate. The state thus needs to strengthen its ownership function by consolidating and reinforcing COPIREP and the Conseil Supérieur du Portefeuille (CSP) together with a strong connection with the CTR in charge of steering priority policy reforms.

Table ES.1 summarizes the main private investment and market opportunities identified, together with the short- and medium-term policy measures necessary to enable them. It shows the positive impact these measures will have on the three drivers of fragility, the widespread geographical reach of these measures, and existing or possible World Bank support for their implementation. The table also indicates in bold the opportunities and measures that should be within reach, even in the case of continued fragility of government institutions or external shock.

-
- 1 Office National des Produits Agricoles, the government agency certifying all of the Democratic Republic of Congo's agricultural exports.
 - 2 According to the Democratic Republic of Congo's national forest reference emission level submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2018, the annual rate of deforestation has increase from 0.44 percent over the period 2000–10 to 1.25 percent over 2010–14. See https://redd.unfccc.int/files/2018_frel_submission_drc.pdf.
 - 3 Ambassadors to DRC, Non-Paper: Improving the Economic Environment and Business Climate in the Democratic Republic of Congo, December 3, 2019.
 - 4 World Bank, "The Democratic Republic of Congo Sixth Economic Update: Increasing Domestic Revenue Mobilization and Restoring Monetary Policy Effectiveness to Foster Accelerated and Inclusive Growth" (Working paper, World Bank, Washington, DC, 2019).
 5. Doing Business 2020

TABLE ES.1 OPPORTUNITIES AND RECOMMENDATIONS

Priority measures and expected impacts on drivers of fragility	Region	Short-term actions and policy measures to create market opportunities	Medium-term actions and policy measures to create market opportunities
1. Improve management of natural resource sectors.			
Reforming mining will <ul style="list-style-type: none"> Secure a stronger fiscal and foreign exchange revenue base. Address governance issues rooted in the sector. Target fragile and poor regions. 	Ex-Katanga, Kivus, Kasai, Tshopo	Opportunities: Increase mining investments and diversify fiscal mining revenues. Measures: Improve enforcement and monitoring, end special regimes, end super taxes on super profits, promote sustainable artisanal mining, reform GÉCAMINES (governance reform and/or limit its role to that of a holding company).	Opportunities: Develop new mining areas and artisanal mining. Measures: Undertake geological surveys and improve capacity to negotiate, integrate, and formalize artisanal mining; revise the requirement to deposit 60 percent of revenues from export receipts in a Democratic Republic of Congo bank.
Reforming agribusiness will <ul style="list-style-type: none"> Support diversification. Target fragile and poor regions. 	Equateur, Kwilu, Kongo Central, North Kivu	Opportunities: Expand horticulture, livestock, and fisheries to supply fast-growing urban markets; develop the 50,000 hectares in the hands of established players by providing needed financial and technical assistance (for rubber, palm oil, coffee, and cocoa); prepare for large increase in FDI (if Agriculture Law is revised). Measures: Revise the Agriculture Law (article 16) to enable FDI; eliminate the ONAPAC decree levying 2 percent of sales on 15 key agriculture commodities; initiate feasibility studies to increase supply (of horticulture, fisheries, livestock) to urban markets and development of large farms; complete the development of the 210-hectare Maluku Special Economic Zone as a PPP.	Opportunities: Scale up commercial agriculture serving urban markets; develop plantations villageoises connected to the larger commercial farms. Measures: establish PPPs involving road and river connectivity and security (as a priority), as well as agricultural innovation services ^a , seed development, food safety and animal and plant health services.
Reforming forestry will <ul style="list-style-type: none"> Secure a stronger fiscal and foreign-exchange revenue base. Target fragile and poor regions. 	Mongala, Tshopo, Tsuhuapa, Mai-Ndombe	Opportunities: Increase adoption of best practices in existing forestry concessions to protect and sustainably manage the forests; leverage carbon financing. Measures: Increase the capacity of the government to enforce and monitor concessions and carbon financing contracts with related benefit sharing.	Opportunities: Develop sustainable management of forests and plantations of fast-growing wood for cities in periurban areas. Measures: Increase the capacity of the government to promote the efficient and effective enforcement of forest governance and to promote fast-growing wood plantations (including agro-forestry) on bare land around the main cities; support local MSMEs in the forest sector.

Note: FDI = foreign direct investment; GÉCAMINES: Générale des Carrières et des Mines; MSME = micro, small, and medium enterprise; ONAPAC = National Office for Agricultural Products (Office National des Produits Agricoles); PPP = public-private partnership; RVF = Régie des Voies Fluviales; MSME = micro, small, and medium enterprise;
 a. Agriculture innovation services include three pillars: agricultural research and development, extension, and education.

Priority measures and expected impacts on drivers of fragility	Region	Short-term actions and policy measures to create market opportunities	Medium-term actions and policy measures to create market opportunities
2. Promote private investment in key enabling sectors.			
Reforming transport will <ul style="list-style-type: none"> Address governance issues rooted in the sector. 	Kongo Central, Kinshasa, Lualaba	<p>Opportunities: Target contract PPPs in transport management and services toward sectors like rail and ports to support mining and international trade.</p> <p>Measures: Improve the governance of transport SOEs (especially SCTP, SNCC, and RVF) and build the capacity to support PPPs.</p>	<p>Opportunities: Establish PPPs that bring investments in infrastructure sectors like rail.</p> <p>Measures: Develop government capacity to integrate PPPs into public investment management.</p>
Reforming power will <ul style="list-style-type: none"> Improve access and services in fragile and poor regions. 	Kongo Central, Nord and Sud Kivu, Haut-Katanga, Lualaba	<p>Opportunities: Initiate power projects (especially renewable like hydro) to support mining; establish a PPP for hydro near economic centers and gas power generation (Boma) combined with support to the grid when financially sustainable; develop off-grid solar for small businesses and households.</p> <p>Measures: Operationalize regulatory agencies (ARE and ANSER) and improve the governance of SNEL. Build the capacity of provincial authorities and conduct feasibility studies on above-mentioned opportunities.</p>	<p>Opportunities: Expand electricity from mini-grids, further off-grid in solar, biomass (linked with industrial agriculture), and hydro (including in underserved regions).</p> <p>Measures: Develop the capacity to implement PPPs, providing standard contracts for independent power producers at the national and local levels (regional/municipal) and including devolved sector regulatory capacity.</p>
Reforming ICT will <ul style="list-style-type: none"> Diversify and increase fiscal revenues through official e-payments to governments and utilities. Improve governance through automation. Improve connectivity with the poorest and most vulnerable regions. 	All regions	<p>Opportunities: Unleash the development of broadband.</p> <p>Measures: Develop and implement the regulatory framework of the recently published new telecommunications law; restructure SCPT to support the development of the telecommunications infrastructure.</p>	<p>Opportunities: Develop e-government (taxes, utility payments, land registry), e-agriculture, e-learning, e-health, digital entrepreneurship.</p> <p>Measures: Expand broadband to secondary cities and rural areas.</p>

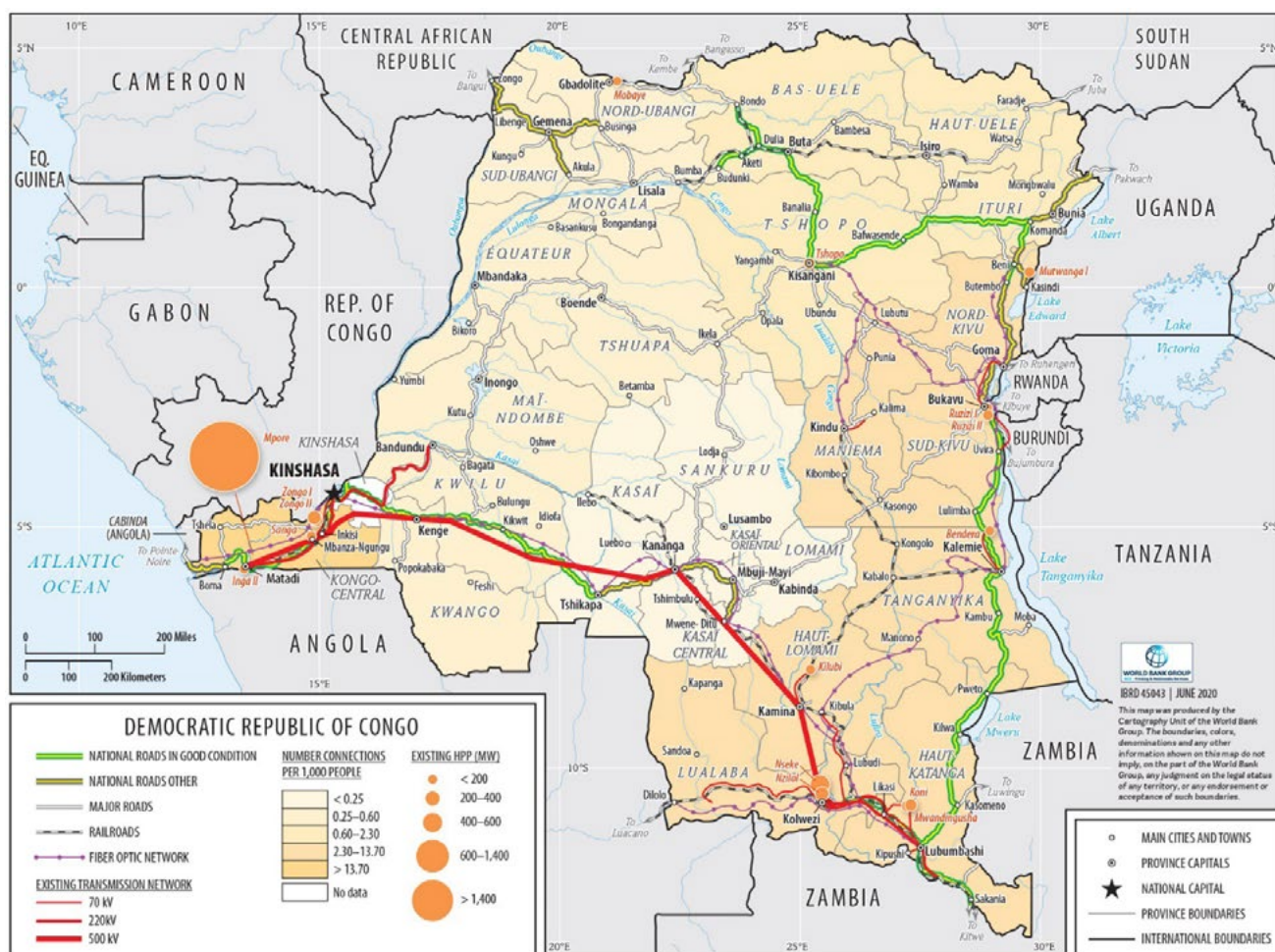
Note: ANSER = Agence Nationale de l'Électrification et des Services Énergétiques en Milieu Rural et Péri-Urbain; ARE = Autorité de Régulation du Secteur de l'Électricité; PPP = public-private partnership; RVF = Régie des Voies Fluviales; SCTP = Société Commerciale des Transports et des Ports; SNCC = Société Nationale des Chemins de Fer du Congo; SNEL = Société Nationale d'Électricité; SOE = state-owned enterprise;

Priority measures and expected impacts on drivers of fragility	Region	Short-term actions and policy measures to create market opportunities	Medium-term actions and policy measures to create market opportunities
Reforming finance will <ul style="list-style-type: none"> Improve access and services in fragile and poor regions. 	All regions	<p>Opportunities: Increase financial inclusion through development of and investment in digital financial services (payment systems, mobile money); attract private equity and venture capital so as to build on the successful experience of the King Kuba fund (equity investment) to cities with expanding SME activities (Goma, Lubumbashi, Bukavu); increase investments in the insurance sector.</p> <p>Measures: Operationalize bilateral and multilateral interoperability in digital finance; adopt unique financial biometric identification; create a common digital platform for MFIs; enhance government-to-private and private-to-government payments; expand internet coverage; provide financial education; offer advisory support (capacity building) to SMEs and banks; develop the regulatory environment framework for PE and VC digital finance; support the development of the insurance sector.</p>	<p>Opportunities: Increase access to finance for SMEs by developing SME finance instruments and products; increase access to agriculture finance (including agri-insurance).</p> <p>Measures: Develop risk-sharing mechanisms that include partial credit guarantees (with a crisis component), provision of long-term credit lines, and collateral systems (the development of and investment in leasing and warehouse receipts financing); support the development of private credit bureaus to reduce borrower information asymmetry; support capital markets development (beyond the government bond market) and develop the regulatory environment for capital markets; support the restructuring and refinancing of SOFIs (Savings Bank of Congo, CADECO; Development Bank of Congo, SOFIDE; and cooperative banks, COOPEC IMARA and the MECRECO networks).</p>
Reforming education and health will: <ul style="list-style-type: none"> Improve social contract and trust. Improve access and services poor and vulnerable segments of society. 		<p>Opportunities: support social entrepreneurs leveraging new technologies through impact bonds and social franchising.</p> <p>Measures: Launch program of impact bonds and social franchising - including pilots leveraging new technologies.</p>	<p>Opportunities: Leverage new technologies and the vast network of private providers such as social entrepreneurs and faith-based organizations.</p> <p>Measures: Create a skills fund for private sector-led TVET; support private sector and e-solutions (e-health and ed-tech); develop training and certification of doctors and teachers.</p>

Note: MFI = microfinance institution; PE = private equity; SME = small and medium enterprise; SOFI = state-owned financial institution; TVET = technical and vocational education and training; VC = venture capital.

Priority measures and expected impacts on drivers of fragility	Region	Short-term actions and policy measures to create market opportunities	Medium-term actions and policy measures to create market opportunities
3. Improve governance and the business environment.			
Policy-making governance reform will: <ul style="list-style-type: none"> Address governance issues. 		Measures: Strengthen the capacity of the CTR to steer key reforms through advocacy, quality control, implementation support, and monitoring.	
Fiscal reform will: <ul style="list-style-type: none"> Secure a stronger fiscal revenue base. 		Measures: Consolidate taxes with lower rates in exchange for reduction of exemptions, including on imports; audit para-fiscal measures including those falling within the remit of subnational authorities; pursue business reforms related to taxation.	Measures: Codify para-fiscal measures and eliminate the most egregious ones; automate tax systems; effectively implement the single window reform and expand it to secondary cities; simplify taxation for microenterprises; develop a property tax system starting with the high-value urban and suburban areas.
Strengthening commercial justice and property rights will: <ul style="list-style-type: none"> Address governance issues. 		Measures: Implement the recently adopted OHADA laws that provide for the training of judges, transparency of court decisions and their motivations, the independence and accountability of judges, and the development of mediation and arbitration.	Measures: Secure and digitize land registries, a task which goes hand in hand with improving commercial justice because the majority of disputes are land-related; start with high-value land areas.
Bolstering the capacity to reform SOEs and establish PPPs will: <ul style="list-style-type: none"> Improve use of fiscal revenues. Address governance issues. 		Measures: Promote PPPs and reform key SOEs by strengthening the state's ownership function through consolidating and reinforcing COPIREP and CSP; build capacity at the provincial level starting with regions already experimenting with PPPs; reform SOE boards and reporting, starting with the priority SOEs (SCTP, SNCC, SNEL, SCPT, RVF and GÉCAMINES).	Measures: Create a fund to ensure that prefeasibility studies are reliably funded; operationalize recommendations from infrastructure assessments in key sectors (energy, ICT, transport) and regions (see above) and build capacity with expertise and training.

Note: COPIREP = State-Owned Enterprises Reform and Management Committee (Comité de Pilotage de la Réforme des Entreprises Publiques); CSP = State Portfolio Upper Council (Conseil Supérieur du Portefeuille); CTR = Reform Technical Committee (Comité Technique des Réformes); GÉCAMINES: Générale des Carrières et des Mines; ICT = information and communication technology; OHADA = Organization for the Harmonization of Business Law in Africa; PPP = public-private partnership; RVF = Régie des Voies Fluviales; SCPT = National Post and Telecommunications Company (Société Congolaise des Postes et Télécommunications); SCTP = Société Commerciale des Transports et des Ports; SNCC = Société Nationale des Chemins de Fer du Congo; SNEL = Société Nationale d'Electricité; SOE = state-owned enterprise;

MAP ES.1 MAP OF THE DEMOCRATIC REPUBLIC OF CONGO WITH KEY INFRASTRUCTURE

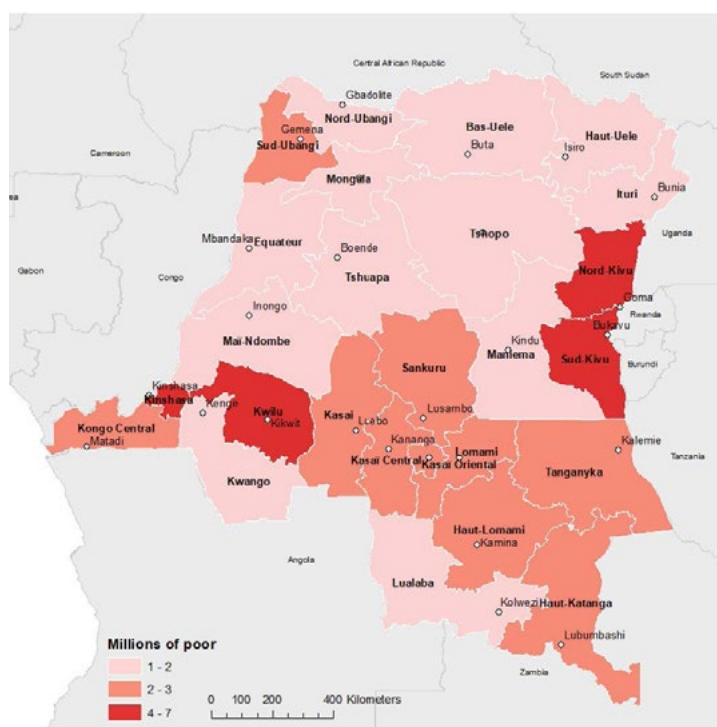
Source: World Bank cartography office.

01. CONTEXT: WINDOW OF OPPORTUNITY TO REFORM A CRITICAL FRAGILE COUNTRY

The Democratic Republic of Congo is one of the most populous (80 million) and poorest (73 percent of its population lives in extreme poverty) countries in the world and has been in a state of conflict and fragility for the better part of the past 40 years. Pervasive economic governance problems and the various crises (security, pandemics) continue to simmer throughout the territory.

Strong factors of fragility remain. Drivers of fragility include a lack of diversification of sources of fiscal and foreign exchange revenue, a reliance on extractives, and strongly favored elite and vested interests; a dysfunctional governance system that has led to a lack of trust and cohesion at every level of society; and a political settlement based on violence resulting in enduring security concerns, even in the capital.

MAP 1.1 THE NUMBER OF POOR RESIDENTS VARIES SPATIALLY

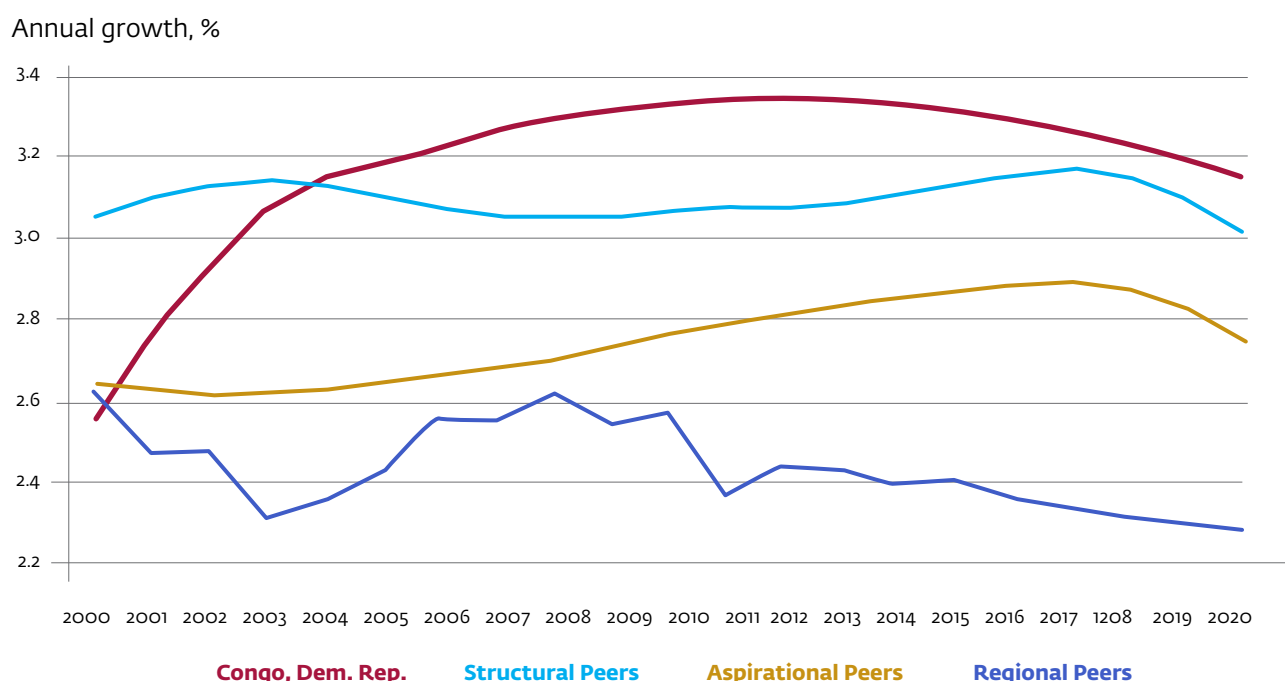


Source: World Bank (2019).

With a weakly integrated economy over a vast territory, vulnerabilities in the Democratic Republic of Congo have a strong spatial dimension (see map 1.1). Some regions are indeed specifically exposed to specific risks: a high number of poor people in the Kasai and Kivus, Ebola and conflict in the Kivus, 400,000 refugees coming from Angola, and regional dimensions of the political fight for power.

Given its high population growth (3.3 percent per annum, see figure 1.1)¹ and fertility rate (more than six children per woman), the Democratic Republic of Congo's population may reach 400 million in 50 years, hence the urgency for the country to move to a strong and sustainable growth path. This growing demand will require a growing private sector to meet its needs.

FIGURE 1.1 POPULATION GROWTH



Source: World Development Indicators.

Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa.

There is a historic window of opportunity following the country's first peaceful political transition with the election of President Félix Tshisekedi in January 2019. In this overall context, positive signs have emerged. Some important policy reforms have been accomplished over the past few years: mining codes; the liberalization of the power, water, telecommunications (telecom), banking, and insurance sectors; a new central bank law and public-private partnership (PPP) law; adhesion to the Organization for the Harmonization of Business Law in Africa (OHADA); the signing of the New York Convention on the enforcement of foreign arbitration awards; and passage of the new family law, which empowers women. This progress needs to be followed by strong implementation measures.

There is increasing global demand for the Democratic Republic of Congo's minerals, and the country holds a large share of the world's reserves of cobalt, copper, and coltan (essential for the electronics and battery industries). The country also has good opportunities to increase its green economy contribution to the fight against climate change by caring properly for its abundant water and forest resources, in part by leveraging carbon financing.

The Democratic Republic of Congo is a country that needs serious attention in the international fight against poverty because of the major poverty and human capital challenges its vast and rapidly growing population faces. The Democratic Republic of Congo is also a key country from the standpoint of regional stability and climate change (it has the world's largest forests after the Amazon). The government, then, can expect strong, continued support from the international donor community, provided that conditions—particularly with respect to governance—are created for these interventions to have a lasting impact.

Igniting the private sector to help answer the country's development will be challenging. One should note that in addition to being fragile, the economy of the Democratic Republic of Congo is small: the gross domestic product (GDP) in 2018 was US\$47.8 billion, government revenues a bit less than US\$5 billion. Even in an optimistic growth scenario, this level would limit the immediate prospects for large investments geared toward the domestic market and costly investment projects (even with modest debt levels), because the low domestic demand would limit economic returns. In the foreseeable future, the main private investment opportunities will thus be related to the sectors in which the Democratic Republic of Congo has an existing or potential comparative advantage (mining, forestry, water, agribusiness) and an infrastructure needed to support them, which should also benefit other segments of the economy. The growth stemming from these exports will thus fuel the development of infrastructure and economic growth, creating in turn private investment opportunities geared toward the domestic market and newly enabled export opportunities. This goal translates into a double imperative of better resource management combined with selected interventions to consolidate the economy and mitigate risks before transformation can happen.

1 In figure 1.1 and in the rest of the document, structural peers most similar to the Democratic Republic of Congo are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa.

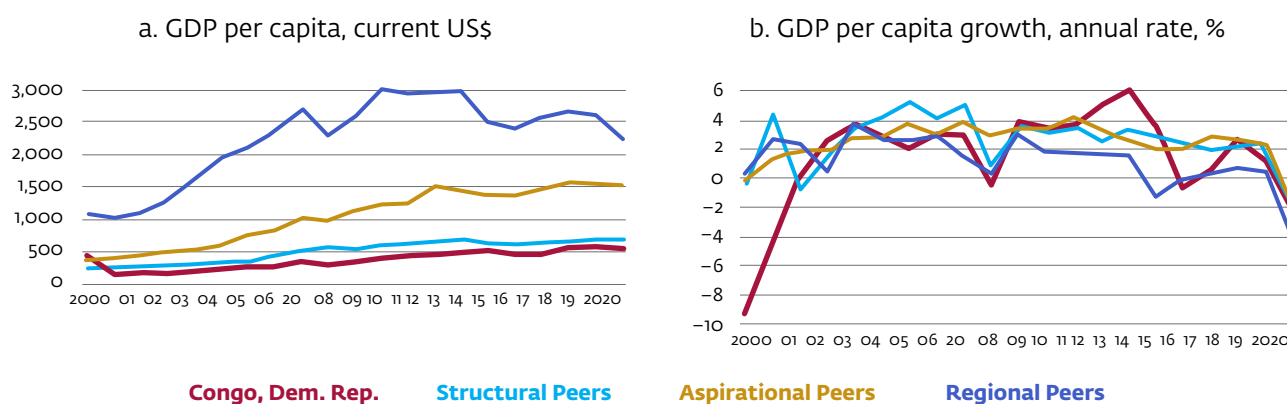
02. THE ECONOMY AND THE PRIVATE SECTOR: RESOURCE-BASED

2.1. ECONOMIC PERFORMANCE DOMINATED BY THE UPS AND DOWNS OF MINING

The Democratic Republic of Congo's economy grew 7.7 percent between 2010 and 2015, but the end of the commodity price supercycle brought that to a close. This growth performance was not enough to make a big dent on extreme poverty (people living on less than US\$1.90 a day), which still affected 76 percent of the population in 2012 (94 percent in 2004).¹ After Nigeria, the Democratic Republic of Congo has the second-largest number of people living in extreme poverty in Sub-Saharan Africa. There are large geographical disparities in poverty incidence across the country, with extreme poverty concentrated in the northwestern regions of the country and in the Kasais.

Growth has been hovering around 4 percent since 2003 (see figure 2.1), which, given a population growth of more than 3 percent, is grossly inadequate for reducing poverty. According to the latest World Bank estimates, poverty reduction stalled with poverty remaining around 73 percent between 2016 and 2018.

FIGURE 2.1 GROSS NATIONAL PRODUCT, 1995–2020



Source: World Development Indicators.

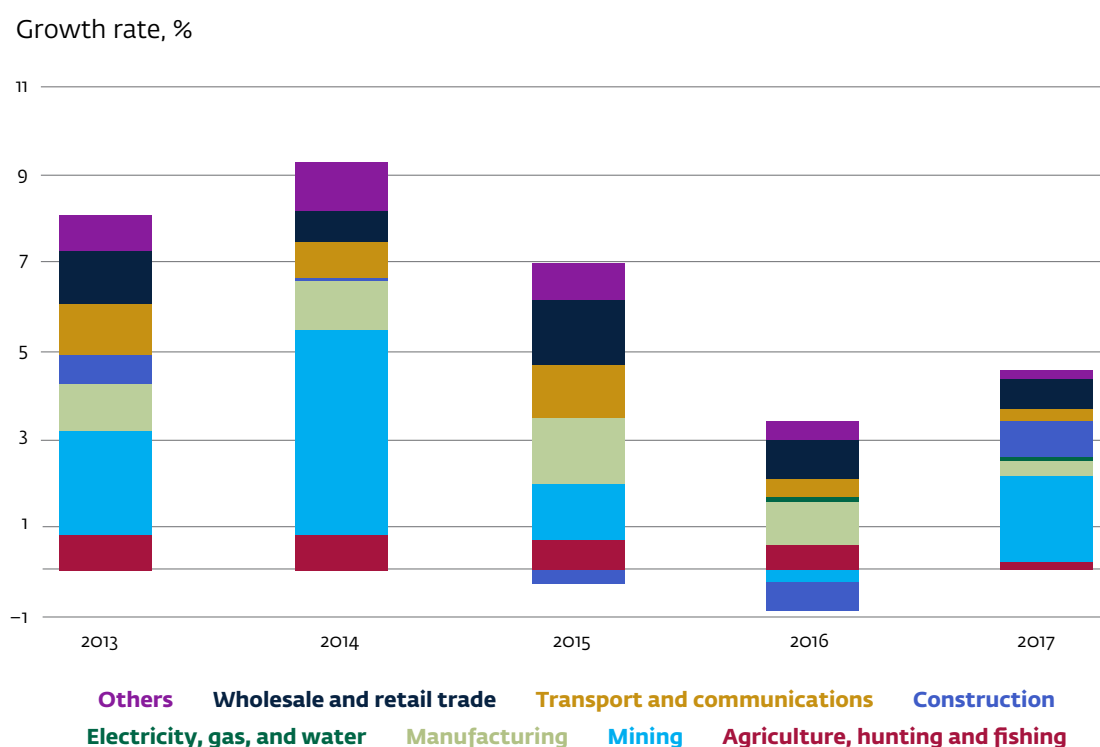
Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa.

At the time of writing, the COVID-19 pandemic is still spreading and is already likely to weaken growth and fiscal outcomes. The Democratic Republic of Congo's economy is now projected to contract by 2.2 percent because of lower global demand for commodities. Furthermore, lower exports of minerals will severely deter revenue mobilization, which will fall into the single digits as a share of gross domestic product (GDP), putting further pressure on a tight national budget. Extreme poverty is projected to increase by 1 percent by 2022 instead of the 0.7 percent decrease expected before the pandemic.²

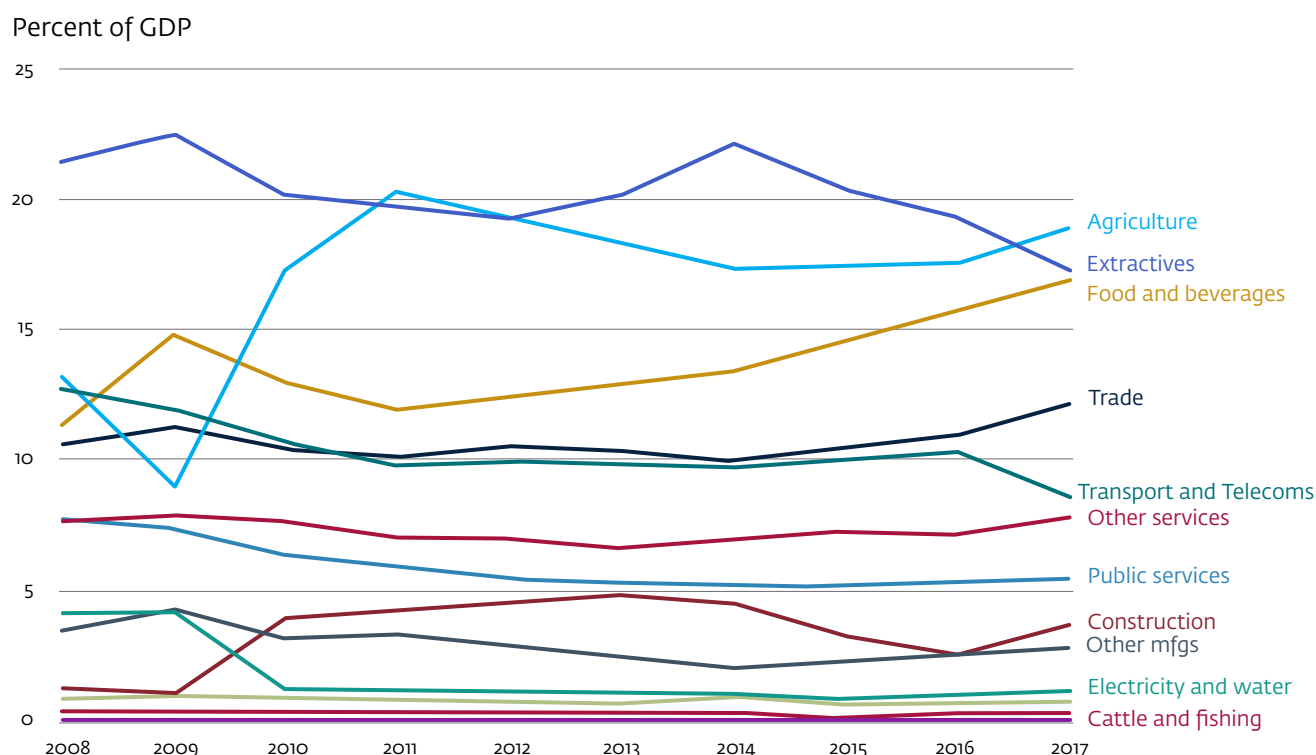
The extractive industries sector remains by far the principal driver of growth (see figures 2.2 and 2.3), but only a portion of this growth has translated into higher welfare for the population.³ Economic growth was also driven by continued growth in consumption sectors (particularly the mining sector): the wholesale and retail trade (9.1 percent) and construction and public works activities (8.1 percent). The contribution of manufacturing to growth has been mostly driven by the food and drinks sector, which represents 85 percent of this sector. On the other hand, the contribution of agriculture to growth has been from low to negligible in the past five years.⁴

The fragile economy is vulnerable to commodity price shocks. International reserves have improved slightly but remain very low at five weeks of imports. The narrow fiscal base also provides little buffer for government's expenditures in case of price downturns.⁵

FIGURE 2.2 CONTRIBUTION TO GDP GROWTH



Source: Banque Centrale du Congo (BCC), "Annual Report" (BCC, Kinshasa, 2018).

FIGURE 2.3 SHARE OF GDP BY SECTOR OF ACTIVITY

Source: Banque Centrale du Congo (BCC), "Annual Report" (BCC, Kinshasa, 2018).

Note: GDP = gross domestic product; telecom = telecommunications.

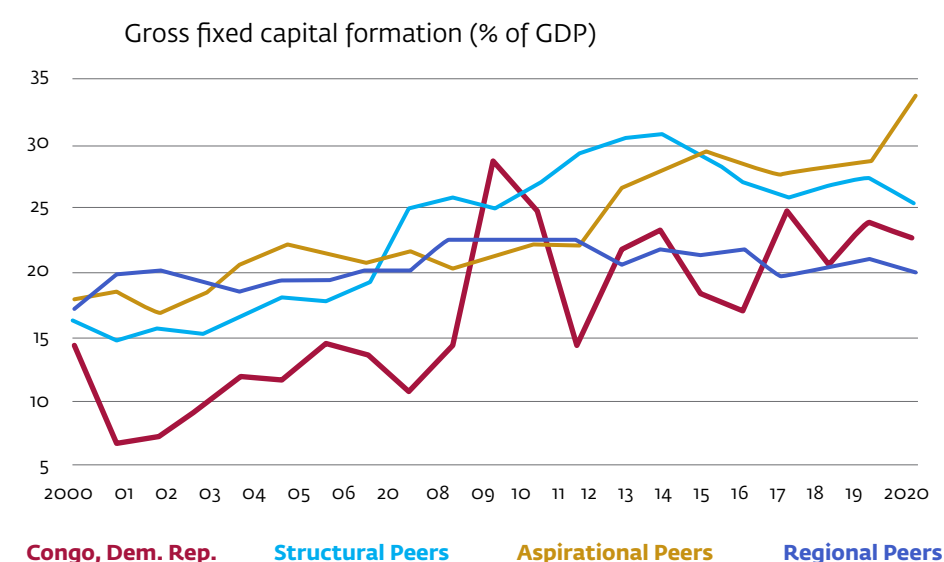
The fiscal space is very tight, significantly limiting the ability of government to provide essential infrastructure and basic services. Domestic revenues are low following the resumption of mining activity, estimated at 10.4 percent of GDP in 2018, which is an improvement compared to 2017 (8.2 percent). Revenues are below those of Sub-Saharan African and low-income countries (17 and 15.1 percent, respectively) as well as below historical standards in the Democratic Republic of Congo (14 percent in 2014).

Monetary policy developments have been positive, but gains remain fragile. A new organic law concerning the Central Bank adopted in December 2018 is in line with international standards and best practices.⁶ The law strengthens the bank's institutional independence while clarifying the hierarchy of monetary policy objectives and modernizing the central bank's operational framework. The law now must be implemented. The cycle of hyperinflation, which ended in 2002, was broken thanks to improved policies, including upgraded and prudent management of public finances and the elimination of financing of public deficits by the Banque Centrale du Congo. Even during this period of relative stability, though, commodity price shocks led to large currency movements, translating into periods of significant inflationary acceleration. The latest episode started when the Congolese franc was devalued in 2016–17 in response to drastic fiscal tightening.

After Zimbabwe, the Democratic Republic of Congo is the most dollarized economy in Sub-Saharan Africa. Foreign currency deposits in dollars accounted for 89.4 percent of total deposits with commercial banks in December 2018, while foreign currency-denominated credits amounted to half of total credit in the economy.⁷ Over time, the population has lost trust in the national currency. The persistently strong dollarization of the economy has impeded the effectiveness of the BCC's monetary policy, increased the country's exposure to exchange rate shocks, and raised the costs of banking. A strategy to de-dollarize the economy was adopted in 2012, but it has only been partially implemented and has failed thus far.

While revenues from the mining sector have fueled growth, they have not translated into investments as a sustainable source of future growth. Gross fixed capital formation is on a downward trend since 2010 (see figure 2.4), accompanied by a sharp decrease in public investment since 2015 and persistent, extremely low levels of private investment. While it is improving, the country's extractive sector contribution to inclusive growth remains below potential. The development of highly capitalistic industrial mining does not directly create many jobs, even if artisanal mining contributes to rural employment and personal income. The main channel through which mining should contribute to growth is through the revenues it generates, but these do not reach the poor: a large part of revenues from extraction are either transferred abroad or captured by vested interests.⁸ This is compounded by the fact that the contribution of the sector to government budgets is low given exemptions, special treatment, special regimes, institutional dysfunction, and weak administrative capacity. As a result, the resources allocated to priority infrastructure and social sectors are limited, especially considering the country's huge development challenges.⁹

FIGURE 2.4 INVESTMENTS IN THE DEMOCRATIC REPUBLIC OF CONGO 1995–2020



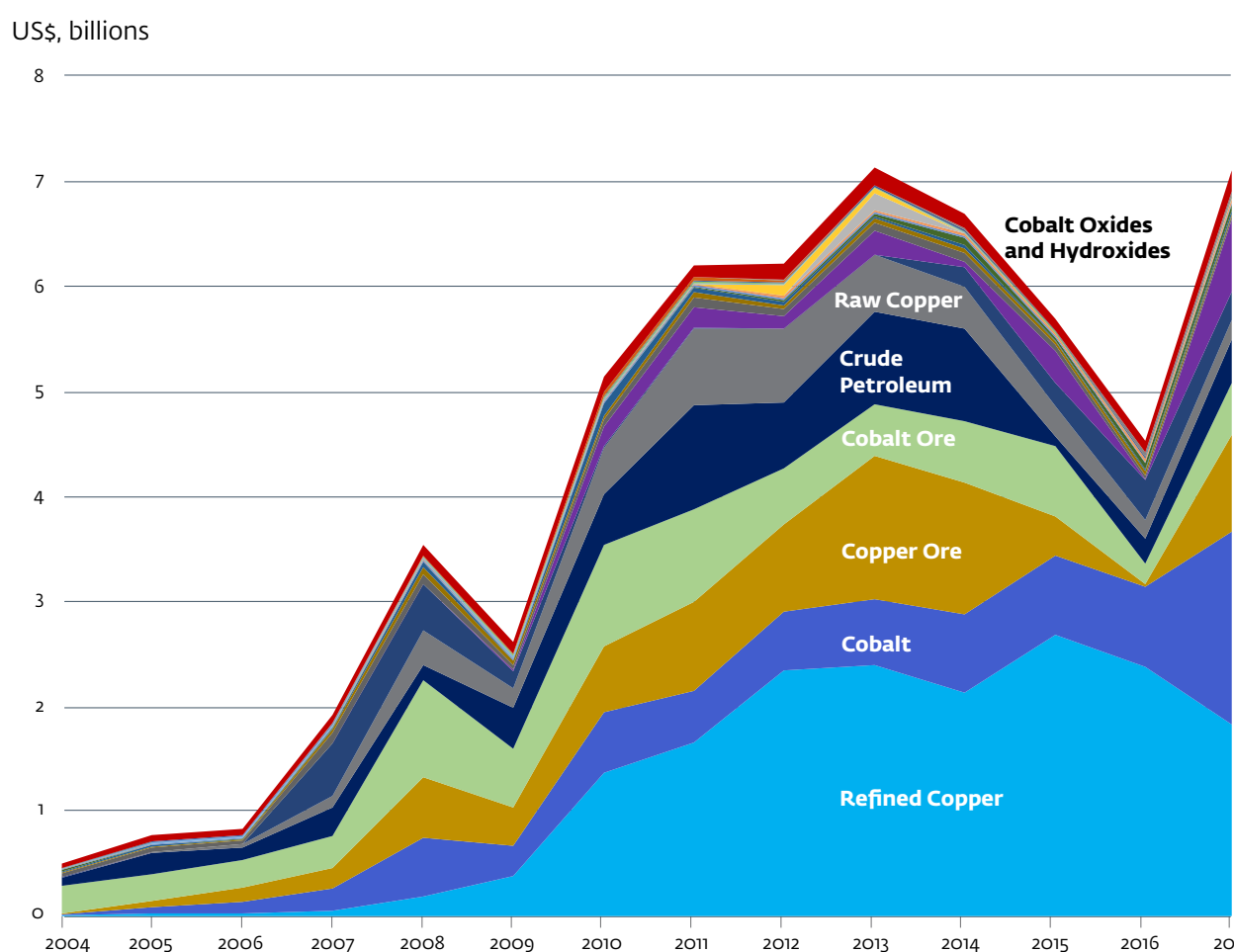
Source: World Development Indicators.

Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda.

Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa. GDP = gross domestic product.

The central place of the extractive sector in the Congolese economy is furthermore reflected in the export sector, of which minerals and oils accounted for more than 95 percent of the total value in 2017 (see figure 2.5). Other products exported in 2017 include rough wood and sawn wood for a combined value of US\$55 million (0.8 percent of total exports), slightly above one-third of the value of equivalent exports in 2011; increased exports of cocoa bean valued at US\$25 million; coffee (US\$18 million); and plants used in the manufacture of perfumes (US\$13 million).

FIGURE 2.5 EXPORTS FROM THE DEMOCRATIC REPUBLIC OF CONGO, 2004–20, FUELED BY COPPER AND COBALT



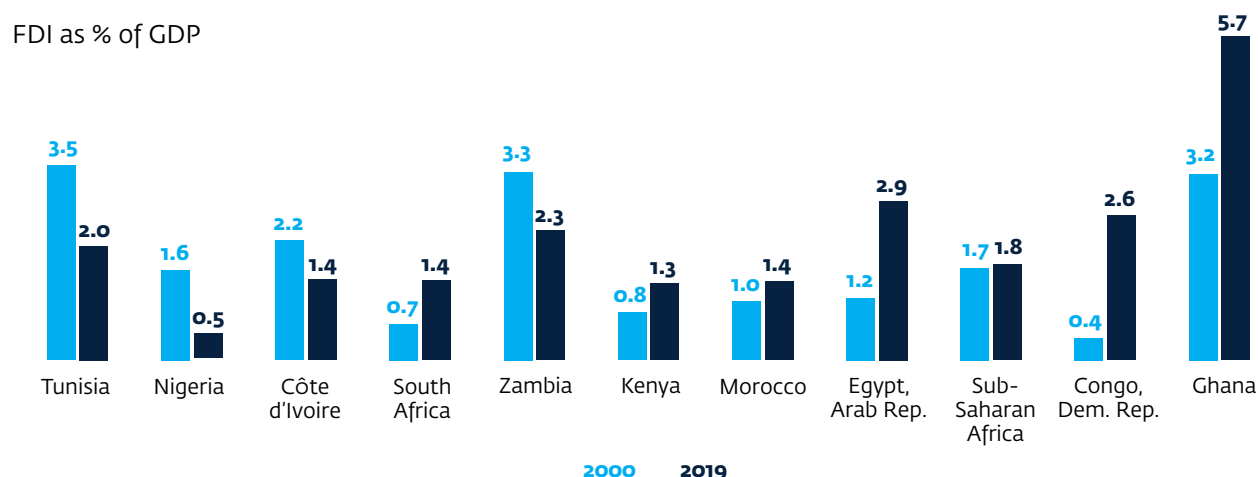
Source: MIT Observatory of Economic Complexity.

Among the Democratic Republic of Congo's trading partners, China plays the central role in the economy as illustrated by the concentration of trade volumes. Slightly less than half (45 percent) of the country's exports go to China,¹⁰ which, at 21 percent, is also the largest supplier of the country's imports, along with South Africa. The prominence of China as a trade and investment partner is the consequence of the strategic agreement signed between China and the Democratic Republic of Congo in 2007. The dual concentration in terms of export product and markets exposes the economy to both the volatility of mineral prices and the economic fortunes of China. A diversification of the economy would reduce these exposures.

Neighboring countries also play a crucial role in the economy of several regions of the Democratic Republic of Congo. Regional trade flows are not quantified precisely because many of them go by road and are virtually unrecorded.¹¹ Officially recorded flows nonetheless suggest an important level of trade between the Democratic Republic of Congo and its neighbors. In 2017, the country sourced 11.00 percent of its total imports from Zambia (US\$498 million), 4.10 percent from Uganda (US\$189 million), 3.90 percent from Tanzania (US\$151 million), 0.65 percent from the Republic of Congo, and 0.52 percent from Burundi. Figures for Rwanda and Uganda are available for only 2016, when they accounted, respectively, for 3.3 percent and 2.7 percent of Democratic Republic of Congo's imports (US\$186 million and US\$152 million).¹² The neighboring countries of the East African Community (EAC) and the Common Market for East and Southern Africa (COMESA) are the "natural partners" of several regions of the country. Kivu is closely connected economically with Burundi (Bukavu/Rusizi), Rwanda (through the nearby urban area of Goma), and Uganda (Beni/Butembo). Likewise, Lumumbashi is closely connected with Zambia through rail and electricity infrastructure. The Democratic Republic of Congo also has a bilateral single customs territory agreement with its other neighbor, Tanzania.

The boom in the mining sector since the end of the conflict in 2002 (see figure 2.6) has been fueled by foreign direct investment (FDI). According to the 2018 United Nations Conference on Trade and Development (UNCTAD) World Investment Report, FDI inflows were US\$3.6 billion in 2016 and US\$1.15 billion in 2017. FDI has remained at a level similar to that in 2017, at 2.7 percent of GDP in 2018,¹³ which is below the levels witnessed in recent years.¹⁴ FDI has helped offset the current account deficit and build some foreign reserves. China is the major investor in the country, followed by France, the United States, and other European countries.

FIGURE 2.6 COMPARISON OF DEMOCRATIC REPUBLIC OF CONGO AND OTHER SUB-SAHARAN ECONOMIES, 2000 AND 2019



Source: World Development Indicators. All data are 2017, except for Tunisia, Côte d'Ivoire, Sub-Saharan Africa, and the Democratic Republic of Congo, which are 2016.

Note: GDP = gross domestic product; FDI = foreign direct investment.

2.2 GROWING CHINESE PRESENCE IN THE ECONOMY: AN OPPORTUNITY?

In November 1972, relations were again established between the former Republic of Zaire (now the Democratic Republic of Congo) and China, and since then China has been an important partner in many sectors. In recent years, there has been an uptick in the number of research nongovernmental organizations (NGOs), trade initiatives, and international cooperation programs relating to Chinese investments in the country. The Forum on China-Africa Cooperation is one of the most prominent ones and has become the main platform for political and commercial engagements in the region.¹⁵

China has replaced the European Union as the Democratic Republic of Congo's main trading partner, and its mining sector particularly caters to Chinese economic interests. According to UN Comtrade, 77 percent of Congolese exports of cobalt between 2014 and 2018 went to China, as did 24 percent of copper exports.¹⁶ China's mining companies are now dominant (70 to 80 percent of the copper and cobalt market according to the French treasury).

The 2007 Sicomines Agreement between the government of the Democratic Republic of Congo and several Chinese state-owned enterprises (SOEs) significantly increased China's footprint in the country. The agreement consisted of the provision of public infrastructure (roads, railways, hospitals, schools, and dams), as well as mining infrastructure in exchange for mining rights previously owned by Générale des Carrières et des Mines (GÉCAMINES) in the Kolwezi region.¹⁷ According to the International Monetary Fund (IMF), liabilities from the mining infrastructure project Sicomines represented almost 40 percent of the Democratic Republic of Congo's external debt, meaning that Sicomines debt was equivalent to about US\$2.5 billion.¹⁸

Since Sicomines, China has increased its presence in the sector. Several large Chinese players operate the largest mines in Katanga alongside medium-sized players. In recent years, two major new mines have been acquired by Chinese companies through buybacks of US and Canadian mining concessions. Chinese interests are also present even in artisanal mining, which remains very important in the Democratic Republic of Congo (20 percent of cobalt production) through mining cooperatives.

Recently, 37 Chinese companies operating in the Democratic Republic of Congo have set up an association supported by the governments of both countries.¹⁹

China's presence in the Democratic Republic of Congo has not been confined to mining. In the 1970s, a farm devoted to producing crops and raising cattle was established in N'Djili, a suburb of Kinshasa,²⁰ a project that is still operational.²¹ One of the largest deals ever negotiated in the Congolese agriculture sector gave a Chinese firm rights in 2008 to farm 100,000 hectares of land in Bandundu and Equateur provinces to develop palm oil production, but the three-year deal was not renewed in 2011.²² Another Chinese industrial initiative in the 1970s built a sugar factory in Kisangani, but this was destroyed during the civil war. Njumboket and Nkanda identify eight Chinese-connected companies in the agribusiness sector currently present in the Democratic Republic of Congo.²³

Chinese involvement in construction has a long historical track record²⁴ and has increased in infrastructure sectors following the Sicomines deal including the new terminal at Kinshasa Airport, the US\$14 billion Inga 3 dam project and new telecom infrastructure.

The emergence of China as a critical investment and trade partner in the Democratic Republic of Congo is both a major opportunity and challenge. Being able to rely on a partner with a long-term view who can bring much needed financial and technical resources presents great opportunities. The challenge is not to be overly dependent on that relationship, which should be managed from a position of strength and good governance.

2.3 DUAL PRIVATE SECTOR: LARGE FIRMS COEXISTING WITH MICRO-INFORMAL FIRMS

The private sector in the Democratic Republic of Congo has a dual structure characterized by the following:

- Foreign companies (mining, telecom) together with a few long-established local conglomerates (import/export, agribusiness, banking, construction)
- Informal micro and small firms captured in low-productivity, low-value-added activities that provide employment and livelihoods for most Congolese

The agriculture sector represented 20 percent of GDP²⁵ in 2017, extractive industries 17.4 percent, manufacturing 19.7 percent (dominated by food and beverages), and services 37.8 percent.²⁶

The agricultural sector is limited and characterized overall by weak, fragile value chains. Most subsectors lack the organizational structure, institutional regulatory oversight, market mechanisms, and player involvement to operate an interlinked value adding multistage activity sector.

The manufacturing sector in the Democratic Republic of Congo is quite small outside of food and beverage production, the latter having been fueled by the consumption demand induced by mining-fueled growth. Most factories are outdated, and many have suspended operations for various reasons including high electricity costs, administrative harassment, and the lack of spare parts, inputs, and skilled personnel.

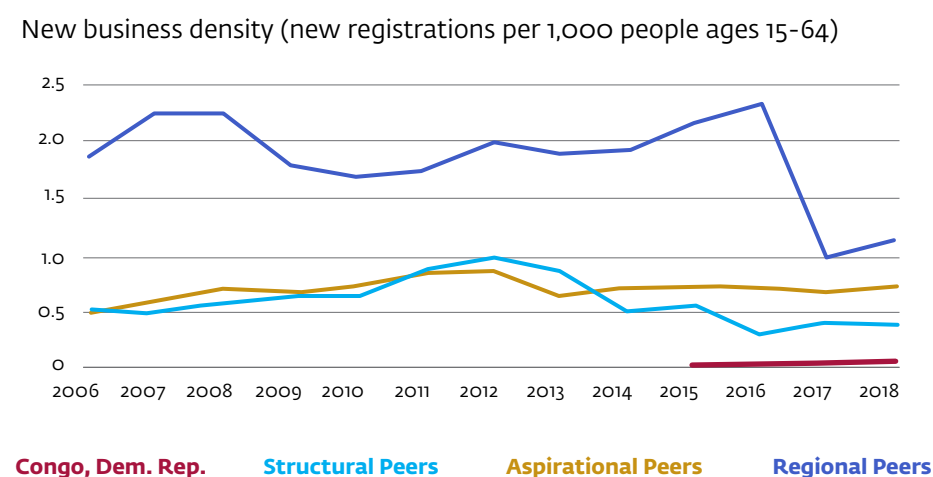
The shift of labor from agriculture into services is the most distinctive feature of the structural transformation of the private sector in the Democratic Republic of Congo. This shift and the corresponding increase in wage employment decreased poverty by 0.5 percent between 2005 and 2012.²⁷ One of the main drivers of productivity growth during the period was the movement from low-productivity sectors to higher-productivity sectors, namely, the movement out of agriculture, which is a low-productivity sector. The shift toward the transport sector—the most productive sector between 2005 and 2015—from all other sectors except mining represented a positive contribution.

Low-productivity agriculture employs 62 percent of the working-age population, compared to 65 percent in 2012 and 72 percent in 2005.²⁸ The services sector was the main source of jobs during the growth years, adding approximately 2.5 million jobs between 2005 and 2012, mainly in transport and financial services. In the same period, agriculture added 1.4 million jobs, while the secondary sector gained only 100,000 new jobs (mainly in construction). In addition to the decline in the labor share of agriculture, the share of mining—essentially artisanal and small-scale mining—in employment decreased.²⁹

Nonagricultural wage employment accounted for approximately 60 percent of the additional workers, with the public and private informal sectors absorbing most of the 4.3 million new workers. The public sector added over 700,000 workers (doubling employment in the sector). The informal private sector added over 900,000 workers (tripling sectoral employment). The formal private sector added 59,000 workers (a 28 percent increase since 2005). Altogether, the modern wage sector expanded by approximately 40 percent, with the public sector accounting for the bulk of the increase.

Micro and small firms constitute the bulk of the economic activity, and there are significant barriers to their formalization (resulting in very low new business registrations; see figure 2.7), growth, and competitiveness. Over 90 percent of firms are small (one to nine employees), and nearly half of them have been on the market for less than five years. Firms that are six years and older nonetheless contribute most of the employment in the country (around 60 percent), while young firms account for over 35 percent of total employment. The share of young firms in the Democratic Republic of Congo is large despite the fragile economic context; it rates second only to South Sudan among fragile and conflict states. SMEs demonstrate a stronger dynamic in creating new jobs than large firms do. Small firms have an annual employment growth rate of 5.2 percent, and 6 percent for medium-sized firms, but only 1.3 percent for large firms. The growth rate of existing SMEs, though, is sluggish, and SMEs in the Democratic Republic of Congo need to improve performance to serve as an important engine of growth and job opportunities for young, skilled workers.³⁰

FIGURE 2.7 NEW BUSINESS REGISTRATIONS PER 1,000 PEOPLE, 2006-18



Source: World Development Indicators.

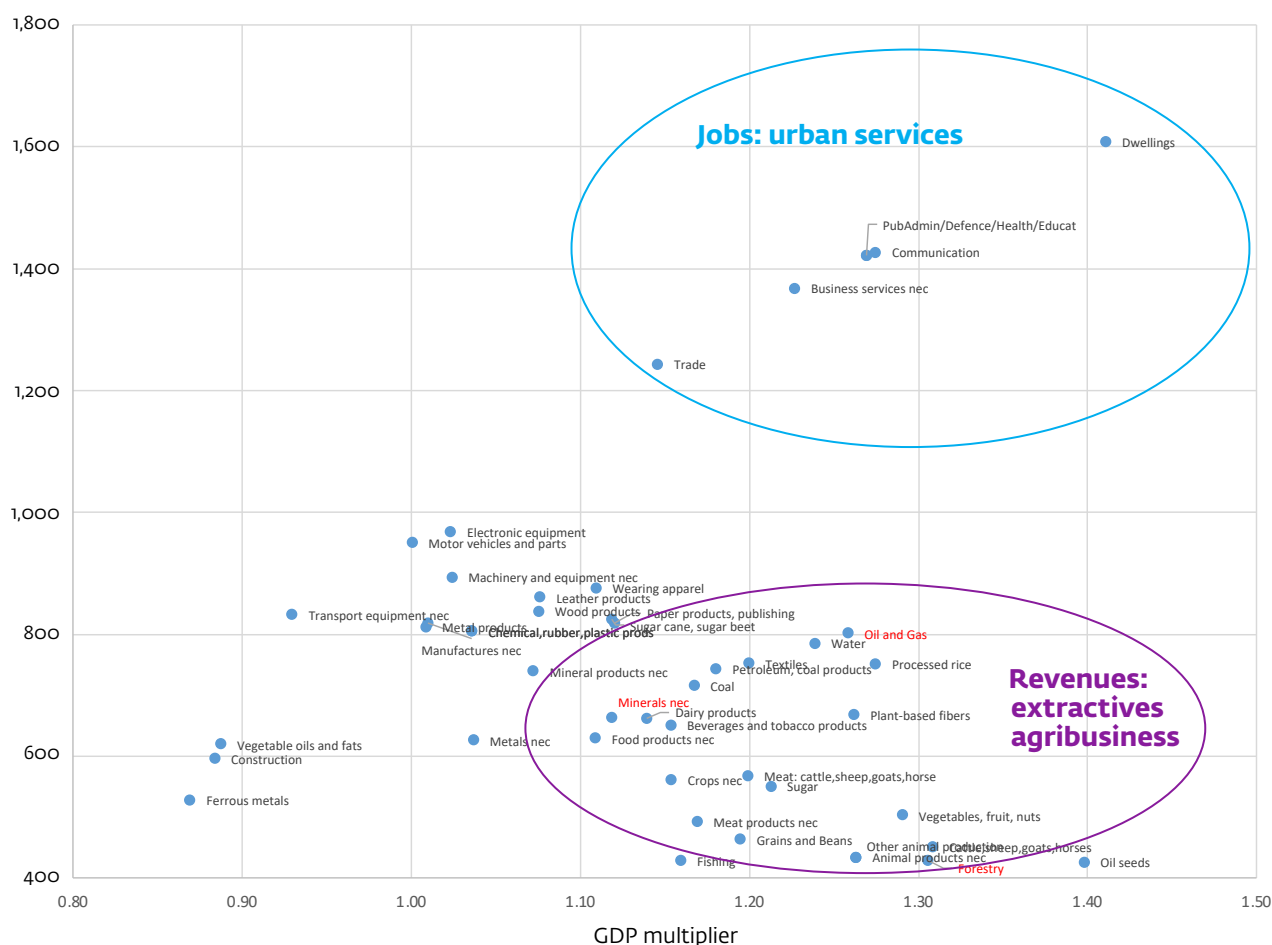
Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa.

Unlike in developed countries, where SMEs serve as the main engine of growth and job creation, in the Democratic Republic of Congo most of the labor force is trapped in very low-productivity activities, largely in the informal sector, which employs 89 percent of the working population (with significant geographical disparity). Most of the informal firms are capital-poor and underperforming. Around 65 percent of informal firms are active in the agro-industry and food trade, retail trade, and repair services. Informal firms with the highest capital endowment are active in transport, mining, and other primary production activities, the retrieval of raw materials, construction, and services such as hotels and restaurants.

The duality of the Congolese economy is illustrated in figure 2.8, which shows that extractive and resource-based industries are the main drivers of GDP growth, while job creation takes place mostly in urban services (the growth of which is largely driven by the rents derived from extractive industries).

FIGURE 2.8 GDP AND JOB MULTIPLIERS RESULTING FROM INCREMENTAL GROWTH FOR EACH SECTOR.

Job multiplier



Source: Team elaboration based on national statistics.

Note: GDP = gross domestic product.

- 1 World Development Indicators.
- 2 Christian Vang Eghoff, "Concept Project Information Document: Kinshasa Multisector Development and Urban Resilience Project" (Report PIDC27359 for project P171141, World Bank, Washington, DC, 2019).
- 3 World Bank, Democratic Republic of Congo Systematic Country Diagnostic: Policy Priorities for Poverty Reduction and Shared Prosperity in a Post-Conflict Country and Fragile State (Report 112733-ZR, World Bank, Washington, DC, 2018). See annex C for a detailed discussion.
- 4 World Bank, "The Democratic Republic of Congo Sixth Economic Update: Increasing Domestic Revenue Mobilization and Restoring Monetary Policy Effectiveness to Foster Accelerated and Inclusive Growth" (Working paper, World Bank, Washington, DC, 2019).
- 5 World Bank, "Sixth Economic Update."
- 6 World Bank, "Sixth Economic Update."
- 7 World Bank, "Sixth Economic Update."
- 8 Revenues transferred to the public sector increased at a slower pace than income payments. The share of income outflows to exports of extractives, a proxy for the share of foreign investors in natural resources rent, increased from 3.4 to 26.0 percent over 2007–14. Revenues transferred to the public sector also increased, but at a slower pace. Indeed, the effective tax rate, calculated as the ratio of public revenues collected from the natural resources sector to the exports of oil and minerals, has doubled over the period 2007–14, reaching 14.9 percent in 2014. World Bank, Democratic Republic of Congo Systematic Country Diagnostic.
- 9 World Bank, Democratic Republic of Congo Systematic Country Diagnostic.
- 10 Trade statistics also show 25 percent of total exports going to Zambia, which are certainly destined to other countries.
- 11 World Bank, Diagnostic Trade Integration Study: Democratic Republic of Congo (Washington, DC: World Bank, 2010).
- 12 Data from the MIT Observatory of Economic Complexity.
- 13 World Bank, "Sixth Economic Update."
- 14 FDI was on average 5.5 percent of GDP between 2011 and 2015, and 6.5 percent of GDP over 2016–17.
- 15 Inoussa Njumboket and Jean-Marie Nkanda, "Chinese Investments and Forest Land Use: Situation and Trends in the Democratic Republic of Congo" (IIED project report, International Institute for Environment and Development, London, 2019).
- 16 Another 15 percent of cobalt and copper exports went to Zambia, a portion of which are also reexported to China.
- 17 A list of investments financed by the Sicomines deal can be found in David Landry, "The Risks and Rewards of Resource-for-Infrastructure Deals: Lessons from the Congo's Sicomines Agreement" (CARI Working Paper 16, School of Advanced International Studies, Johns Hopkins University, Washington, DC, 2018).
- 18 International Monetary Fund, "Democratic Republic of the Congo: Staff-Monitored Program and Request for Disbursement under the Rapid Credit Facility" (Report 19/388, IMF, Washington, DC, 2019).
- 19 See <https://deskeco.com/rdc-mines-plus-de-30-entreprises-chinoises-se-regroupent-lempire-du-milieu-avance-ses-pions>.
- 20 An agricultural institute in Hebei Province in China provided financial support for the project and sent agricultural experts to the farm.
- 21 Njumboket and Nkanda, "Chinese Investments and Forest Land Use."
- 22 See Jenny Hong, "Congo Farm Law Seen Hurting Foreign Investment," Reuters, March 5, 2012, <https://www.reuters.com/article/ozatp-congo-democratic-agriculture-idAFJOE82405H20120305>.
- 23 Njumboket and Nkanda, "Chinese Investments and Forest Land Use."
- 24 The Chinese government, for instance, constructed the National Assembly (built between 1975 and 1979) and the Stade des Martyrs, the national sports stadium (completed in 1994), as a gift.
- 25 Basic price (net of taxes).
- 26 Services including construction and electricity and water services. Banque Centrale du Congo.
- 27 World Bank, Democratic Republic of Congo Systematic Country Diagnostic.
- 28 World Bank, Democratic Republic of Congo Systematic Country Diagnostic.
- 29 World Bank, Democratic Republic of Congo Systematic Country Diagnostic.
- 30 World Bank, Informal Enterprise Surveys for the Democratic Republic of Congo, 2014.

03. CROSS-CUTTING POLICY ISSUES AND POTENTIAL SOLUTIONS

The Democratic Republic of Congo presents one of the most challenging business environments in the world for investors, a reality reflected by one of the lowest scores of the 190 countries surveyed (36.2 percent of the best score) in the 2020 *Doing Business* report.¹ Unlike for most countries, all factors relevant to investment decisions show levels of constraint that allow hardly any scope for profitable returns under current conditions. Table 3.1 shows the constraint environment for the Democratic Republic of Congo and indicates whether profitable investments are observed under the same conditions in other countries; light blue-marked areas indicate conditions under which no profitable investments have occurred.² This is further confirmed by the fact that most IFC investments in the Democratic Republic of Congo have not been profitable (with the notable exception of IFC's SME Ventures, which has successfully provided technical assistance and equity financing to a growing number of Congolese entrepreneurs). Under such circumstances, it would be unrealistic to hope to address these multiple constraints in all sectors. Therefore, focus should be on core existing sectors in the economy (resource-based and infrastructure) to try to improve the conditions of investment and doing business, and on building the capacity for the state (the investment agency ANAPI being the technical lead for investment climate reforms) to take meaningful action to improve the conditions of investment and doing business through urgent improvement of governance in the mobilization of resources, in the protection of property, and in justice.

TABLE 3.1 CONSTRAINTS FACING LARGE INVESTMENTS IN THE DEMOCRATIC REPUBLIC OF CONGO

Congo, Dem. Rep.	DEMAND	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS			
	Domestic and/or global market potential	Labor and skills	Geography and natural resource endowment	Existing capabilities	Energy	Transport	Finance (cost and availability)	Regulatory barriers	Rule of law and property rights	Market contestability	Macro and political stability
Agriculture and forestry	1	5	1	6	4	2	5	5	7	1	4
Oil, Gas and Mining	1	5	1	4	2	2	3	6	7	3	7
Utilities	2	5	1	6	5	5	6	5	8	3	3
Construction and Real estate	1	6	1	5	2	1	3	6	9	3	4
Transportation and Warehousing	2	5	1	7	3	4	3	5	5	4	2
Food and beverages	2	5	1	6	4	1	3	5	7	2	4
Chemicals	4	7	1	9	3	5	6	6	8	5	3
Nonmetallic Mineral Product Manufacturing	1	5	1	5	4	1	2	5	8	3	4
Primary Metals	2	5	1	6	5	5	2	6	9	4	6
Pulp and Paper	2	9	1	9	6	4	5	8	10	6	6
Textiles, Apparel and Leather	4	11	2	12	3	8	6	9	13	6	4
Plastics and Rubber	4	11	3	10	5	8	6	8	14	5	7
Industrial and Consumer Products	4	8	1	10	6	6	5	8	9	4	5
Information	0	6	1	4	2	1	2	5	8	2	3
Finance and Insurance	0	5	1	4	1	1	1	5	5	1	2
Wholesale and Retail Trade	2	7	2	9	5	6	6	7	8	3	6
Professional, Scientific and Technical Services	4	13	3	12	6	8	6	7	11	7	9
Health Care	4	7	1	11	3	7	6	5	10	5	4
Education Services	2	9	1	10	5	5	6	7	9	4	5
Accommodations and Tourism Services	0	6	1	7	2	5	3	5	8	4	3
Electric Power	2	5	1	6	2	1	4	6	8	4	3

Source: IFC elaboration based on World Bank Indicators

Note: The numbers in the cells show the number of indicators for which the Democratic Republic of Congo scores below the minimum indicator level observed where investments have taken place. light blue = 2 or more scores below the minimum; navy = 1 score below the minimum; green = all scores above the minimum.

3.1 POOR GOVERNANCE (INCLUDING PROPERTY RIGHTS AND COMMERCIAL JUSTICE)

Governance issues can lead to policy uncertainty. Private investors are faced with high policy uncertainty, which considerably increases the risks and cost of doing business in the Democratic Republic of Congo. There was no consultation, for example, on the 2011 Agriculture Law, which requested that locals own 51 percent of agriculture ventures, effectively stopping FDI in the sector. It is also common for ministries to issue decrees that tilt the level playing field by, for instance, giving import duty or tax exemptions to individual players. Finally, private sector players avoid relying on the unpredictable and very slow courts to resolve disputes.

Governance issues also make access to land costly and risky. Poor governance together with inefficient, manually maintained urban land registries and a weak judiciary also manifests itself through major risks and costs to accessing urban land. A leading housing developer, for example, estimates that only 20 percent of titles are “clean” in Kinshasa and require long and costly investigation and 100 percent premiums on prices that are already very high. A leading retailer is now only renting property following a major dispute on the first property he bought. Rural land is easier and cheaper to access as long as due process is followed, especially with regard to respecting traditional customary land rights. Foreign investors are discriminated against when trying to invest in both urban land (they are limited to a 25-year “registration right”) and rural land (they are required by the aforementioned agriculture law to hand over 51 percent of their shares to a local partner).

Governance issues lead to costly and risky contract enforcement, and major governance issues within the justice system make legal recourse problematic. This is particularly the case for one-off major contracts such as land transactions, a circumstance aggravated by the poor state of land registries (most legal disputes are land related). Dispute resolution is not only uncertain, it is often time-consuming (610 days on average, according to Doing Business data) and very costly (80 percent of the claim’s value on average, also according to Doing Business). The signing of the OHADA treaty and the New York Convention and the adoption of the law requiring arbitration are steps in the right direction.

Governance issues also lead directly to major fiscal and parafiscal policy issues that are mentioned as the main constraint by both large and small firms. More generally, the complexity of compliance in the Democratic Republic of Congo creates one of the most challenging business environments in the world for investors. In addition to paying taxes, improving commercial justice (implementing OHADA standards) and facilitating trade would carry the highest benefits in light of the important costs related to these two indicators.

Addressing the root of poor governance should start with reinforcing the process of piloting and monitoring high-impact reforms (not just reforms in the investment climate, but also reforms linked to critical sectors) in order to create a better, more level playing field for private sector investments. As mentioned, the Democratic Republic of Congo has already taken some steps in the right direction by establishing the Reform Technical Committee (Comité Technique des Réformes; CTR) as an interministerial body under the authority of the prime minister to represent key stakeholders within the executive that are piloting priority economic reforms. The capacity of the CTR would need to be increased and supported by partners to guarantee adequate monitoring of implementation. A desirable model to follow could be that of “delivery units” established at the highest level of government, as several successful reforming countries have done.

3.2 MAJOR FISCAL, PARAFISCAL POLICY ISSUES

Prudent fiscal management has enabled the government to keep a surplus in recent years, contributing to the overall positive macroeconomic performance. Sources of revenue, however, remain limited, and the overall level of revenue collection as a percentage of GDP remains low by Sub-Saharan African standards.³ This burden, however, falls disproportionately on the private sector, which unanimously complains about the resulting fiscal pressure.

Two sectors contribute heavily to government revenues. First, the oil and mining sector, which yielded products worth US\$1.1 billion in 2016, provided 18.3 percent of total government revenues that year.⁴ The telecom sector accounted for 27.1 percent of the nontax revenues collected by the General Directorate for Public Revenue (Direction Générale des Recettes Administratives, Judiciaires, Domaniales, et de Participations; DGRAD) in 2014.⁵

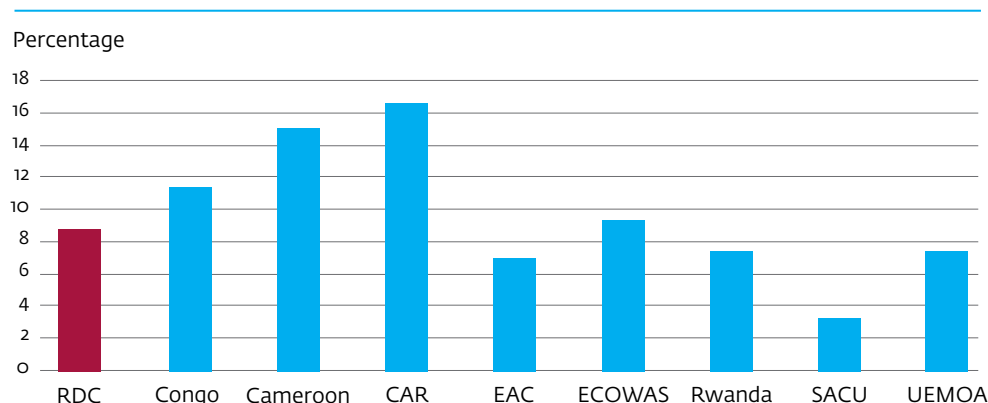
Tax and nontax revenues are managed by three administrations: the Direction Générale des Impôts, the Direction Générale des Douanes et Accises, and DGRAD. In 2016, revenues collected by DGRAD accounted for 26.8 percent of government revenue and 2.6 percent of GDP, those collected by Direction Générale des Douanes et Accises were 33 percent of government revenue and 3.2 percent of GDP, and those collected by the Direction Générale des Impôts were 40 percent of government revenue and 3.9 percent of GDP.⁶

Tax and revenue administration poses several problems for the private sector. First, generous and numerous exemptions are a source of significant revenue shortfall for the government. Two World Bank studies have estimated the tax gap to be equivalent to 5.2 percent of GDP in 2013 for taxes (equivalent to more than 50 percent of collected revenue) and pointed to evidence of significant shortfalls for parataxes as well.⁷ This is symptomatic of vast exemptions, including discretionary ones, and significant fraud.⁸ Fiscal pressure can therefore vary greatly depending on individual cases and carry the potential to be prohibitive for the exercise of private enterprise, the general resulting uncertainty creating very strong disincentives for investment.

The administration and possibly the legal basis of these exemptions must be reviewed. First, the economic rationale of fiscal holidays is not always clear. Exemptions in the mining sector, for instance, are not always justified, especially as the country's resources represent an important share of world reserves for copper and some rare metals.⁹ Second, fiscal exemptions make the playing field among private sector participants less level if they are granted on an ad hoc and discretionary basis, such as when establishment agreements are granted outside of regular regimes.¹⁰ Third, the multiplicity of taxes, duties, and fees significantly adds to the cost of collection (for both the administration and the private sector), contributes to a lack of transparency and uncertainty about the regime, and opens the door for abuse. According to the Association of Congolese Businesses (Fédération des Entreprises du Congo; FEC), there are 246 different taxes and perceptions at the central level (mostly administered by DGRAD) to which 347 taxes and perceptions levied by subnational entities (provinces) must be added. 52 payments (excluding parafiscal taxes) are required from businesses per year in the Democratic Republic of Congo compared to an average of 37.4 in Sub-Saharan Africa, and the total tax rate is 54.6 percent of profits compared to 46.8 percent in the rest of Africa and 39.8 percent in Organisation for Economic Co-operation and Development (OECD) countries.

Average tariffs in the Democratic Republic of Congo are not particularly high by regional standards¹¹ trade weighted average rate for tariffs of 8.4 percent in 2020 (see figure 3.1). That said, 29.4 percent of tariff lines have the maximum rate of 20 percent. Moreover, imports are subject to numerous taxes that are unrequited or whose proportions far exceed the usefulness of services rendered. Moreover, despite the creation of single windows for foreign trade (the pilot phase started in 2015), several other institutions are still operating outside that framework, thereby prolonging the time required for administrative formalities and increasing their cost. Preshipment inspection is mandatory for most imports of US\$2,500 or more, and the corresponding fees (0.75 percent of the cost, insurance, and freight value, with a minimum charge of US\$100) are borne by the importer.¹²

FIGURE 3.1 TRADE WEIGHTED AVERAGE TARIFF, 2020 (EXCEPT CAR, 2017; REP. OF CONGO, 2015; CAMEROON, 2019)



Source: World Bank, Democratic Republic of Congo: Diagnostic Trade Integration Study (Washington, DC: World Bank, 2010).

Note: CEMAC = Central African Economic and Monetary Community; EAC = East African Community; SACU = South African Customs Union; ECOWAS = Economic Community of West African States; UEMOA = West African Monetary and Economic Union

The Democratic Republic of Congo is a member of several regional economic communities, so trade with most of its neighbors falls under a number of free trade agreements.¹³ The recent signing of the African Continental Free Trade Area may lower trade barriers further with several of its East African Community (EAC) and Common Market for East and Southern Africa (COMESA) neighbors. Estimates predict, for instance, an increase in trade with Rwanda of US\$56 million, up from estimates of US\$100 million in 2017.¹⁴

According to interviews with the private sector, firms (including large, established ones) are exposed to the uncertainties and the predatory behavior that some administrations condone. In addition to the outright abuses of power that firms frequently reported, examples of inefficient application collected by the CPSD team include the following:

- *Confusion about legal texts and how taxes are administered.* A complaint shared with the team involved the basis of calculation for the tax, the administration having made the broadest definition possible to maximize the collected revenue. Another example is the overlap between national and subnational taxes¹⁵ and incoherence between different laws.
- *Revenue collection for allegedly rendered services when either no services or poor-quality services are provided,* such as the four percent levy on turnover collected by the “Office Congolais de Contrôle” (OCC) when services provided by the organization are not yet operational.
- *Taxes and levies that create disincentives for private firms to engage into new activities,* including high licensing fees.

In light of this reality, the authorities should aggressively build on earlier efforts to streamline the collection of revenues (such as by centralizing the collection of parataxes under the DGRAD and implementing e-payments in the context of e-government), reduce the number of tax payments (which impose additional compliance costs to firms), and, most importantly, reduce the number of taxes and levies (several hundred already eliminated) while diminishing and rationalizing the exemptions. In addition, a review of the parafiscal levies under the purview of the Direction Générale des Douanes et Accises and the taxes and levies collected by subnational authorities should lead to the clarification of the reasons that they are collected, who is subject to them, who is collecting them, and how they are calculated, as well as their legal standing. (It would seem logical to start with regions such as Bas Congo, the Kivus, and the ex-Katanga that have the largest markets and most economic activities.) Furthermore, this review should lead to a significant rationalization of the fiscal landscape for the private sector with a consolidation of collection, as well as a significant reduction in the number of taxes and cost-recovery fees for public services.

3.3 UNDERPERFORMING STATE-OWNED ENTERPRISES AND PUBLIC-PRIVATE PARTNERSHIPS

Currently, the state controls all key utilities—electricity, water, transport—and has an important presence in mining. Seven large, strategic enterprises operate in these four sectors. These SOEs rank among the largest employers in the country, employing together over 37,000 people. In addition to these, the portfolio includes a dozen or so fully owned or majority-owned enterprises (including the national insurance company), plus 20-odd minority stakes in the mining, manufacturing, or service sectors. According to government estimates, the book value of the SOE portfolio at the end of 2016 represented a bit less than 50 percent of gross domestic product (US\$16.5 billion). Total SOE revenues account for approximately 8 percent of GDP, which is equivalent to government total revenue.¹⁶

The seven largest SOEs¹⁷ are losing revenue and are operating in challenging circumstances. Their financial situation is degrading with their collective losses increasing. In 2017, losses amounted to US\$500 million (equivalent to 16.6 percent of government revenues that year). The government relationship with SOEs is part of the problem. Liquidity problems stem in part from the fact the state is facing difficulties in settling its electricity, telecommunications, and water invoices and owes large amounts to the SOEs in these sectors. It should also be noted that some of the SOEs also receive subsidies. Société Nationale des Chemins de Fer du Congo (SNCC, the railway), for instance, received US\$40 million subsidies in 2017 and GÉCAMINES (mining) benefited from low tariffs of water and electricity. The largest loss-makers are GÉCAMINES and SNCC. Recurring losses have put them in a vulnerable financial situation, and their estimated total debt at the end 2017 was US\$4.4 billion (including debts), up from US\$3 billion in 2014. The SOEs have accumulated arrears corresponding to taxes and social charges of over US\$1 billion.

SOEs face major operational difficulties, illustrated by the large decrease in volumes and quality of the services they provide, despite significant support from development partners in all three sectors.¹⁸ Where SOEs have failed, the private sector has sometimes entered the market: independent electricity providers are now supplying customers in many parts of the country, four licenses have been attributed in the recently opened insurance market (previously monopoly run by the Société Nationale d'Assurances; SONAS), and PPPs have been developed in rail and port operations.

Since 2008, efforts have been made to improve the governance of SOEs and steer them toward commercial operations by changing their legal standing into single-shareholder joint-stock companies. The legal framework under which they operate remains unclear, however, notably with respect to asset ownership and compliance with OHADA provisions. Efforts to improve the performance of public companies also involved attempts to bring in international private sector expertise under services contracts in the major infrastructure SOEs, performance contracts with the government, and restructuring. These efforts achieved limited results, resulting in deteriorating SOE performance and limited restructuring following the failure of services contracts that faced significant internal opposition. Progress was achieved in reducing the wage bill with retrenchment programs and tariff revisions.

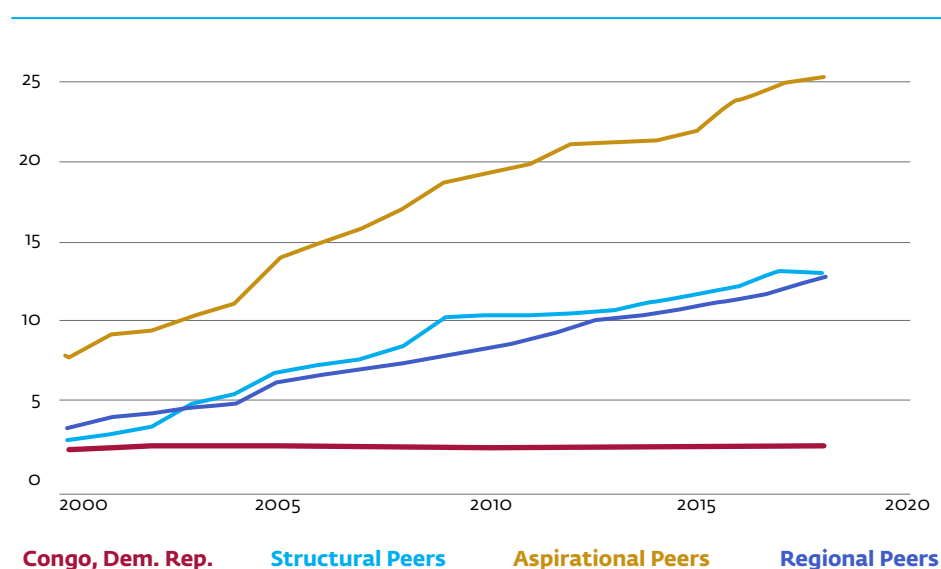
SOEs should be reformed and repurposed. Reforms should (a) strengthen the state ownership and monitoring function through a specialized agency with sufficient resources; (b) enforce the provisions of the OHADA-based company law in SOEs; (c) professionalize boards of directors; (d) enhance the use of information and communication technology (ICT) within the SOEs; and (e) make the SOE sector

and associated debt more transparent.¹⁹ In addition to proceeding to the reform and modernization of the legal framework for the state portfolio and the institutions managing it, as well as the restructuring of state-owned enterprises, specific sectoral reforms will have to accompany the overall SOE reform effort.

As with other cross-cutting issues, we recommend focusing on the main SOEs in the priority sectors: Société Commerciale des Transports et des ports (SCTP) and SNCC (transport), Société Nationale d'Electricité (SNEL; energy), SCPT (internet broadband), and GÉCAMINES (mining). Recommendations are discussed further in the appropriate sectoral sections below.

The provision of infrastructure in the Democratic Republic of Congo incorporates both SOE provision and private participation. In recent years, private participation in infrastructure has made notable contributions to the transport and power sectors. Private participation has been both sought as an element to improve the situation of SOEs by transferring some of their assets and functions (such as rail services on the SCTP line) to the private sector and as a way to provide infrastructure services where public services are not present. The overall number of PPPs still remains very low (see figure 3.2). There are very important untapped needs that private sector participation could meet, but the economic viability of PPP projects (outside of those linked to mining for power generation) must be assessed carefully, given the very limited financing capacity of a small economy and government budget in countries like the Democratic Republic of Congo. Additionally, there are challenges linked to the capacity to manage such schemes (linked to fragility factors discussed earlier). One early example of a potentially transformative PPP project is the Maluku Special Economic Zone near Kinshasa (see box 3.1).

FIGURE 3.2 NUMBER OF PPP PROJECTS



Source: Private Participation in Infrastructure (PPI) database, <https://ppi.worldbank.org/en/ppi>.
 Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa. PPP = public-private partnership.

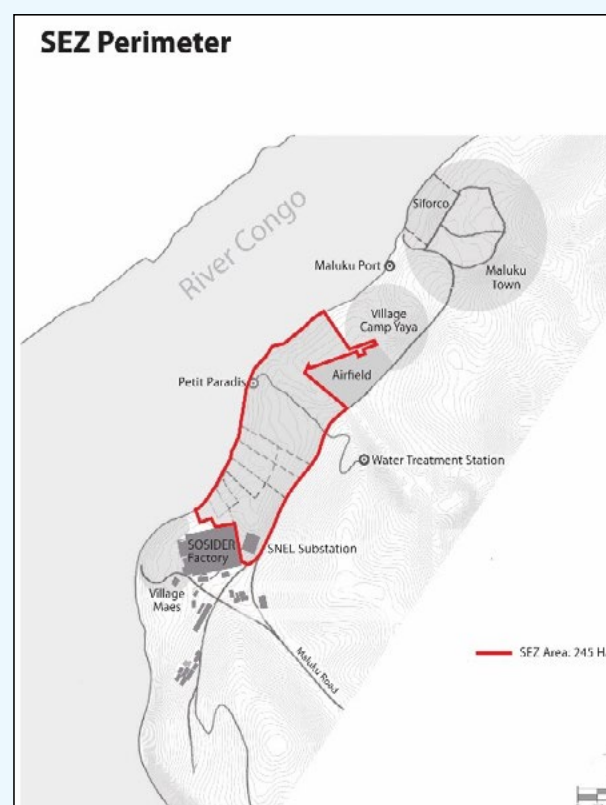
BOX 3.1 THE MALUKU SPECIAL ECONOMIC ZONE

The Maluku Special Economic Zone (SEZ) was created in 2012 and was initially designed in 2010. The 210-hectare Maluku SEZ aims to decentralize economic activities away from the congested center of Kinshasa and to promote agriculture-based growth along the Matadi-Kikwit corridor by supporting private investment in commercial agriculture. The project reaffirms the government's commitment to the industrial zone of Maluku, an 850-hectare area (going beyond the 210-hectare SEZ) started in the 1970s that has floundered from the lack of regular public or private investment.

The Maluku SEZ project is defined by the following approach:

- Focus on agribusiness activities by local entrepreneurs, with a special focus on serving the Greater Kinshasa area, while providing opportunities for complementary investment in transport and logistics, commerce, and services
- Service the needs of international and national tenants, with a target market split of 60 percent industrial, 20 percent logistics and warehousing, and 20 percent services users
- Provide threefold security: land tenure, reliable infrastructure and utilities, and physical security
- Harness the potential of river transport for encouraging production of agricultural produce in districts upstream of Maluku, as well as for using rivers to bring produce to Maluku for processing
- Serve as a catalyst for reinvestment at the adjacent Société Sidérurgique de Maluku factory, an industrial development previously established in the industrial zone

At transaction adviser assisted the government in competitively selecting a private developer. In August 2019, a reputable international zone developer was selected, and an agreement is now in its final stage of negotiations. A zone regulation agency will be established to design and implement regulations, and capacity building to help the agency design and implement regulations, procedures, and operational manuals and also enable linkages and promote and facilitate investments. Last, the project contributed to the financing of basic infrastructure for an initial area of 211 hectares—notably, a fence to secure the zone based on the land use and infrastructure master plan that was developed. It is expected that subsequent infrastructure developments will be financed by the developer.



Map B3.1.1 Maluku Special Economic Zone Perimeter

Source: IFC

A new PPP law was passed in 1998, and the institutional framework to implement it must now be put in place. The law does not cover contracts governed by specific laws such as energy, water, or telecommunications. There is thus a need to develop a PPP strategy encompassing all sectors. State-Owned Enterprises Reform and Management Committee (Comité de Pilotage de la Réforme des Entreprises Publiques; COPIREP), the government body responsible for designing, monitoring, and supporting the implementation of SOE reforms under the Ministry of Portfolio,²⁰ could also be involved by providing technical support to SOEs by identifying and preparing feasibility studies and contracting for well-designed PPPs that would secure new investments in infrastructure, as well as help some SOEs refocus on core activities and provide services more efficiently with an appropriate contracting of private services. The promotion of PPPs and the reform of key SOEs will thus require a strengthening of the state's ownership function by consolidating and reinforcing COPIREP and State Portfolio Upper Council (Conseil Supérieur du Portefeuille; CSP). The government should operationalize a central PPP unit within to (a) ensure that launching PPPs is carried out through a professional, transparent, and competitive process and to (b) build capacity through the provision of training. The government should also create a project development fund to ensure that PPPs are underpinned by high-quality feasibility studies and a viability gap fund to ensure that PPPs and their related contingent liabilities are reliably funded.

Furthermore, private sector partnerships can happen at greater scale in key sectors only if adequate sector reforms are undertaken alongside improved management of public-private transactions. For PPPs more specifically, and beyond accompanying SOEs in their PPP transactions, investigating innovative opportunities should be pursued given the heterogeneity of the economic environment in the Democratic Republic of Congo, including at the provincial and municipal levels. For instance, there are opportunities to investigate selective innovative PPPs that handle water provision (see water section in chapter 4) or renewable energy²¹ in economically dynamic regions (mining regions, Kivus, Kinshasa, and Bas Congo). There are already hydroelectric and thermal power plants that generate around 150 megawatts and are operated by private operators in the Democratic Republic of Congo.²²

- 1 World Bank, Doing Business 2020 (Washington, DC: World Bank).
- 2 IFC investments in other countries.
- 3 World Bank, “The Democratic Republic of Congo Sixth Economic Update: Increasing Domestic Revenue Mobilization and Restoring Monetary Policy Effectiveness to Foster Accelerated and Inclusive Growth” (Working paper, World Bank, Washington, DC, 2019).
- 4 ITIE (Initiative Pour la Transparence des Industries Extractives), “Rapport de Conciliation ITIE-RDC 2016, Réalisé pour le Compte du Comité Exécutif de l’ITIE RDC” (Annual report, Ernst & Young RDC, Gombe-Kinshasa, 2018).
- 5 World Bank, “Étude sur les Écarts Fiscaux en République Démocratique du Congo” (Working paper, World Bank, Washington, DC, 2017).
- 6 World Bank, “The Democratic Republic of Congo Sixth Economic Update.”
- 7 World Bank “Étude sur les Écarts Fiscaux en République Démocratique du Congo” ; World Bank, “Écart des Recettes Non Fiscales En République Démocratique Du Congo: Cadre Méthodologique” (Working paper, World Bank, Washington, DC, 2017).
- 8 World Bank, Democratic Republic of Congo Systematic Country Diagnostic: Policy Priorities for Poverty Reduction and Shared Prosperity in a Post-Conflict Country and Fragile State (Report 112733-ZR, World Bank, Washington, DC, 2018).
- 9 For good practices, see OECD (Organisation for Economic Development), “The Hidden Costs of Tax Incentives in Mining” (Consultation draft, OECD, Paris, 2018), <https://www.oecd.org/tax/oecd-and-igf-invite-comments-on-a-draft-toolkit-that-will-help-developing-countries-to-identify-and-cost-potential-behavioural-responses-by-mining-investors-to-tax-incentives.htm>.
- 10 World Bank, Democratic Republic of Congo Systematic Country Diagnostic.
- 11 World Bank “Diagnostic Trade Integration Study: Democratic Republic of Congo” (Working paper, World Bank, Washington, DC, 2010).
- 12 WTO (World Trade Organization), “Trade Policy Review: Report by the Secretariat” (Working paper WT/TPR/S/339, WTO, Geneva, Switzerland, 2016).
- 13 WTO, “Trade Policy Review.” The Democratic Republic of Congo is a member of the African Union, the African Economic Community, the Community of the Great Lakes Countries, the Economic Community of Central African States, the Common Market for Eastern and Southern Africa (COMESA), and the Southern African Development Community (SADC). The country is engaged in the tripartite negotiations aimed at harmonizing the rules of the East African Community (EAC), COMESA, and the SADC.
- 14 Both figures come from TradeMark East Africa. See “Rwandan Trade with Democratic Republic of Congo Set to Increase to US\$56 Million under the AfCFTA,” United Nations Economic Commission for Africa, news release, [https://www.uneca.org/stories/rwandan-trade-democratic-republic-congo-set-increase-US\\$-56-million-under-afcfta](https://www.uneca.org/stories/rwandan-trade-democratic-republic-congo-set-increase-US$-56-million-under-afcfta).
- 15 Another example is the provincial edict 002/2017 adopted in North Kivu in 2017, which lists 261 different categories of levies.
- 16 World Bank, “Opportunities and Challenges to Increase Access to Electricity in the DRC” (Working paper, World Bank, Washington, DC, 2019).
- 17 GÉCAMINES, REGIDESO, RVA, SCPT, SCTP, SNCC, and SNEL.
- 18 Since 2003, the bank has initiated or completed nine lending operations relating to the electricity, mining, telecommunications, transport, and water sectors for a total financing envelope of close to US\$2.2 billion.
- 19 World Bank, “Democratic Republic of Congo: Governance of State-Owned Enterprises” (Working paper, World Bank, Washington, DC, 2019).
- 20 World Bank, “Democratic Republic of Congo: Governance of State-Owned Enterprises.” COPIREP has a broad mandate that covers a number of areas, including (a) all activities relating to the state’s divestment in SOEs; (b) managing the reform of the SOE sector (including sector-specific and company-focused reforms); (c) supporting relevant institutions in carrying out the SOE reform process; and (d) preparing plans for addressing staffing and related issues in SOEs such as overstaffing and delayed salaries.
- 21 Biomass energy potential, for instance, is underexploited. The World Bank identified only three biomass projects linked with agribusiness activities in the Democratic Republic of Congo (palm oil and sugar production).
- 22 World Bank, Democratic Republic of Congo: Governance of State-Owned Enterprises.”

04. IDENTIFICATION OF SECTOR OPPORTUNITIES

4.1 ENABLING SECTORS

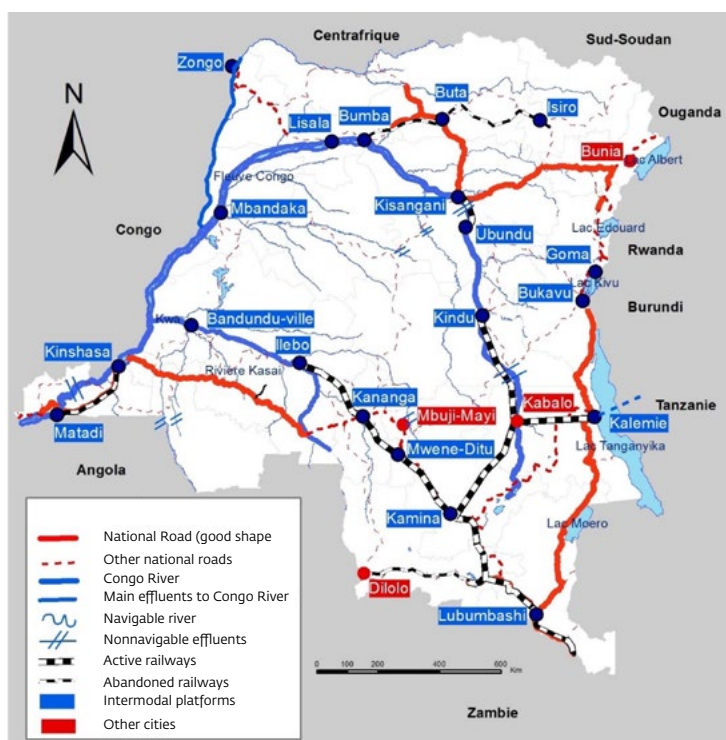
Transport and logistics

The transport sector plays a critical role in any economy by connecting firms to domestic and global markets (both for imports and exports).

Current performance

The historical multimodal transport network (rail, road, water) is no longer operational and faces very significant infrastructural problems, while state-owned transport companies are experiencing financial and operational difficulties. Such difficulties in a country as big as Western Europe cuts off most regions of the Democratic Republic of Congo from each other and cuts off rural areas from urban centers (see map 4.1).

MAP 4.1 TRANSPORT NETWORK AND MULTIMODAL PLATFORMS IN THE DEMOCRATIC REPUBLIC OF CONGO IN 2016



Source: Louis Berger and SYSTRA, "Etude Du Plan Directeur National Intégré des Transports en République Démocratique Du Congo, Rapport Phase 1: Diagnostic Intégré des Transports," 2017.

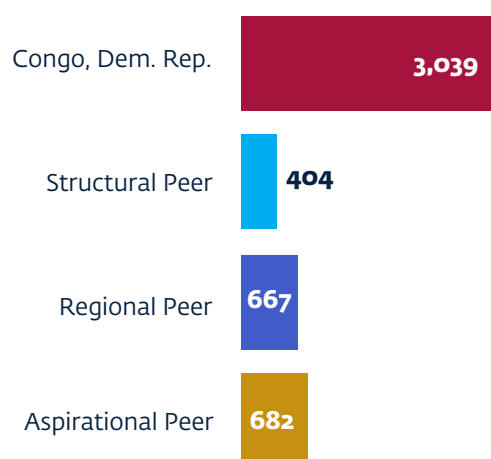
Transport costs (including for border crossing) are very high. According to one operator, it costs US\$3,600 to transport a 20-foot container from the deep-sea port of Pointe Noire in the Republic of Congo (across the Congo River) to Kinshasa through the Matadi River port (more than the US\$3,200 it costs to transport the container from Shanghai, China, to Pointe Noire), and another US\$3,000 to transport it from Kinshasa to Kisangani in the middle of the Democratic Republic of Congo. Border compliance costs¹ are considerably higher than in comparator countries (see figure 4.1).

One of the main access routes to the Democratic Republic of Congo's markets is through the port of Matadi, which serves the Bas Congo and Kinshasa and connects to river transportation on the Congo River. In addition to the Matadi corridor, the country is connected to regional and global markets by 13 land corridors, 5 of which currently have a predominant role because they connect regions (distant from Kinshasa) to neighboring foreign markets.² Two of these corridors connect the mining region of ex-Katanga to South and East African ports, and two others connect the Kivu regions in the east of the country to East Africa. Because of infrastructure and geographical constraints, these regions cannot have access to the Democratic Republic of Congo's international ports and therefore must rely on ports in neighboring countries that serve as natural gateways:

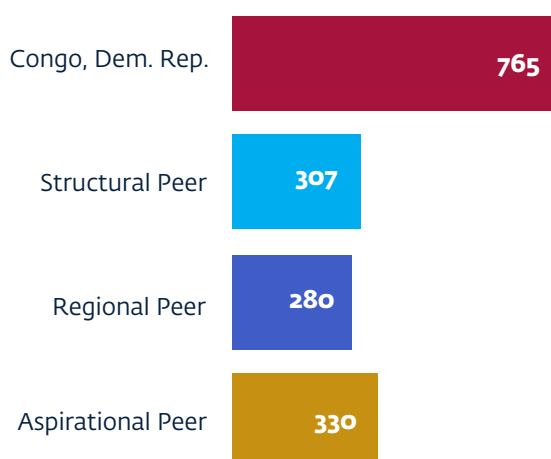
- North-south corridor, Durban, South Africa, to Lubumbashi via Lusaka, Zambia (2,500,000 tons)
- Dar es Salaam, Tanzania, corridor to Lubumbashi via Lusaka (850,000 tons)
- Central corridor from Dar es Salam to Goma and Bukavu (850,000 tons)
- North corridor from Mombasa, Kenya, to Goma via Kampala, Uganda (624,000 tons)
- Luanda, Angola, corridor (76,000 tons)

FIGURE 4.1 COST TO IMPORT, BORDER COMPLIANCE AND DOCUMENTARY COMPLIANCE, SELECTED COUNTRIES

a. Cost to import: Border compliance (US\$)



b. Cost to import: Documentary compliance (US\$)



Source: World Bank, Doing Business.

Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa. GDP = gross domestic product.

There are three ports in the country: Matadi (150 kilometers upriver), Boma (90 kilometers) on the Congo River, and Banana, with direct sea access on the country's 40-kilometer littoral. The port of Matadi accounts for 95 percent of the total traffic of these ports, more than 3 million tons.³ Shipping to Matadi is expensive, as it approximately doubles the cost of shipping internationally. The Société Commerciale des Transports et des Ports (SCTP) terminal remains the main operator in Matadi, but it faces difficulties with deteriorating infrastructure and equipment. As a result, ships calling must be equipped with cranes on board. The performance at the port of Matadi has been improved through the new private concession given to the Matadi Gateway Terminal (MGT). Another issue is the maintenance of the river access by Congolaise des Voies Maritimes (CVM), which is, according to operators, not at the published depth (an operator estimates the current draught at around 6.2 meters against 7.9 meters) and thus prevents ships of higher tonnage from being served by the port. Goods are transported from Matadi by road and rail to Kinshasa, where they are dispatched from the SCTP port, which is also in need of rehabilitation.

Both rail and road networks are for the most part built to connect with and complement the river network through logistics platforms built at various points of contact between rivers, roads, and rail lines. With the collapse of rail transport, road transport accounts for more than 90 percent of freight transport in the country (see table 4.1), which is concentrated in the international corridors and between the large cities in the Bas Congo and Kinshasa, ex-Katanga, and Kivus. Large transport companies are mostly present in Kinshasa and ex-Katanga. Thirty-seven companies were authorized in 2016 to transport 145,312 tons of minerals from Haut-Katanga et le Lualaba.⁴ Several medium-sized entities operate in the important road transport network between Matadi and Kinshasa. Public road network density in the Democratic Republic of Congo is only 25 kilometers per 1,000 square kilometers and 0.9 kilometers per 1,000 inhabitants compared to the African continent's average of 204 kilometers per 1,000 square kilometers and 3.4 kilometers per 1,000 inhabitants. Less than 5 percent of the 58,000-kilometer national road network is paved, and around 50 percent is in fair to good condition (meaning passable). Only 6 (from east to west: Matadi, Kenge, Bandundu, Tshikapa, Kananga, and Mbuji-Mayi) of the 26 new provincial capitals can be reached by road from Kinshasa.

TABLE 4.1 FREIGHT MODAL SHARES 2016

	Total		Domestic		International	
	Tons	Share (%)	Tons	Share (%)	Tons	Share (%)
Road	23,886,000	91.8	17,557,000	93.8	6,329,000	86.7
Rail	120,000	0.5	10,000	0.1	110,000	1.5
River	1,396,000	5.4	1,055,000	5.6	341,000	4.7
Pipeline	510,000	2.0	51,000	0.3	459,000	6.3
Air	113,000	0.4	50,000	0.3	63,000	0.9
Total	26,025,000		18,723,000		7,302,000	

Source: Louis Berger and SYSTRA, "Etude Du Plan Directeur National Intégré des Transports en République Démocratique Du Congo, Rapport Phase 1: Diagnostic Intégral des Transports," 2017.

River transport in the Democratic Republic of Congo is extensive with about 16,238 kilometers of navigable waters and lakes providing a vital access to most of the country's hinterland. River transport is the second most important transport mode with 5.4 percent of freight transported and 2,719,000 passengers in 2016. The most widely used routes in terms of freight traffic are Kinshasa-Brazzaville, Republic of Congo, (340,000 tons) and Kinshasa-Kisangani (203,000 tons). The river and lake transport corridors most used by passengers are the Kinshasa-Brazzaville (750,000 passengers) and Goma-Bukavu (416,000 passengers) routes.⁵

Most of the the country's river transportation service is provided by small, informal private operators.⁶ A key link between Kinshasa and Kisangani and the Equateur region enables the transport of imported consumer goods from Kinshasa and of agriculture and forestry products from the hinterland. Freight is particularly expensive: the cost of transporting a container from Kinshasa to Kisangani is about the same as the cost of shipping between Shanghai, China, and Pointe Noire, Republic of Congo. The rotation of a boat takes about 80 days.⁷ River transport is impaired by degrading infrastructure: signalization on the river is not reliable, requiring the use of pilots, and does not enable navigation by night; port infrastructure (quays, cranes) in Kinshasa and other ports is dilapidated or nonoperational, reducing productivity despite modest recent investment efforts in cranes in Kisangani. Another cost factor is the plethora of taxes and controls by regions in ports between origin and destination.⁸ Overall demand for river transport is diminishing because of insecurity in the provinces and competition from goods imported through from the country's eastern neighbors. Because of these issues and competition from informal transporters, several firms have exited the market.

Railways, once an important part of the Democratic Republic of Congo's network, are in a state of disrepair owing to dilapidated infrastructure (extremely limiting operational speeds), a very thin rolling stock (only 38 locomotives are available to SCTP, for example, while Société Nationale des Chemins de Fer du Congo [SNCC] renewed its stock, and a historically unsuccessful management culture.⁹ The Democratic Republic of Congo owns one of the largest networks in Africa with an operational network of 3,641 kilometers in the south (managed by SNCC) connecting the ex-Katanga mining region to Southern Africa and 366 kilometers in the west (managed by SCTP) connecting the port of Matadi to Kinshasa. A third network, the Uélé line (1,026 kilometers managed by the Chemins de Fer des Uélé; CFUF) ceased operations at the beginning of the 2000s.

Traffic has collapsed, as rail freight tonnage has been divided by a factor of 20 since the late 1980s, a trend that has continued until recently. On the SCTP network, the supply of freight declined by 75 percent from 837 trips per year in 2007 to 210 in 2015.¹⁰ In tonnage, freight diminished by 50,000 tons, or 75 percent, between 2006 and 2015. Transport of minerals for export was historically the main business of SNCC, but it has since been replaced by road transport. In 2010, minerals accounted for only 25 percent of export freight (only 2 percent of mining cargo when road transport accounts for 98 percent); general freight, 50 percent; and agricultural products, 25 percent.¹¹ With about rail accounted for about 120,000 tons, or 2 percent of total international freight in the country in 2015.¹² Almost half of freight traffic is domestic. According to most recent figures, rail transported 535,000 passengers per year, the majority, 500,000, on the SCTP urban lines (90 percent of passengers). In 2008, there were more than 1.4 million passengers transported on the Democratic Republic of Congo rail network, and in 2000 about 4 million.

Air transport remains an important way to connect regions but cannot substitute for the absence of land or river-based infrastructure. There are 50 airports in the country, 5 of which are international airports (Kinshasa, Lubumbashi, Goma, Kisangani, and Gbadolite). The sector is characterized by deteriorating infrastructure (buildings, tracks, access roads, and movement areas) which do not meet standards of safety and security; obsolete equipment that does not meet the requirements of the International Civil Aviation Organization (ICAO); inadequate air terminals in terms of traffic development; and unprotected airport areas.¹³ Maintenance in the country is done by foreign companies; airplanes are maintained abroad.

The air sector was liberalized long ago in 1978, but this has not led to the development of viable air companies in the country. There are two large domestic airlines—Congo Airways, which remains the main operator in the country with 30 percent of the general market (domestic and international) and 53 percent of the domestic market, and CAA, which operates regionally and holds 10 percent of the general market (domestic and international) and 43 percent of the domestic market and which dominates the freight market. There are numerous smaller national companies (Air Kasai, Air ex-Katanga) with negligible market shares.

A new terminal is being built in Kinshasa and with it the airport capacity will reach 3 million passengers. The new terminal's construction started in May 2018, and is financed by China's Eximbank and the government.¹⁴

Opportunities

A handful of private sector concessions in operation for maritime terminals and train and road operations which have enabled the continued operation of some of the country's key links, among which are:

- MGT terminal in Matadi;
- Three toll road concessions with SOPECO (three in the ex-Katanga and the RN1 between Matadi and Kinshasa);
- The ARSS rail concession between Matadi and Kinshasa; and
- Dedicated private terminals in Matadi and the port on the Congo River.

The existence of these PPPs demonstrates that there is space for the private sector to work with public entities to provide commercial transport services. Some of these actors already active in PPPs have shown interest in bidding for additional business, especially in the regions of dense economic activity: Bas Congo, ex-Katanga, and Kivu. The conditions under which these partnerships operate, however, may be far from ideal. First, these PPPs have not yielded significant investments in transport infrastructure (aside from the investment in the terminal at Matadi) that would guarantee the sustainable operation of transport on these links, if any.¹⁵ A second potential issue involves the conditions under which these PPPs have been awarded and negotiated and whether they meet satisfactory governance and value for money criteria for the Congolese public.

One key transport infrastructure issue that the Democratic Republic of Congo faces and the private sector could help resolve is the urgent need to improve the country's connection to global markets, reduce the cost of imported inputs for businesses and consumption goods (particularly those sent to Kinshasa) for the population as whole, and improve the effectiveness by which exports of minerals and forestry products are sold on global markets. To improve access to Kinshasa, there are alternative and competing visions,¹⁶ among which is the construction of a new US\$1.2 billion deepwater port in Banana, and the building of a bridge crossing the Congo River to better connect Kinshasa to Brazzaville. The current project, which would link both capitals at Maluku (70 kilometers east of Kinshasa) by a rail and road bridge. The bridge would connect Kinshasa to the newly completed road connecting Brazzaville to the port of Pointe Noire.¹⁷

These visions will take at best several years to materialize. In the shorter term, the rehabilitation of port equipment at Matadi and Kinshasa would more immediately improve the flows of goods to and from Kinshasa and the Bas Congo. This effort would need to be accompanied by a review of the overall management of port operations to reduce port costs. Also, according to operators, these investments would likely be sustainable even if new investments in a deep-sea port in Banana or connections to ports in neighboring countries (Republic of Congo, Angola) materialize, given the economic volume of freight needed for the two regions. This would require comparatively lower investments that private sector operators would be able to support and recoup over the medium term. Additionally, the recent development of private train freight services on the SCTP line could be complementary in terms of multimodal offerings.

Complementing the upgrade of facilities in Matadi and Kinshasa, the facilitation of circulation on the Congo River (necessitating both investments and improvement in the management of river traffic) could potentially help reinvigorate the transport of products from and to the regions as well as lower the high cost of imported goods. Here as well, this would need to be accompanied by a review of tariffs by the Régie des Voies Maritimes (RVM) and CVM.

A second area of interest for private investors is rail transport in the ex-Katanga region. A short-term option would be to revive transport toward Zambia and South Africa using the existing rail infrastructure of SNCC. This would expand the supply of transport in addition to existing trucking transport. Another more ambitious project that has gained the interest of the private sector in recent years would be the realization of the rail link between Kolwezi and Dilolo to connect the SNCC network to the Caminho de Ferro de Benguela (CFB) line on the Angolan side and connect the ex-Katanga to the port of Lobito, which is the closest sea access point, although not by much. This prospect is more distant, as this would require an agreement between both countries as well investments worth several hundred million dollars into 426 kilometers of track renovations, in addition to investments in rolling stock, logistics platforms, and so on.

The economic viability of these prospects would not depend just on the transport of minerals. The historical volumes that were once transported on the rail are unlikely to materialize again because copper is now being processed before being exported, thus leading to much lower volumes and less price sensitivity in transport costs and raising questions about the validity of a rail transport model linked to mining. On the other hand, the transport of imported products to serve a populated, economically dynamic region would generate new economies for rail transport and lead to significantly reducing the cost of imports for the region.

The airport gateway could benefit from private participation, since the total traffic of the country's international airport at Ndjili is roughly equivalent to that of other airports in Africa that have recently been privatized. Airports in Abidjan, Côte d'Ivoire; Libreville, Gabon; and Madagascar have been privatized with total traffic ranging from 700,000 to 900,000 passengers. The airport is currently being expanded with Chinese participation, and it is unclear under what administrative model the expanded airport will be managed.

Connecting the hinterland is the other big challenge for the Democratic Republic of Congo. Historically, this connection has been maintained by river transport and connected roads. It would seem desirable to improve the infrastructure and the management of river navigation (including the role of the SOEs CVM and RVF).

A key challenge for road transportation is the funding for maintenance. Channeled for the most part through the road fund (Fonds National d'Entretien Routier; FONER), funding levels are insufficient to complete needed maintenance, but there may be limited opportunities that arise locally. The government of North Kivu is experimenting with a pilot model of retaining funds gathered from tolls at the provincial level to undertake maintenance in partnership with private firms, an approach that seems successful so far. Overall, however, the role for private investment is likely very limited.

Constraints and possible solutions

There are numerous SOEs in the sector, and their role is central to the development of transport as they operate key multimodal networks in the nation (see table 4.2).¹⁸ Public transport companies are in bad financial and operational shape and carry significant debt liabilities, including social ones (see table 4.2). Overall, the revenue of the three largest transport SOEs in 2017 was 20 percent lower than the average for the period 2011–17, and of them, only the Régie des Voies Aériennes (RVA) has not seen a decline in revenues.

TABLE 4.2 REVENUES, NET INCOME, AND DEBT OF LARGEST TRANSPORT SOES IN 2017, US\$ MILLION

SOE	Revenues		Net income		Debt at end of 2017		
	2017	2011–17 avg.	2017	2011–17 avg.	Financial	Tax and social	Total
RVA	91.5	89.2	(6.1)	(19.7)	11.8	88.7	100.5
SCTP	87.9	139.1	(52.1)	(66.5)	61.4	115.3	175.4
SNCC	39.8	42.3	(150.6)	(141.3)	135.1	221.1	356.2
Total	219.2	270.6	(677.7)	(227.5)	208.3	425.1	633.4

Source: World Bank, "Democratic Republic of Congo: Governance of State-Owned Enterprises" (Working paper, World Bank, Washington, DC, 2019).

Note: Average for 2011–17 excludes 2013. RVA= Régie des Voies Aériennes ; SCTP = Société Commerciale des Transports et des Ports, ex-SONATRA; SNCC = Société Nationale des Chemins de Fer du Congo, SOE = state-owned enterprise.

The poor performance of SOEs occurs despite economic rents for several of them, such as RVA and CVM for use of airspace and the Congolese maritime stretch between Matadi and Kinshasa. The country's ports and airports are among the most expensive to use in the world.¹⁹ SNCC is also the recipient of large subsidies, which amounted to US\$40 million in 2017.

Ultimately, the role of SOEs in the transport sector will have to be redefined in light of the economic unsustainability of their operations. This specifically means the significant fiscal liabilities created and the fact that a large portion of their activities belong to the productive sector and hence do not necessitate government involvement and can be carried out by private sector providers. The transition will be difficult and possibly very long and drawn out: it will require retrenching SOEs to focus on strategic assets while transferring activities to private operators and very significant productivity gains to make the remainder of their operations viable. Other elements of this transition will require the tackling of financial and social debts and regulatory reform that will produce market-based tariffs.

In the short term, as discussed above, PPPs with transport SOEs should be reviewed and potential new PPPs assessed. This should be part of a broader effort to repurpose SOEs, which could include strengthening the state ownership and monitoring function through a specialized agency with sufficient resources; enforce the provisions of the OHADA-based company law related to SOEs; professionalize boards of directors; enhance the use of information and communication technology within the SOEs; and make the SOE sector and associated debt more transparent.²⁰ The experience and expertise of COPIREP, the government body responsible for designing, monitoring, and supporting the implementation of SOE reforms under the Ministry of Portfolio,²¹ should be leveraged to operationalize the PPP unit. COPIREP's capacities can also be used to strengthen the interface for PPPs by providing technical support to SOEs in identifying and preparing well-designed PPPs (feasibility studies, contracting) that would secure new investments in infrastructure and a revenue basis for SOEs.

Power

Current performance

Like the transport sector, the power sector is key to business competitiveness. The poor performance of the sector forces manufacturing firms in the Democratic Republic of Congo to source almost half of their electrical power from generators. Power can cost US\$1.00 per kilowatt-hour, which is not unusual because of transportation costs that can double the price of fuel, while US\$0.20 is considered an average cost of electricity in most countries. Such firms also lose, on average, 11 percent of annual sales due to electrical outages. The electrification rate is estimated to be between 15 and 20 percent (up from 9 percent in 2013).²² To date, there is essentially no access to electricity in the country except in a handful of cities (World Bank 2019d).²³ Access also differs by income level, with access standing at 56 percent for the 20 percent richest part the population versus 14 percent for the poorest quintile. Consumption per capita is among the lowest in the world, slightly above Ethiopia and on par with Tanzania.

Electricity production in the nation is 99 percent hydropower, and there have been no investments in power generation in the past 30 years. The installed capacity of the public operator SNEL consists of 15 hydroelectric power plants representing 2,581 megawatts of installed capacity and some 30 thermal units with an installed capacity of 28 megawatts.

Available capacity is estimated at 44 percent of that total (1,078 megawatts), which falls far short of the 4,000 megawatts needed at peak demand. At the center of the Congolese electricity generation capacity are the Inga 1 and Inga 2 dams. They currently operate at about 50 percent capacity because of a lack of maintenance. A rehabilitation and maintenance campaign started in 2010.

Private sector actors have also intervened in rehabilitating the Inga dams. The Fiabilisation, Réhabilitation, et Renforcement des Infrastructures SNEL de Production et de Transport project consisting of a consortium of private sector firms.

The existing transmission network, albeit limited, is in good condition²⁴ and increased from 5,510 to 6,771 kilometers of high voltage lines since 2012. On the other hand, the distribution network is much more limited, being fragmented and dilapidated.²⁵ Separate grids serve the country. The main one is the transmission grid linking the south-west network that covers Kinshasa and the southern network covering the ex-Katanga region with 1,770 kilometers connecting Inga to Kananga and Kolwezi (capacity is in the process of nearly doubling to 1,000 megawatts) and interconnected with Kasumbalesa and southern Africa. The Democratic Republic of Congo power system is completed by isolated grids operated by SNEL and half a dozen private operators.²⁶

These grids are developed around hydroelectric power plants with installed capacities ranging from 2 to 20 megawatts,²⁷ and systems of generators as in Kananga and Mbandaka. In total, around 150 megawatts of hydroelectric and thermal power plants are operated by private operators.²⁸

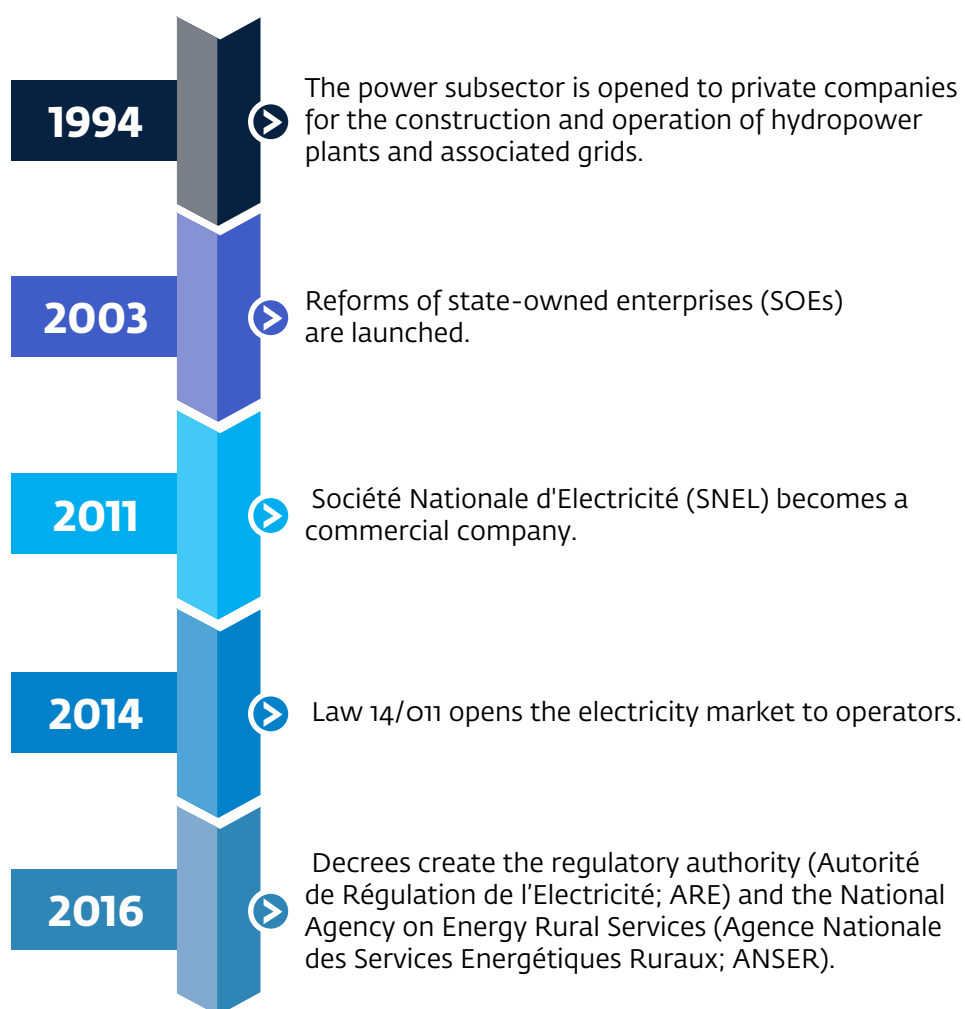
Industry accounts for the largest share of electricity consumption, representing 55 percent of Congolese demand, followed by residential (35 percent) and other commercial uses and services (10 percent). Industrial and residential electricity consumption levels have doubled since 2000 (111 and 105 percent, respectively, between 2000 and 2015), while commercial and public services consumption has been cut by 48 percent. Industrial consumption comes mostly from the extractive industry, which requires large quantities of fuel and electricity for extraction and conversion of metallic ores. Formal mining is mainly located in the provinces of Kasai Central and Kasai Oriental, in the Haut-Katanga and Lualaba, but also in the northeastern regions of Haut-Uele and Ituri. Industries such as food processing, textiles, metallurgy, and the light chemical industry located around large cities such as Kinshasa, consume only a small amount of electricity, in part due to limits on access to reliable electrical power sources.²⁹ The same is true for industry linked to raw material deposits, such as limestone for cement works. Mines in the south also rely on imported electricity through the Democratic Republic of Congo-Zambia interconnector (a 220-kilovolt line between Kasumbalesa and Luano). SNEL also imports electricity from Uganda.

Opportunities

The country possesses some of the greatest hydropower resources in the world, 13 percent of the world's hydroelectric potential, only 2.5 percent of which has been exploited. Additionally, its electricity sector has been progressively liberalized.

The private sector has stepped in to fill the gaps left by the state provision of electricity (figure 4.2). There are several types of projects involving the private sector in the country. Recently, the 147-megawatt Ruzizi III project has been signed between the governments of Burundi, Democratic Republic of Congo, and Rwanda and a consortium of firms from Kenya and Norway. The closing is expected by 2021, and operations are to begin by 2025. Other large-volume projects include initiatives linked to mining projects (Kasai Central and Kasai Oriental, Haut-Katanga and Lualaba, and the Kivus). The country also has several minigrids operating with private sector involvement, essentially in the Kivus. Finally, off-grid individual solar operators are expanding to serve large swathes of untapped demand around large urban centers.

FIGURE 4.2 LIBERALIZATION OF THE ENERGY SECTOR



Mining companies have invested in expanding generation capacity through loans to SNEL (estimated at US\$1 billion in total) and mostly avoided investments in entities such as independent power producer and build-operate-transfer projects. The largest of these projects financed the rehabilitation of Inga 2 turbines, the construction of Nzilo II hydropower plant, and improvements on the Inga-Kolwezi high-voltage line. In total, mining companies have accumulated over US\$1 billion in lending to SNEL through such projects, almost entirely to improve the supply of electricity to their mines. Mining firms have built their own power plants to supply their mines.

Demand from the mining sector is not fully met, and there is a consequent need to augment the supply of electricity to the ex-Katanga region. Overall, demand is outpacing supply: estimated at 10,000 gigawatt-hours in 2017, it is expected to grow to 28,000 gigawatt-hours by 2030. The mining sector accounts for a large share of this demand, which is expected to reach 11,000 gigawatt-hours by 2030.³⁰ The increased capacity of the high-voltage line should allow for extra generation capacity to meet demand in the South: a firm considering building a 100-megawatt plant in the West mentioned that several mining companies in the South had expressed interest as clients. Imports from neighboring countries (Angola and Zambia) would also help meet short- and medium-term needs.

The landscape of private providers of electricity is fragmented into a market typified by small regional actors, mainly in the Kasai and the Kivus. Mining companies have occasionally formed PPPs with provincial governments to serve minigrids. Other independent power producers have developed in North Kivu.

Local and international companies seeking to tap into markets with little existing electrical infrastructure have emerged to provide off-grid solar electricity. The International Renewable Energy Agency (IRENA) estimates that 1.2 million people already have access to solar lights in the country.³¹

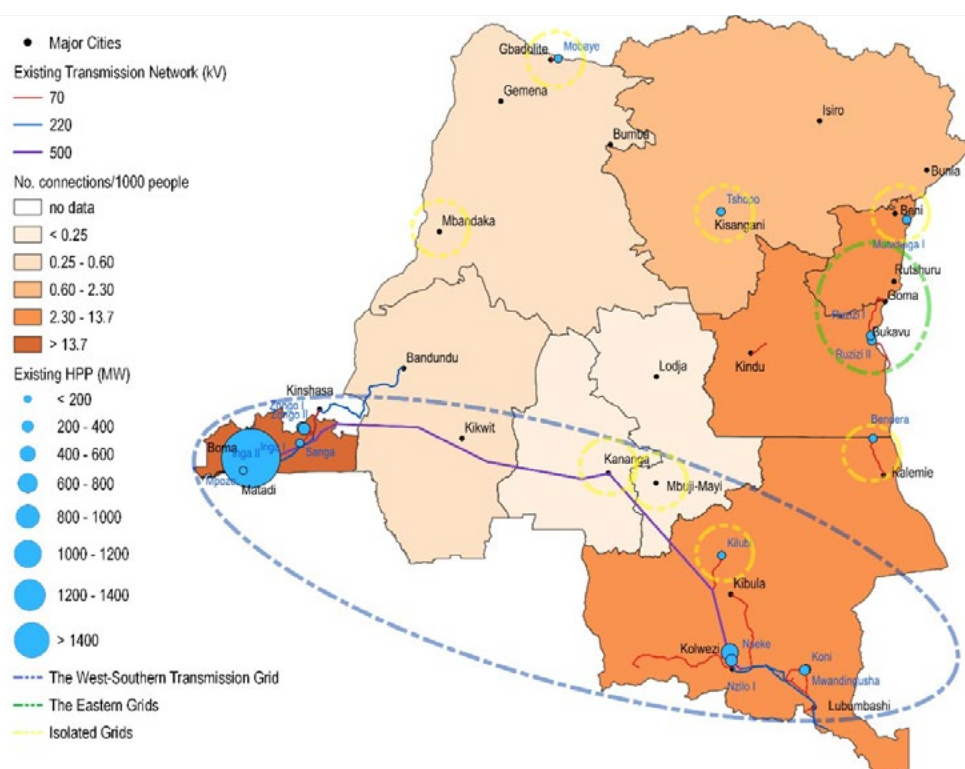
Constraints and possible solutions

There is a need to increase generating capacity. Scaling up private sector investments into the grid would require SNEL to become a credible off-taker. With over US\$3 billion of debt and very high losses, SNEL has a negative cash flow and is unable to make the required investments. SNEL's poor performance is linked to an array of internal factors such as operational inefficiencies, inadequate human resources, and low performance culture, which are identified as priority areas of the recovery plan. This impedes private investments to expand production on the grid, because SNEL cannot credibly commit to a power purchasing agreement.³²

The varying characteristics of electricity supply in regions (connection or not to grids, presence or not of mining activities) and the overall fragile context call for differentiated approaches with the focus being put on small to mid-size interventions that are geographically close to population centers (see map 4.2).³³

- **Southwestern region.** Given the high demand density and existing grid infrastructure, focus should be on (a) supporting public investment in critical hydropower close to major demand centers (last group of Inga 1 and last three groups of Inga 2, Nzilo in the ex-Katanga, Zongo 1 near Kinshasa); (b) securing supply from neighboring countries for the ex-Katanga region (Angola, Zambia); (c) strengthening and densifying the existing interconnected grid backbone (electricity from Zongo 2) and rehabilitating/maintaining urban distribution (Kinshasa, Kolwesi, Lumumbashi, Matadi) to improve reliability and quality of service and to keep up with fast-growing demand; (d) fostering minigrids and stand-alone systems provided by private sector operators where grid improvements and expansions are less financially viable (including assessing whether a connection to the grid would be economically viable for Kananga and Mbuji-Mayi).

MAP 4.2 CURRENT STATE OF POWER SYSTEM DEVELOPMENT IN DEMOCRATIC REPUBLIC OF CONGO



Source: SNEL; World Bank, "Opportunities and Challenges to Increase Access to Electricity in the DRC" (Working paper, World Bank, Washington, DC, 2019).

- **Eastern region.** In a region of growing demand and insufficient infrastructure, where most demand remains largely unmet, focus should be on improving transmission from hydro plants to Goma and on the distributing electricity in Bukavu and Goma. This would require improving the planning and regulatory oversight (to deal with issues regarding the definition of concessions), building the capacity of current providers who are facing important development challenges, and focusing on business customers in the short term.
- Elsewhere where connection to grids is not economically feasible (remote regions and household and small businesses customers for which grid connection would be too expensive), solutions from the private sector should be investigated (minigrids, off-grid individual solar systems), with a focus on creating an enabling environment for these private sector providers. Several private initiatives seem to demonstrate that there is a sustainable market.

Supporting the recovery of SNEL by building capacity in the short term and by defining a change management plan, with a view to transferring asset ownership or management to the private sector, will be an integral part of forward progress. Additionally, in the context of decentralization, reinforcing the capacity of provincial governments and regulators to manage the sector (planning, policies and regulations, PPPs) and interact with private sector providers is a priority. Emerging private sector operators are operating in a high-cost environment of low-efficiency governance and ill-defined regulatory obligations. Examples of the high cost of doing business for these operators include a multiplicity of taxes and licensing requirements and anti-competitive behavior that prevents operators' development, as well as access to finance for the smaller ones.

Priority in the short term should be given to larger and growing regions (urban centers) from an economic standpoint in order to build a critical mass of private sector providers that could then serve other regions and support the larger economic operators for which access to electricity is essential for growth. The operationalization of Autorité de Régulation du secteur de l'Electricité (ARE) and the rural electricity development agency (ANSER)—created in 2016 and now in the implementation phase following the ministerial decision of November 2018—will have a key role to play.³⁴

Water

Current performance

Urban water services have been severely affected by the country's economic troubles, and the operational performance of REGIDESO has declined considerably. Services totally ceased to function in more than 30 of the 94 urban centers supplied by REGIDESO and many neighborhoods of the remainder, resulting in long-lasting service interruptions in Kinshasa. This led communities to install autonomous water networks, particularly in peri-urban areas of major cities. The coverage rate of urban water supply services declined from 68 percent in 1990 to 35 percent in 2006. After 2006, as SOE revitalization was underway, a concurrent reform of the urban water sector envisioned the introduction of private sector participation in the management of services. This was preceded by the corporatization and financial restructuring of REGIDESO and accompanied by substantial investments in the rehabilitation and expansion of urban water facilities. The management contract did not attract any bidder,³⁵ so a service contract has been instead put in place.

Opportunities

Demand for urban water services is strong, owing to the gap in current provision and the expected growth of 5 percent of the urban population. A new water law was approved in December 2015 that prescribes a single ministerial authority for water services, decentralizes asset ownership and policy, delegates the management of service provision to private or public entities and autonomous systems managed by user associations explicitly recognized, prescribes cost-based tariffs (articles 84–85), and calls for a new regulatory authority. There is interest among private sector providers in serving large urban areas Kinshasa, but also Goma.

In May 2015, the government approved a revision of REGIDESO's tariffs (set in US dollars). The current level of water rates, which have a weighted average value of US\$0.82 per cubic meter, is comparable to the rates observed in the subregion.³⁶ In normal operating conditions (billing and collection), the current water rates should enable REGIDESO to cover its operating costs, but this is not the case, as only 60 percent of REGIDESO's running costs are being covered.³⁷

Lack of payment from public entities have added to the difficult financial situation, as most debts arise from public consumption. State debts on water consumption invoices accumulated by the third quarter of 2018 were estimated to be CGF 261.4 billion (US\$136 million), which is more than a year of revenues.³⁸

Constraints and possible solutions

The national regulatory authority foreseen by the law of 2015 is not yet operational, and institutional fragmentation remains.³⁸ Once in place, the role of the new national regulatory authority relative to that of the regions should be clarified. In coordination with the regions, which now own the assets under the new law, the new authority should also start investigating the possibilities for establishing individual concessions or management contracts in large cities in the regions. In some instances, this would regularize or clarify existing situations including the status of REGIDESO, and besides, there is evidence of interest from the private sector.

The reform of REGIDESO into an economically sustainable water services provider, particularly by defining its perimeter of operations, must be pursued. A study by Nodal is under way under the PEMU project. Preferential tariffs to industrial businesses should also be reviewed.

Digital infrastructure

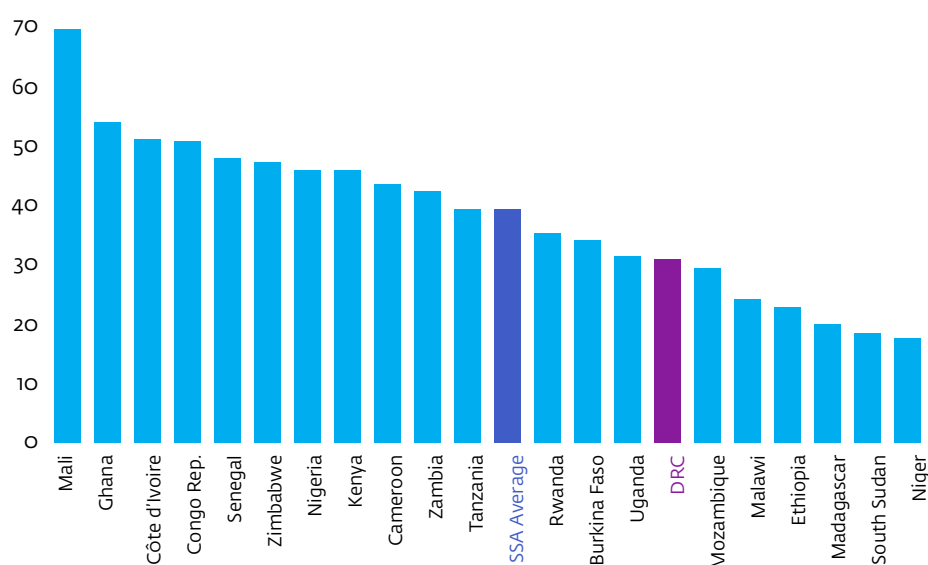
Current performance

The telecommunications sector remains underdeveloped and lags behind regional peers. Given the poorly developed fixed-line networks,⁴⁰ mobile phones have become the main mode of communication in the country, and the penetration rate is 47 percent. The development of broadband infrastructure in the country has also been slow, given the poor development of national cable networks. After many delays, the Democratic Republic of Congo was finally able to connect to its first undersea fiber-optic cable network, but internet pricing remains high.

SCPT, a key SOE, has had a monopoly on the telecommunication sector since 1970. In consequence of the war and subsequent mismanagement, SCPT has fewer than 2,000 connections, according to reports, and its revenues are insufficient to cover the costs of its 500 employees. Since 1997, there have been discussions to privatize SCPT, but this is yet to materialize. SCPT is also responsible for the development of the national backbone fiber-optic networks in the country. Because of the shortage of funds, the national backbone remains underdeveloped, and the existing infrastructure is of poor quality. The landing station at Muanda, which has allowed the Democratic Republic of Congo to connect to its first undersea high-speed cable in 2013, is managed and serviced by SCPT, and other operators can connect to this only via the SCPT network, giving it a de facto monopoly. SCPT now draws substantial revenues from this fiber-optic connection that have increased by 60 percent between 2011 and 2017.⁴¹

As a result of limited access to the national cable network due to high prices and uneven quality, the broadband penetration remains low (figure 4.3). Fixed broadband connections are only available in the major cities, and in the absence of a strong national fiber-optic cable network, most broadband connections are achieved through wireless access, satellites, and more recently, mobile phones. The penetration of fixed broadband connections is 5 percent.⁴² Access to broadband remains a rarity and a luxury, at US\$150 for 1 megabyte per second in the Democratic Republic of Congo, compared with US\$17 in Uganda.⁴³

FIGURE 4.3 UNIQUE MOBILE SUBSCRIBER PENETRATION RATE, SELECTED COUNTRIES, SUB-SAHARAN AFRICA



Source: GSMA Intelligence data; World Bank Private Sector Scan

Note: SSA = Sub-Saharan Africa.

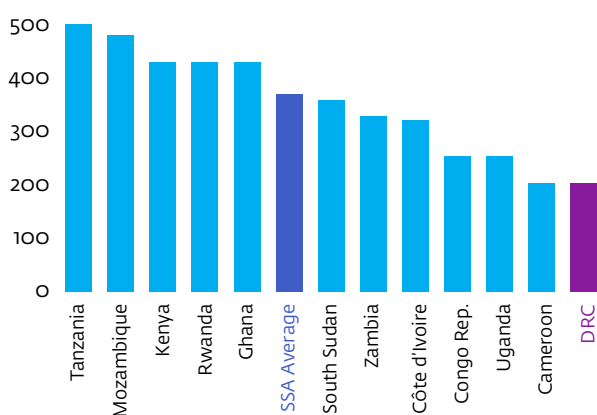
There are multiple internet service providers (ISPs) now providing internet access at reasonable cost in major cities and suburbs through satellite, WiMAX, CDMA, or EDGE technologies. There are 25 ISPs in the country, most of which are concentrated in Kinshasa. Some of the ISPs are very small and serve as few as 500 subscribers. Furthermore, many of these ISPs operate without licenses and are not registered. Given the dependency on international satellites for broadband, consumers are faced with bandwidth limitations and high prices, which further restrict access.

Given the limited availability of public funds, funding from external partners and donors, especially China, is playing a key role in developing the telecommunications infrastructure. Since 2013, China has assisted SCPT in rolling out a fiber-optic national backbone network (SCPT has also contracted with the Chinese company SNPCC to build the backbone). Phase I and II of this project are completed, and phase III is underway. China also helped SCPT connect to the international undersea fiber-optic cable in Muanda.

For all its progress, SCPT is nonetheless absent from many parts of the country. In the East, SCPT is largely absent, and other players are either currently or about to begin providing services once the sector is liberalized. Liquid Telecom is poised to connect its existing network in Rwanda through the Democratic Republic of Congo toward the fiber network coming from Zambia, and in doing so to provide services in Goma and Bukavu. These new providers represent a significant opportunity to expand the sector, but there is also a risk if regulatory capacity is not developed alongside to ensure appropriate market conditions.

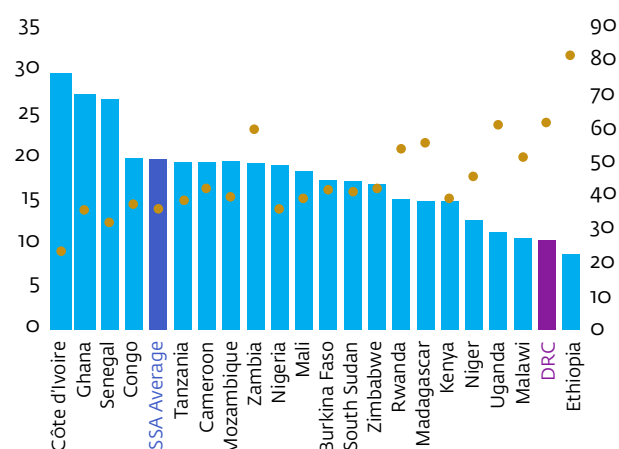
Mobile usage is on the rise in the Democratic Republic of Congo. The penetration rate of mobile subscribers has almost doubled since 2011 and is in line with regional peers (see figure 4.3). Usage, on the other hand, is relatively low (see figure 4.4).⁴⁴ Furthermore, smartphone penetration and usage are still very low (see figures 4.5 and 4.6). The market for cellular services is dominated by four large mobile network operators (MNOs). Mobile phones are not just a pervasive communication medium, they are also a unique, affordable tool many people use to access the internet.

FIGURE 4.4 MINUTES OF USE PER CONNECTION, SELECTED COUNTRIES, SUB-SAHARAN AFRICA

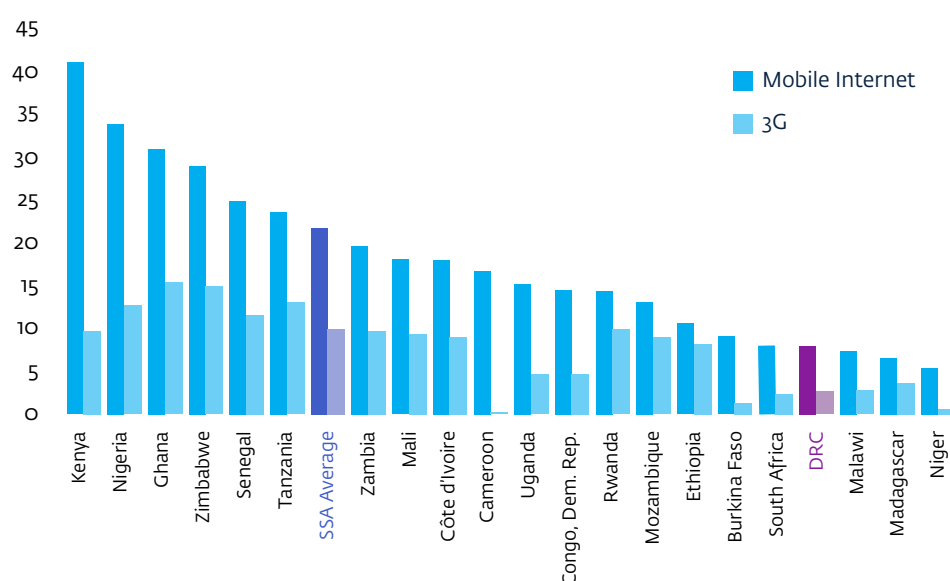


Source: GSMA Intelligence and Deloitte analysis, based on operator data; World Bank Private Sector Scan
 Note: SSA = Sub-Saharan Africa.

FIGURE 4.5 SMARTPHONE ADOPTION, SELECTED COUNTRIES, SUB-SAHARAN AFRICA



Source: GSMA Intelligence; World Bank Private Sector Scan

FIGURE 4.6 MOBILE INTERNET AND 3G PENETRATION

Source: GSMA Intelligence.

Note: SSA = Sub-Saharan Africa.

Despite a low number of internet users relative to the country's population, the liberalization of the telecom sector has opened the market to a growing number of private operators. Increased competition among operators has helped significantly decrease costs for consumers. It is estimated that 96 percent of telephone users use prepaid service.⁴⁵

Mobile banking is still underdeveloped. Given the potentially large user base and the low penetration of financial services, the Democratic Republic of Congo is one of the most promising mobile money markets in Sub-Saharan Africa, due to both an enabling regulatory environment and the potential for commercial scale in a country with over 80 million people. Because of the country's poor infrastructure, low literacy levels, and dispersed population, though, mobile banking has yet to grow to its full potential. The Democratic Republic of Congo remains a predominantly cash-oriented society with minimal access to formal financial services. Informal financial services are more common but are still limited to only a minority of Congolese citizens. It is estimated that fewer than 20 percent of adults had a mobile money account in 2017. There is a great opportunity to develop mobile money as a means for alternative forms of payment, and it is also an urgent necessity. At the household level, salary payments and bill payment capability are promising points of entry. Mobile money faces challenges around GSM system reliability, customer education, and trust in the system. After banking crises that occurred in the 1980s and 1990s, banks are still considered unstable and untrustworthy.

The start-up ecosystem in the Democratic Republic of Congo is growing but is still at a very nascent stage. The start-up ecosystem is mostly concentrated in Kinshasa, and some activity is in Lubumbashi and Goma. There is very little activity outside of these three main centers. Furthermore, the start-up ecosystem remains unbalanced. There are several start-up incubators in Kinshasa, as well as start-up events and competitions, but training, support, and financing for start-ups remain limited. Of those that are operating in this space, structured and affordable programs with relevant content are rare. A few standout examples of start-ups exist, including e-Mart and Labes Key, but these are still new. Overall, given the nascency of the ecosystem, there are few start-up success stories.

Opportunities

The Democratic Republic of Congo is one of the largest markets in Sub-Saharan Africa with such huge, untapped potential for ICT, which could furthermore play a potentially important role on the road to recovery and inclusive and sustainable development (see box 4.1). ICT provides leap-frogging opportunities by enabling new ways of communicating, sharing and storing information, delivering services, and conducting business. Moreover, with a large and growing youth population and growing urban centers, there is a growing demand and a captive market for digital products and services. In the East, given that the Democratic Republic of Congo borders on Burundi, Rwanda, Uganda, and Zambia, there is the potential to connect to international cable networks through the networks currently existing in these countries, and create a very competitive market for ICT services.⁴⁵

BOX 4.1 EMERGING USES OF TECHNOLOGY IN THE DEMOCRATIC REPUBLIC OF CONGO

Ebola response: Recognizing the role technology can play in combatting the Ebola outbreak, the Ministry of Health, along with Kinshasa Digital, organized the first hackathon in Kinshasa, focused on Ebola. An app developed by Congolese students, which they called “Lokele,” won the first prize. Lokele is a prototype application to facilitate the real-time transmission of data and information between communities and the Ebola response teams. The application allows community workers to recognize the symptoms of Ebola by completing a questionnaire and then alerting the response team. The application allows for communication between the community workers and the Ebola Response Teams, and also sends a final report on Ebola cases to the Ministry of Health. The founders are participating in a three-month incubation program, to develop a nationally scalable version of the application.

Food security: Building on the growing penetration of mobile phones in Eastern Democratic Republic of Congo, the World Food Program piloted, and later scaled up, an application called “mobile Vulnerability Analysis and Mapping” (mVAM) in the country to obtain real-time data for food security. mVAM collects data through SMS, voice calls, and interactive voice response systems, and more recently through Facebook Messenger, and other messaging apps, to provide real-time information on the functioning of food markets, food security, and also more recently Ebola. The information is then used for targeted response in terms of providing access to the necessary resources and action, and also tracking the efficiency and adequacy of support provided. In the country, mVAM has also expanded to track internally displaced persons (IDPs) and their access to food. More recently, the Equateur province, which has been affected by the Ebola outbreak, entered into a partnership with mVAM to track the nutrition and food needs of the affected communities.

Energy: The growing adoption of technology has also provided an opportunity to increase access to basic services like energy. For example, a start-up, BBOX, is deploying and scaling off-grid energy solutions in Goma, on the eastern border of the Democratic Republic of Congo, using mobile-money-linked pay-as-you-go (PAYGO) systems. The product offerings started with small solar home systems (SHSs) to increase access to electricity (many households were first-time users) and has grown to provide larger minigrid systems to provide energy access to small businesses and schools, among others. The company also signed a landmark agreement with the GoDRC to roll out off-grid SHS and minigrids across the country, with a focus on unconnected rural areas.

Education: “Schoolap” is one of the first education technology start-ups in the country and is working closely with the GoDRC to improve the quality of education by providing teachers and students with access to quality learning materials digitally. Access to learning materials and books is a huge challenge in the Democratic Republic of Congo, and libraries are rare. Given increasing internet penetration, Schoolap addresses this challenge by providing access to quality learning materials, for both teachers and students, digitally. It also provides a MIS platform for managing and tracking student performance and allows for greater engagement between parents and school authorities. Schoolap works with the Department of Education and Programs in the government to create quality content and align with the government’s syllabus. It also works with governments and institutions, rather than individual schools, which has allowed it to scale-up quickly. As of early 2019, it covered 8,000 schools in the country. It was recognized as the Best Start-Up in the Democratic Republic of Congo in a global competition and is now looking at scaling its solutions across the country. Given the strong uptake of the platform, it is targeting reaching 20 percent of the schools in the country by 2020.

Improvements are being made in the telecommunications infrastructure that provide a basis on which to build:

- **The country was connected to international bandwidth through the West Africa Cable System submarine fiber-optic cable in 2013.** The government rolled out a fiber-optic national backbone network with support from China. International bandwidth, though, is still limited, and as a result, internet pricing is high and backhaul capacity for both fixed and mobile internet services is low.
- **Telecommunications providers in the Democratic Republic of Congo can create an alternative terrestrial international fiber network by connecting to those that currently exist in neighboring countries.** In 2012, a private company, expanded its fiber network to Lubumbashi via Zambia, which was the Democratic Republic of Congo's first fiber-link connection.
- **The country's first commercial long-term evolution networks (LTE) were launched, albeit geographically limited, soon after LTE licenses were issued in May 2018.** Mobile operators are keen to develop mobile data services that capitalize on the growth of smartphone usage, but in mid-2016, their attempts to dramatically increase mobile internet pricing was criticized by the regulator.
- **A new government entity, the Société Congolaise de Fibre-Optique, which will own and operate fiber infrastructure created under the project, has also been established.** The infrastructure will be owned by the government entity, and under a PPP model, the operations and management of the infrastructure will be contracted to a private operator through an open and competitive tender process.
- **There is scope for expanding the coverage of mobile towers to meet untapped demand.** Helios Towers purchased mobile towers from Bharti Airtel and is working on upgrading the infrastructure, which includes integrating solar panels to power the towers. This was expected to be completed by the end of 2018. As mentioned earlier, the European Investment Bank is also supporting the financing of the construction of solar-powered mobile towers.

The government is deploying a 3,000 new kilometers within the national fiber-optic network to connect the country's most populated and separated economic clusters of Kinshasa (West), Goma (East), and Lubumbashi (South). The project also supports the commercialization of the new backbone capacity through a PPP structure and provides technical assistance to strengthen the line ministry and the telecommunications regulatory authority, Autorité de Régulation de la Poste et des Télécommunications du Congo (ARPTC, established in 2002), to improve the governance of the sector.

Given the growing youth population in the Democratic Republic of Congo, there is an opportunity and need to develop the ecosystem for entrepreneurship. The agricultural and extractive sectors have limited employment potential, and given the high rate of underemployment, the Democratic Republic of Congo needs to develop the entrepreneurship ecosystem to provide productive opportunities for youth. With the large domestic population, the largest Francophone market in terms of the number of consumers, and the lack of traditional systems and service providers, there is a captive market for cross-cutting digital solutions. Further, the growing urban centers are home to an increasingly tech-savvy population.

Even though the newly published telecommunications act would abolish the monopoly of the incumbent operator (SCPT) if adopted, a restructuring of the operator will be crucial to the development of the telecommunications infrastructure. This is one of the biggest constraints to developing the sector. Currently, SCPT has a monopoly on the landing station at Muanda and charges a fee for connecting to the network. Coupled with the poor quality of infrastructure, the costs to connect to the undersea fiber-optic network remain high, and the quality of connections remains low. An assessment of the infrastructure at the Muanda landing station indicated that the quality of infrastructure was extremely poor and that the cost of rehabilitating the infrastructure would be higher than new construction.

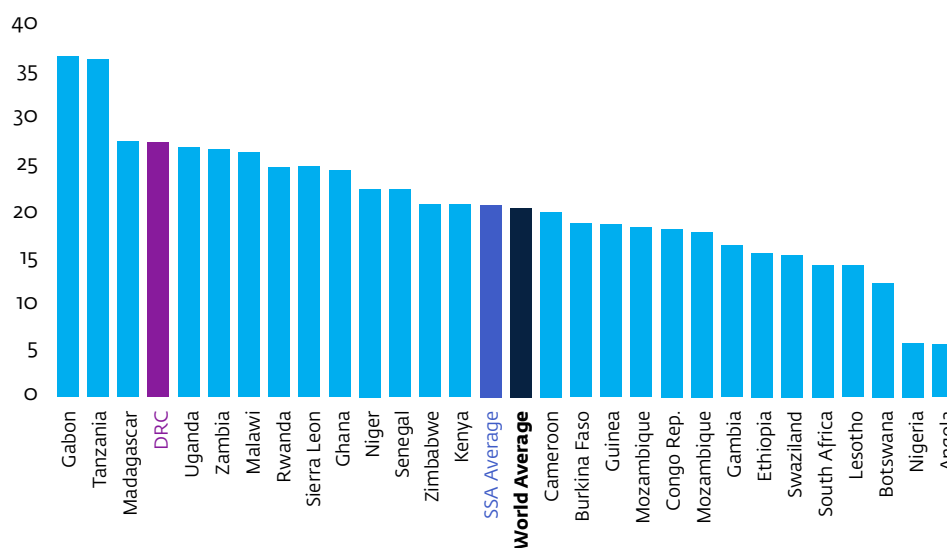
Another concern is the weak legal and regulatory framework. Private operators meeting during field consultations complained about arbitrary decrees published by authorities that forced them to divulge consumer data. The new ICT legal framework is designed to address the main gaps and weaknesses of the 2002 law⁴⁶ by proposing improvements to technology law, as well as “cyber,” legal, and institutional frameworks. It also deals with subject areas such as cyber security, cybercrime, privacy, promotion of ICT sector innovation, and support for the national entities that oversee the ICT sector. The Democratic Republic of Congo, just recently took the most important and immediate next step toward enabling and promoting the development of ICT services by publishing the new telecommunications law.

The poor quality of power and road infrastructure has restricted the development of the sector. Feasibility studies conducted in 2007 highlighted that developing a national fiber-optic backbone for the Democratic Republic of Congo would require a huge investment and suggested combining the development of the fiber-optic network with the power and railway utilities to take advantage of cost efficiencies. Little progress though, has been made on a cohesive infrastructure development plan. Given the poor and unreliable power supply, mobile towers must receive power from generators, a requirement which increases the cost of operation. Furthermore, transporting fuel to the generators also increases costs because of the poor quality of road infrastructure, which in turn increases overall operation costs. Attempts to run mobile towers on solar power have also been unsuccessful, as there have been reported incidents of the solar panels being stolen.

Telecommunication services pricing, enforcement, and cost recovery are key issues. The telecommunications regulator sets the price for voice calls and messages. In 2013 and 2014, for instance, a call between two networks was set at US\$0.037, which was further reduced to US\$0.031 in subsequent years. Despite a high court order that stated that the telecommunications regulator should set the base price and not control the pricing, the regulator remains sensitive to price controls. For instance, in 2016, the regulator ordered MNOs to cancel new internet offers as the increase in price (35 percent to 500 percent) had been imposed without consultations with the regulator. Despite these pricing controls, enforcement remains limited, given the poor capacity of the government. Because of inadequate government enforcement and monitoring, the quality of services provided by the MNOs remains poor. A related issue is cost recovery by the MNOs: given the high costs of operation and uncoordinated taxes, the high costs incurred by MNOs are passed on to the consumers, which results in higher prices for mobile services.

Complex and uncoordinated taxation and regulation increase the cost of providing mobile services, hence higher final prices paid by the consumers (see figure 4.7). Mobile operators in the Democratic Republic of Congo are subject to regulation by numerous government departments with overlapping interests despite the establishment of the ARPTC. There are several other institutions like the line ministry, the Ministry of Press and Information, and the High Authority on Media that have responsibilities and overlapping mandates in the sector. As a result, operators are subject to several regulatory fees and uncoordinated taxes like excise duties on telecom services and VAT taxes levied on data and voice calls, the cost of which is passed on to customers. Estimates indicate that one-third of the amount paid for mobile services goes to taxes and other fees. Although these taxes have increased government revenues, they are adversely affecting the long-term development of the country's digital economy. Estimates indicate that reducing excise duties by half would increase the number of new subscribers by 1.6 million connections over two years, and eliminating it altogether would double the number of new connections. In addition to the taxes on mobile services, consumer taxes are also levied on mobile handsets, which increases the overall costs of owning and using a mobile phone. Consumer taxes account for 27 percent of the total cost of mobile ownership in the Democratic Republic of Congo, one of the highest rates in Sub-Saharan Africa and significantly higher than the regional and global average of 20 percent.

FIGURE 4.7 CONSUMER TAXES AS A PERCENTAGE OF THE TOTAL COST OF MOBILE OWNERSHIP, SUB-SAHARAN AFRICA COUNTRIES



Source: Data from GSMA, 2015, on digital inclusion and mobile taxation, updated with data from the Democratic Republic of Congo, Deloitte Analysis; World Bank Private Sector Scan

Note: The world average refers to the average across the 110 countries included in the survey. The Sub-Saharan Africa average refers to the average across the 28 Sub-Saharan Africa countries for which data are available.

Financial sector

Current performance

The financial sector fuels private sector-led growth. The Democratic Republic of Congo has gone through a long period of political and economic instability that almost wiped out its financial system. Despite efforts to rebuild the financial system over the past decade, it remains one of the least developed in Sub-Saharan Africa. The system is extremely bank-centric, highly dollarized (at the end of 2018, 90 percent of deposits were in U.S. dollars), it lacks basic insurance services, and has experienced crisis episodes. The Democratic Republic of Congo's financial sector is small (total assets US\$5.3 billion, or 11 percent of GDP at the end of 2018), the private credit-to-GDP ratio being 4.9 percent as of November 2018. Some 94 percent of loans are denominated in U.S. dollars, the largest share of clients being commercial entities (59 percent of total loans) in (mostly) the trade, services, and mining sectors. Financial inclusion is weak, its penetration rate 6 percent, which is low compared to the Sub-Saharan African average of 25 percent. According to World Bank Findex data, account penetration in the Democratic Republic of Congo increased from 19 percent in 2014 to 26 percent in 2017, largely driven by an increase in mobile money account ownership from 9 to 16 percent over the same period. Cash remains the dominant means of payment in the Democratic Republic of Congo.

Banking operations consist mainly of collecting sight deposits and providing short-term loans. There is a lack of availability of medium- and long-term lending. Corporate lending, therefore, exists mainly to finance short-term business needs and export/import activities. The cost of borrowing is high (20.6 percent in 2017). Except for microfinance, credit is restricted primarily to the largest companies or loans that are cash-collateralized or that benefit from offshore guarantees. Trade finance (letters of credit, performance bonds) is developing with the recent influx of large investment projects. According to the 2017 survey of 662 SMEs in the four major cities, there is a high demand for financing: 62 percent of MSMEs believe they have unmet financial needs varying from US\$50,000 to US\$500,000. Most of the loan requests are associated with purchases of equipment and production materials. In terms of the form of funding, 58 percent of MSMEs prefer equity investors, while 35 percent prefer debt. When further questioned about their preference for equity, business owners explain that there are positive spillovers from equity investments that come in the form of mentoring and advice from investors, a longer-term investment timeframe, access to investor business networks, and help with securing sales contracts.⁴⁷

The financial sector consists of a variety of institutions: 16 active, licensed banks, a state insurance company (SONAS) and the National Social Security Institute, 4 private insurance companies and 2 insurance brokers, 6 specialized institutions, 143 microfinance institutions and cooperatives, 59 money transfer institutions, 4 electronic money institutions, and 16 foreign exchange bureaus. There is neither a stock market nor a debt capital market. Bank funding mainly consists of sight deposits from the private sector (companies and households hold respectively 37 and 54 percent of total deposits).

Opportunities

Insurance was recently liberalized with the passage of a new insurance code in March 2015. This reform opens opportunities for the development of the sector by introducing new international players who will not only bring credibility to the sector but also will lay the foundations for the future development of a capital market. Currently, the sector has very low penetration compared to regional levels. Prior to April 2019, the only insurer, state-owned SONAS, had a legal monopoly of all insurance activities. In April 2019, four years after liberalization, four private insurance companies were granted licenses to operate in the Democratic Republic of Congo.⁴⁸

There is also a real potential for growth in the leasing business in the Democratic Republic of Congo: the current market size of leasing in the country is estimated at US\$175 million, the market potential estimated at US\$483 million. A leasing law was passed in February 2015. Without medium- to long-term financing available to leasing players, this potential is likely to remain unrealized. The liberalization of the insurance market will render leasing products more competitive relative to classic loans.

One of the most promising initiatives is the Central African SME Ventures Fund (CASF), which covers the Democratic Republic of Congo and the Central African Republic. The fund provides risk capital (US\$100,000 to US\$500,000) and advice to entrepreneurs in health care, education, telecom, agribusiness, logistics, transport, and hospitality. The fund is managed by XSM Capital Limited, a Mauritius-based limited liability company founded in 2008 that focused on managing and operating funds investing in high-growth SMEs in fragile and conflict-affected states and low-income International Development Agency (IDA) markets in Sub-Saharan Africa. In the Democratic Republic of Congo, XSM Capital is commonly called Kingkuba. CASF was a US\$19.2 million fund that had its first close in 2010 and made investments into 32 SMEs in the Democratic Republic of Congo and the Central African Republic. Subsequently, XSM set up the African Rivers Fund, a US\$50 million fund that had its first close in 2015 and made investments into 28 companies in the Democratic Republic of Congo and Uganda. XSM is currently working on a third fund, African Rivers Fund III, which is targeting US\$75 million in commitments and seeking investment funds. More recently, the Central Bank of Congo signed a US\$50 million currency swap agreement to support investments in local currency despite a heavily dollarized economy. There is an opportunity to expand the operations of the KingKuba fund, which currently operates in Kinshasa. The success of the first equity funds is impressive, and the program could be expanded in the Bas-Congo and other provinces. In the first instance, it would be important to expand to large cities that have existing SME demand for equity (Bukavu, Goma, Lubumbashi, Matadi). Absent a legal and regulatory framework for private equity and venture capital, though, XSM Capital Limited (and similar ventures) would continue to operate in a regulatory vacuum.

Although there is no stock exchange or capital market authority in the Democratic Republic of Congo, there are regulatory provisions that allow the Central Bank of Congo to issue treasury bills and bonds. There is a need to support capital market development beyond the government bond market to enable the banks and the large private sector to raise term funding through stock sales and bonds issuance. There is no strong institutional investor base on which a capital market can build, but the opening of the insurance sector could start expanding this base.

With most of the country's population living in rural areas, the Democratic Republic of Congo's vast surface area and limited infrastructure would make it very costly for banks to open branches nationwide. Agency banking as done in Kenya and as recently authorized by the BCC creates opportunities for banks to reach clients in remote areas through bank agents who can handle cash deposits, cash withdrawals, and funds transfers. This would also enhance financial inclusion in the country while creating revenue-generating opportunities for the designated bank agents.

The BCC has undertaken important reforms to modernize the national payment system infrastructure: the activation of the Real Time Gross Settlement System in 2018, the implementation of a national payment switch, and the passing of the National Payment Systems Act in July 2018. Digital financial services are considered one of the avenues through which financial inclusion can increase in the country. Initiatives have included introduction of cards for social benefits, a shift of government payments from cash to electronic transfers, financial products, and services for the unbanked that include domestic and cross-border money transfer services, airtime transfers, and bill payments. Digital financial services providers (both banks and nonbanks) can offer financial services profitably in areas where bank branches and ATMs are not available to consumers who have historically been unprofitable to serve. There are 35 million mobile phone users in the Democratic Republic of Congo. Between the fourth quarter of 2017 and the first quarter of 2018, the active subscription rate for mobile internet services rose from 37.3 percent to 39.5 percent. Over the same period, the rate of mobile money services usage went from 25.5 percent to 28.3 percent. To realize the full potential of digital financial services in the Democratic Republic of Congo, there is an urgent need to operationalize bilateral and multilateral interoperability, adopt unique financial biometric identification, create a common digital platform for MFIs, enhance government-to-private and private-to-government payments, expand internet coverage, and support financial education.

The microfinance sector has been growing steadily for over a decade and has room for much further growth (only US\$234 million in assets in 2017 concentrated in the eastern Democratic Republic of Congo). The sector stands to play a major role in supporting inclusive growth and reducing poverty. To this end, there is the need to support the restructuring and refinancing of SOFIs (the Savings Bank of Congo, CADECO, and the Development Bank of Congo, SOFIDE) as well as microfinance institutions and cooperatives with extensive networks such as COOPEC IMARA and the MECRECO network).

Constraints and possible solutions

Discussions with the Congolese Bankers Association have highlighted several issues:

- The depreciation of the Congolese franc forces banks to continuously recapitalize; banks propose that this capital be stated in US dollars.
- There are supervisory inconsistencies in the application of accounting norms, and consequently, the Congolese Bankers Association has proposed that the BCC adopt International Financial Reporting Standards accounting.
- Under BCC reserve requirements, 13 percent of deposits must be placed at the central bank in local currency, and in the event that any bank is not able to raise local currency in the market, it shall have to borrow this from the BCC.
- The association noted costs, such as those relative to control fees amounting to 0.6 percent of deposits or the 0.2 percent charged for each transaction through the national payment switch, that are more expensive than using correspondence banks.

- Neither penalties nor losses from fraud are tax deductible.
- The justice system is very inefficient, and some cases have lasted more than 25 years.
- Despite the shortage of skilled labor in the financial sector, the labor laws limit the recruitment of foreign nationals to no more than 2 percent.
- Relations between banks and the BCC are such that the former's positions are not taken into consideration.
- The dollarized economy comes with costs related to the importation of dollars, and yet the BCC requires that banks offer ATMs free of charge when the cost of an ATM is around US\$40,000.
- MNOs acting as e-money issuers are not subject to prudential norms as banks are.

In addition to operational challenges, systemic risks also loom, highlighting the exposure of the sector to external shocks. Most financial soundness indicators have deteriorated dramatically since 2014. Loans are mostly denominated in foreign currency, but much of borrower income is in local currency. As a result, employees that are paid in Congolese francs reportedly convert their salaries into foreign currency immediately to minimize exchange rate risk. Nonperforming loans reached 13.2 percent in October 2019 (up from 7.0 percent in 2014), showing the difficulties that domestic borrowers face in getting loan reimbursements following large exchange rate depreciation and a slowing economy. Low profitability, increasing nonperforming loans, and the low levels of provisions (37 percent) are likely to reduce capital below the requisite 8 percent of risk-weighted assets.

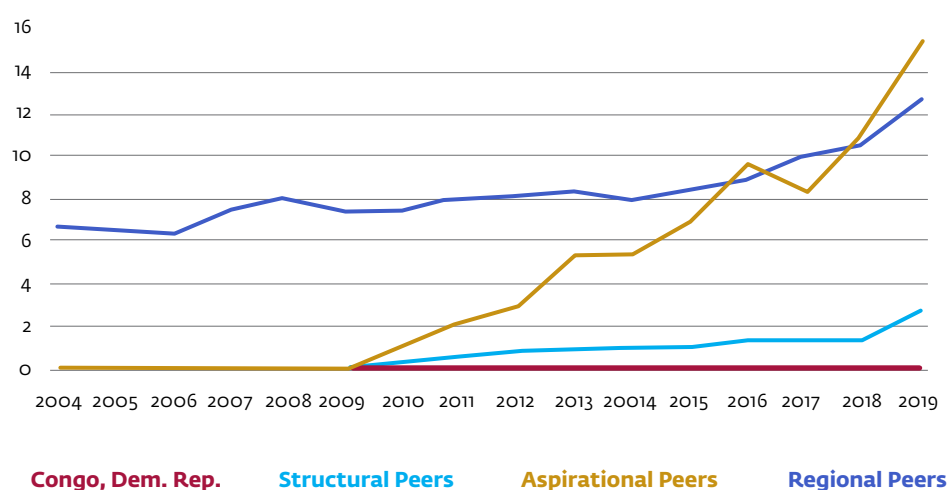
The banking sector exposure to the government and SOEs, private companies, and households equals 6, 25, and 11 percent, respectively. The precarious situation of the government reflected in the accumulation of debts worsens the situation of private suppliers who depend on public contracts. The return on assets became negative during the crisis, and capital adequacy ratios worsened. An increase in capital requirements is expected to reverse this. By contrast, liquidity ratios strengthened over this period, reflecting a wait-and-see attitude by economic agents.

The regulatory environment should be improved to facilitate bank operations. The AML/CFT Act (2004) sets out requirements for customer due diligence (CDD) and other compliance requirements that are difficult to implement in the Congolese context. For instance, national identity cards are not issued in the Democratic Republic of Congo, hence proof of identity is a challenge to performing CDD.

Further, limits are applied to the provision of mobile money services under the tiered know-your-customer (KYC) requirements. There is a need for the central bank to issue clear KYC/CDD guidance to the industry and to assist the financial institutions in achieving improved compliance. Mobile wallets opened without an ID are subject to a monthly transaction limit of US\$100 or local equivalent, while wallets opened with an ID are subject to a monthly limit of US\$3,000 or local equivalent. MNOs are of the view that the imposition of monthly transaction limits severely curtails the usage of such accounts. There are no tiered KYC arrangements for commercial bank accounts. To ensure consistency across financial services, particularly to enhance financial inclusion, the central bank should consider introducing tiered KYC requirements for bank accounts as well.

As an OHADA member country, the Democratic Republic of Congo has a modern legal framework for insolvency and secured transactions, but access to credit for SMEs remains low. Lenders require mainly landed property or bank guarantees as collateral to extend loans, which a clear majority of SMEs do not possess. There is no modern movable collateral registry that would enable the use of movables as collateral for loans, nor is there a private credit bureau that can provide credit information about borrowers (see figure 4.8). Finally, while institutions such as IFC and Agence Française de Développement offer partial credit guarantee schemes to select financial institutions, there is no such facility that is accessible to all lenders (especially microfinance institutions) to enhance access to credit by SMEs.

FIGURE 4.8 PRIVATE CREDIT BUREAU COVERAGE



Source: World Development Indicators.

Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa.

Health

Current performance

As reported by the private sector, the poor health of workers affects their productivity, while the prevalence of pandemics combined with poor health services is a deterrent to investors and tourists. The maternal mortality ratio remains high at 693 out of 100,000 live births, the infant mortality rate is 72 out of 1,000 live births (see figures 4.9 and 4.10), and the incidence of malaria is among the highest in the world at 291 per 1,000 people. The Democratic Republic of Congo is one of five countries that collectively accounts for half of all deaths globally among children younger than five years old. The prevalence of stunting rate among children remains high at 42 percent, and the rate of malnutrition remains high, given that 47 percent of the children under five and 38 percent of women of child-bearing age experience anemia. There are also significant variations between the provinces relative to their performance on these health indicators. In general, the Kinshasa province has a lower fertility rate, a higher rate of adoption of modern contraception, lower mortality rates for children under age five, and a lower incidence of malaria compared to the other provinces.

FIGURE 4.9 MORTALITY OF CHILDREN UNDER AGE 5

Per 1,000 live births

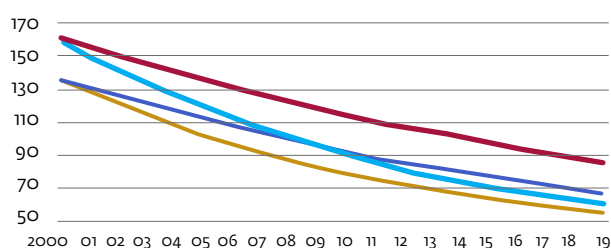
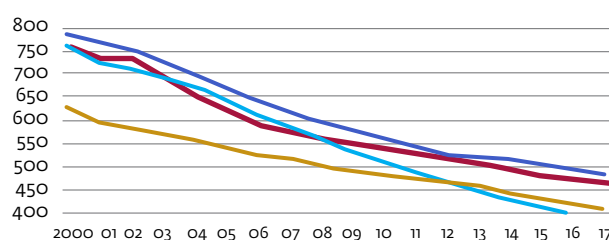


FIGURE 4.10 NUMBER OF MATERNAL DEATHS

Per 1,000 live births



Congo, Dem. Rep.

Structural Peers

Aspirational Peers

Regional Peers

Source: World Development Indicators.

Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa. GDP = gross domestic product.

According to IFC estimates, the private sector accounts for 44 percent of the outpatient care and 25 percent of the in-patient care in the country. In addition, 80 percent of the facilities offering basic surgery facilities also are private. The private medical sector includes both the for-profit private sector—medical and paramedical practices, clinics, polyclinics, and diagnostic centers—and nongovernmental organizations (NGOs) and faith-based health centers and hospitals. The private sector accounts for 46 percent of the 469 hospital structures in the country. Within the private sector, faith-based organizations play a key role, as they manage or comanage with the Ministry of Public Health about 40 percent of all the health zones in the country and 50 percent of all the health facilities. In provinces like Bas-Congo and South Kivu, private and faith-based health facilities outnumber the public health facilities. In all other provinces, the percentage of public health facilities remains higher than the private profit and nonprofit facilities.

Overall, the data indicate that the operational capacity, as well as the availability of basic infrastructure and most services and medicines was better at private facilities compared to public facilities (although shortages were reported in both sectors). The data collected by the Ministry of Public Health shows that private facilities have a relatively higher operational capacity than public facilities and are also more likely to have access to infrastructure like electricity, clean water, sanitation, and communication facilities. Furthermore, for areas like child health, 44 percent of those who seek services outside the house relied on private providers like pharmacies and drug stores, as well as private clinics.

The pharmaceutical sector in the Democratic Republic of Congo is highly fragmented and has limited government oversight. The procurement model in the country is a public-private mix, with the private distribution centers and their association, Fédération des Centrales d'Approvisionnement (FEDECAME), being given the mandate to supply public-sector health facilities. The government has supported the establishment of the private distribution centers through providing office and storage space, technical assistance, and training. In practice, though, there are parallel pharmaceutical supply systems for public sector health facilities. The supply system for any public health facility depends largely on the donor supporting the health zone within which the health facility is located. In the event that the donor supporting the health zone changes, the pharmaceutical supply system for health facilities in that zone would likely also change. Furthermore, although it is expected that FEDECAME pools the procurement of drugs to take advantage of economies of scale, many private distribution centers have established individually negotiated channels for procurement of drugs.

Reports indicate that between 40 and 45 percent of medicines in the Democratic Republic of Congo are counterfeit. Only 10 percent of pharmaceutical products are manufactured locally in the Democratic Republic of Congo, whereas the rest are imported. Most local manufacturers do not meet the minimum certification requirements and hence are not stocked by FEDECAME. The general perception of locally manufactured products is that they are of poor quality, and consequently, most pharmacists are reluctant to stock these.

The health insurance market was opened to the private sector only in 2016 and remains underdeveloped. The Democratic Republic of Congo lacks a culture of insurance among citizens, limiting demand for insurance. Out-of-pocket expenses account for 93 percent of the household's health care expenses, and only 7 percent pay health insurance premiums. In total, the share of out-of-pocket expenses as a percent of total health expenditure is around 40 percent in the country, significantly higher than among its regional peers.

Opportunities

There is potential to further develop the local manufacturing and distribution sector for pharmaceuticals. Currently, the local manufacturing pharmaceutical sector in the Democratic Republic of Congo is relatively bigger than in other countries, but given the tax and quality issues and more competitive imports, the market is small. Government support through capacity building and government procurement for public clinics could help create a larger market for these local manufacturers and enable them to expand.

Developing a PPP framework and building government capacity would also help crowd-in private investments. Opportunities for market-based provision of health services could be explored for GÉCAMINES' managed services (which also include schools). Further, there is scope to develop the private sector in distribution; however, the poor quality of infrastructure is a challenge.

Constraints and possible solutions

The national health development plan for the development of the health sector (2016–20) focuses on integrating the private sector of health care into the overall public health system. Public-private engagement for health remains nascent, however, and there is no guidance framework or PPP regulation for private sector engagement (this remains ad hoc). The government has incorporated NGOs and faith-based organizations (FBOs) to varying degrees into the strategic planning process, but the engagement of the for-profit private sector remains very limited. Efforts by the central level to improve engagement have been slow as the government simultaneously seeks to decentralize the health system to provincial and lower levels of government. Overlapping areas of responsibility between these levels, combined with financial and human resource deficits, as well as limited data about who and where the private sector is, all have further decelerated efforts to engage and regulate the private sector. In the absence of PPPs, the Direction des Partenariats was established in 2003 to ensure proper management of health partnerships. This department currently manages only donor projects and contracts health zone and facility management. A study funded by the Italian Development Cooperation highlighted that one of the main challenges of public-private engagement in the Democratic Republic of Congo is the poor coordination between projects, which mostly operate in silos. Furthermore, the limited coordination in the pharmaceutical sector between procurement by donor-supported programs, the private distribution centers, and FEDECAME results in procurement challenges for FEDECAME.

Inconsistent government tax and regulatory policies limit pharmaceutical manufacturing in the country. The inputs used in the manufacturing process are taxed at the same rate as the finished products. This is a major problem in the Democratic Republic of Congo, because most of the inputs required in the production process are imported. As a result, the locally manufactured products are less competitive. Given the poor capacity of the government, enforcement of quality standards is also limited, which has resulted in the poor quality of locally manufactured products.

The private health sector itself faces numerous constraints related to the availability of commodities, shortages of adequately trained staff, and the financial affordability of private health care. Furthermore, continued political uncertainty has deterred increased corporate investment in the health system.

The country suffers from a severe shortage of qualified health professionals, which is intensified by the dual practices that most public sector health professionals must carry on to supplement their income due to the frequent nonpayment of regular salaries in the public sector. This necessity further reduces their availability and efficiency. There are also wide disparities between the availability of health staff regionally, Kinshasa having about double the number of medical professionals per inhabitant than other regions. In addition to the shortage of physicians, the Democratic Republic of Congo also has a shortage of qualified pharmacists and midwives (in Kinshasa, there is 1 qualified pharmacist per 46,662 inhabitants).

The quality of training provided at higher educational institutes for health is poor, and there is limited oversight and regulation of these institutes. There are three main institutes for training medical health professionals: secondary-level institutions and higher education institutions (which train technical health staff like physiotherapists, nurses, community health staff, and specialized health management staff) and universities, which train medical practitioners like doctors and pharmacists. The private sector (which includes FBOs) accounts for more than 40 percent of the institutes across these three categories of institutes. Most of the institutes suffer from shortages of basic infrastructure and training equipment. The number of these institutes, especially private institutes, has increased rapidly over the past five years and, as a result, there has been limited oversight over the quality of training and a lack of accreditation.

Accessing financing is challenging for health entrepreneurs. Commercial lending rates are high, making it extremely difficult to access the type of capital necessary to start and grow a business. Many private health providers are unable to obtain financing from banks and microfinance institutions, and those who can borrow face significant collateral requirements, restrictively short loan terms, and very high interest rates.

Lack of government capacity and cultural norms are also constraints. The control of counterfeits and dangerous drugs remains ineffective. The demand for healthcare services is restricted by entrenched social and cultural norms. For example, misconceptions about family planning and contraception restricts the adoption of family planning services, as well as modern contraceptive measures.

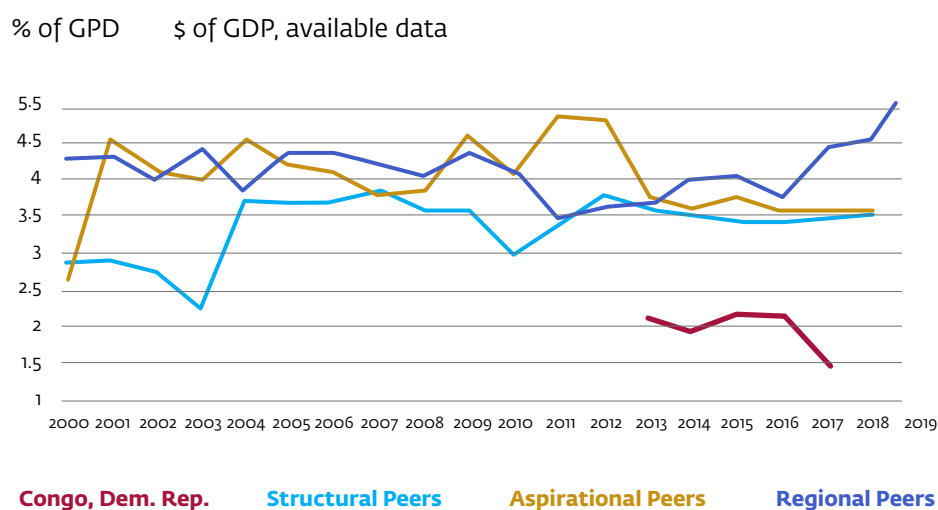
Education (skills for jobs)

Current performance

The lack of skills was noted as a constraint by the private sector but not the main one, because firms have been able to address this problem through training or by recruiting foreign workers. Education remains a significant issue for the Democratic Republic of Congo.

Over the course of the past decade, the Democratic Republic of Congo has made significant progress in improving access to primary education. Between 2005 and 2014, the gross enrollment rate (GER) increased from 93 percent to 107 percent, driven primarily by increases in female participation. The increase in GER was driven by the restoration of basic state functions and the increase in education expenditures, as well as by an increase in the amount of the donor resources available for the sector. The government's expenditure on education as a percentage of total government spending doubled from 6.7 percent of total spending in 2005 to 10.7 percent in 2017, but it still remains very low as a percentage of GDP (see Figure 4.11).

FIGURE 4.11 PUBLIC GOVERNMENT EXPENDITURE ON EDUCATION



Source: World Development Indicators.

Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda.

Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa. GDP = gross domestic product.

Despite the increase in enrollment rates, dropout rates remain high, and learning outcomes remain poor. The primary completion rate is 63.8 percent, indicating that for every 10 students who start grade 1, almost 4 students drop out by grade 6. Furthermore, only 14 percent of the students complete school without ever repeating a year. As a result of high dropout rates, the latest data (2014) indicates that 3.5 million children (27 percent of primary school age girls and boys) are still out of school in the Democratic Republic of Congo. As a result of late entry and high repetition rates, almost 90 percent of children were one or more years older than they should be by the final year of primary school. Twenty-six percent of Congolese students have learning difficulties in second grade, while 51 percent of fifth grade students face the same problem. After completing sixth grade, only 47 percent of Congolese students are considered literate, relative to a figure of 59 percent for comparable countries in the subregion.

Regional and gender inequalities continue to persist. The GERs vary widely across provinces, with the highest primary GER recorded in Kasai Occidental (124.2 percent), while the lowest was recorded in ex-Katanga (93.1 percent). Twenty percent of the out-of-school children were also in the ex-Katanga province, and 80 percent of the out-of-school children were in rural areas. In addition to this, there are significant gender inequalities that increase at higher grades. While there is near gender parity at pre-primary and primary levels (in terms of enrollment), the gender gaps increase significantly from secondary school onwards. At the primary level, the gender parity (2013) stands at 0.90, but it decreases sharply to 0.62 for secondary education and 0.46 for tertiary education. Girls also accounted for 60 percent of out-of-school children of lower secondary school age (12 to 13), 75 percent of which were girls living in rural areas. Female enrollment in TVET education was also extremely low (only 35 percent of the total enrolled students). Girls were also more likely to enroll in fields such as tailoring, cosmetology, and fashion, rather than technical streams.

TVET education provided in the country ranges from short courses for youth and adults with 9 to 12 years of education up to a five-year engineering course. TVET education is also provided both through public and private institutions. There are both separate formal TVET centers, as well as TVET courses in secondary schools and health and other technical institutes. There are also informal TVET centers managed by the Ministry of Social Affairs and the Ministry of Youth, as well as informal training through apprenticeships. In addition to this, there are also TVET centers that target specific sectors like railways, water, and electricity. The latest available data for TVET centers (2013) indicates that for-profit private centers and those run by FBOs accounted for 31 percent of TVET institutions.

Post-primary education is deficient, and TVET lacks quality and relevance. Many secondary school curricula are outdated, incomplete, or of poor quality. Critically, programs that target the development of skills complementary to key growth sectors in the economy attract relatively few students (about 20 percent of total enrollment in 2013–14), with particularly low enrollment rates in agriculture (8 percent), construction (7 percent), and mining (1 percent).

Nonstate actors play a key role in education in the country. Almost 70 percent of the schools in the country are run by not-for-profit FBOs, whereas 20 percent are state-run schools and 10 percent are for-profit private schools. The for-profit private schools consist mostly of low-cost, often informal and unregulated private schools that are concentrated in urban areas. There are also international private schools in large cities like Kinshasa and Lubumbashi that target expats. Some of the FBOs are independently run and financed, a majority of the FBOs are aligned with the government and receive some government financing, usually to meet their operational expenses. The highest proportion of private schools is in Kinshasa, which also has the lowest proportion of state-run schools.

Opportunities

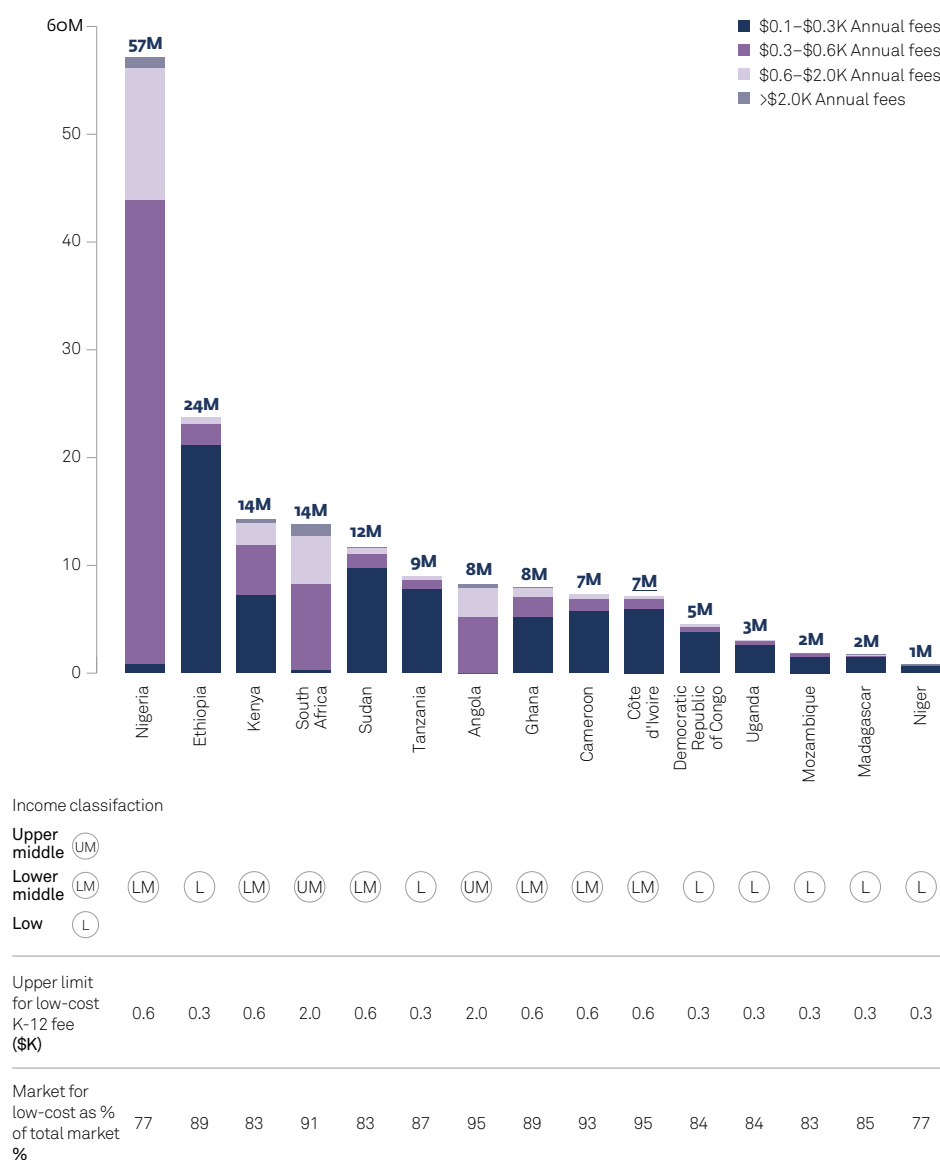
The private investment opportunity in the education sector in the Democratic Republic of Congo is estimated at US\$1 billion to US\$1.5 billion by the 2017 Caerus Capital report *The Business of Education in Africa*.⁴⁹ There is already a market for private education in large cities, and there is an acceptance and willingness to pay for all levels of education, even though the capacity to pay is low.

There is a potential to develop new models for impact investors, donors, and foundations. Innovative models in this segment, such as Bridge International Academies (which has schools in Liberia and Nigeria), LEAP Science and Math Schools, Omega Schools, and Livingstone College, are increasingly catering to this growing demand. Although revenue scalability and profitability of these models have yet to be demonstrated, the programs constitute an attractive investment opportunity for impact investors and donors to reach a wider population base and particularly to pioneer new, innovative models, potentially in partnership with government. Few formal players have participated in the low-cost segment in the Democratic Republic of Congo.

Growing opportunities for the private sector in urban areas could be driven by high-capacity use and increasing affordability. There is a potential for consolidation given market fragmentation in the segment (especially in Kinshasa). The concentration of affluence and population density may support catchment-based K–12 models. Penetration of mid-priced and premium K–12 educational institutions is currently estimated to be 25 percent, implying room for growth and a greenfield opportunity (see Figure 4.12).

Commercial and strategic investors have the potential to develop new higher education institutions driven by capacity constraints in the public sector and demand for employability-oriented education. There is a greenfield opportunity in higher education in the region for firms to set up private universities and colleges. The opportunity is suited for commercial investors and offers significant revenue potential. The average profitability of higher education assets in Sub-Saharan Africa is 25 to 30 percent. A range of providers have built greenfield education businesses across the region.

FIGURE 4.12 ADDRESSABLE MARKET FOR K-12 SCHOOLS IN SUB-SAHARAN AFRICA, 2016



Source: Caerus Capital, <https://edafricareport.caeruscapiatal.co/thebusinessofeducationinafrica.pdf>.

Note: K = thousand; L = lower; LM = lower-middle; M = million.

Constraints and possible solutions

The lack of available information on the private sector is a major constraint. Very little data are available about the private sector in education in the Democratic Republic of Congo, especially the private schools at the primary and secondary levels. This is especially an issue with schools run by FBOs, because not much is known about what these schools teach.

Private providers of school support services usually assess school quality using multiple data-based indicators such as student testing or comparisons of actual attendance with enrollment figures. Services are typically offered by education-focused NGOs as one element of their project portfolios, although there are also for-profit models. Providers supply school evaluations, advisory services, and school management consultancy either to private schools in return for fees or to public schools under PPP arrangements funded by the government or external donors. Their value resides in data collection and analysis to guide whole-school improvement plans.

Thus far, educational links with industry are weak at best and are beset by a lack of attention to entrepreneurial skills training and by trainers without industry-based experience. Concerns about the quality, access, and relevance of programs are common regarding public and private training providers in the Democratic Republic of Congo, one particular concern being the low access to training for women (especially outside of “gendered” trades) and for vulnerable groups.

One of the public-private models that is working well in technical and vocational education and training (TVET) is the funding and operation of the Institut National de Préparation Professionnelle (INPP), despite the INPP levy that firms must pay.⁵⁰ INPP is the main provider of short-term TVET education and functions under the authority of the Ministry of Labor. In theory, it is supposed to be funded partly by government and partly by receipts from the private sector, but in practice it is funded only by the private sector receipts (government contributions are small). They provide training courses specific to private sector needs and are also managed by a board that includes private sector representatives (including the private association, the FEC). The service has been well-received by the private sector, as indicated by their regular payments to support INPP.

The skills fund could increase the quality of and access to skills training provided by nonstate actors in the Democratic Republic of Congo through the establishment of a skills training fund that would provide funds competitively to deliver skills training programs in priority economic sectors of the country. The skills fund would be established to allocate the funds according to its objectives and supervise their use and would finance grants for the development and the provision of improved skills training programs. The skills fund would provide resources to skills training providers who are defined as any nonstate providers legally registered in the country whose core mandate is to deliver training, mentoring, coaching, and other skills-developing activities to local populations and to the training of trainers. The skills fund would strengthen the quality of the private, nonstate provision of skills training and the supply of relevantly trained individuals in the labor market.

To promote student financing models by the private sector, **nonbanking financial institutions could raise funds from conventional investors such as investment funds or development agencies and further complement them with capital from alternative sources (crowd-funding platforms such as Kiva, for instance).** In order to offer loans at the lowest possible interest rates, existing models focus on minimizing operative costs by sharing costs and resources (personnel, infrastructure) with partner TVET schools and universities. Revenue is typically generated from interest payments, but many models have developed innovative alternative repayment schemes to reduce the financial burden and risk borne by students. These models also generate additional revenue from fund administration and performance-based fees charged to investors or commission fees to partnering universities. Student financing could also expand the addressable market by supporting adult learners in returning to education (there is a large adult population ages 22 to 40 that did not pursue higher education at a younger age because of access and affordability issues).

Public support for uses of education technology (ed-tech) could be a key enabler of innovative delivery to achieve wider education access and improved quality and relevance. While ed-tech is a diverse segment, there are three broad categories within it: education delivery (ed-tech-enabled supplementary education and online tertiary education), institutional management and operational efficiency improvement (school and learning management systems, tech-enabled assessments, antiplagiarism software), and directory services and connections (private tutor matching programs). This will require improvements in ICT infrastructure and technical assistance to existing schools for technology adoption.

Nonstate actors could enhance teaching innovation by providing competency-based training opportunities and teaching resources through teaching kits, exchange networks, model schools, and cloud-based platforms. Innovations are designed to work in resource-constrained settings and come with detailed lesson plans and support, making them ready to use and easy to apply. Models leverage ICT, extensive partnership networks, and cascade training to innovations available even in remote areas while keeping operating costs low. Models typically integrate revenue-generating components, although many rely on considerable donor and government funding.

Fragility, conflict, and violence present a challenging environment, but the need for social entrepreneurship solutions is all the greater in fragile contexts. The expansion of social entrepreneurship across Africa has been impressive. Kenya, for instance, has become a global hub for social entrepreneurs active across all service delivery areas, and many social enterprises have reached impressive scale (the Bridge academies, Solar Sister, Jibu Water). Assessments of social enterprise (SE) ecosystems showed that SEs improved access to education as well as access to clean water and energy for millions of Africans, including in most fragile areas.⁵¹

International experience has demonstrated that governments can play a critical and continued role in shaping the markets for, supporting, and in some cases regulating SEs.⁵² Donors can also play an important role in sharing international experiences, providing a safe space for collaboration between social entrepreneurs and the public sector, helping reduce market and institutional barriers to social entrepreneurship, and using donor funding as an opportunity for creating local markets for service delivery through support for social procurement and franchising.

The rise of social entrepreneurs holds promise for the Democratic Republic of Congo's development strategy. If social enterprises can combine the intent of the public good with the business effectiveness and creativity of private enterprise, there is the potential of achieving the best of both worlds. To become operational, though, social enterprises need the ability to solve market failures. The weak business environment is not conducive to the development of entrepreneurship in general and is even more difficult for social businesses, given that access to finance in the Democratic Republic of Congo is one of the lowest in Sub-Saharan Africa. Additionally, social enterprise models often present their own issues, especially related to the drivers of organizational behavior, financing, capabilities, and the potential for scaling. The Congolese government is preparing a program to promote and support social entrepreneurship, which will entail the mapping and survey of social enterprises, identification of models that can be used in the country at scale, plans to leverage microfinance, and digital technology, as well as public procurement.

4.2 TRADED AND URBAN SECTORS

Mining and hydrocarbons

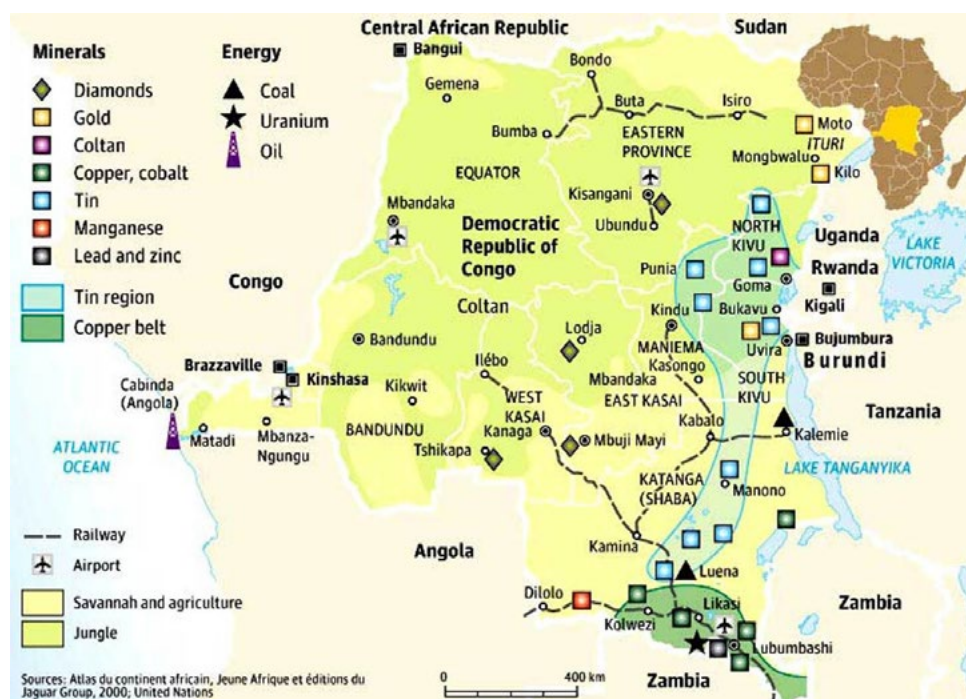
The Democratic Republic of Congo has substantial, untapped, high-quality mineral reserves including copper, cobalt, gold, diamonds, tin, and tantalum.

Current performance

Estimates from 2011 indicate that the Democratic Republic of Congo's mineral reserves are worth over US\$24 trillion. The country is the largest producer of cobalt globally (estimated at 60 percent of the world's production) and holds 45 percent of the global cobalt reserves. It is the eighth-largest producer of copper globally and the largest producer in Africa with 3 percent of global reserves, the third-largest producer of tantalum, and the seventh-largest producer of tin. It is also the second-largest producer of industrial diamonds and has 25 percent of the world's diamond reserves. It is further the fifth-largest producer of precious gemstones with 10 percent of the world's gold reserves. The mineral reserves are also high quality and significantly better than the global average. For instance, the Democratic Republic of Congo has some of the highest-quality copper reserves in the world, and some mines are estimated to contain grades above 3 percent (the global average is 0.6 to 0.8 percent). Other strategic resources include lithium and germanium. The copper and cobalt belt in the country is concentrated in the ex-Katanga, whereas the tin belt stretches across ex-Katanga and the Kivu provinces. Map 4.3 shows the distribution of mineral resources across the Democratic Republic of Congo.⁵³

Mining has been the main contributor to exports (US\$6 billion accounting for 95 percent of exports in 2017) and fiscal revenues (US\$1 billion expected for 2019). Mining activity increased by 12.8 percent in 2018. Production of cobalt, copper, and oil—the main export products of the Democratic Republic of Congo—grew by 92.5 percent (partially due to the start of production of several new mines), 8.7 percent, and 9.4 percent, respectively, at the end of September 2018 compared to the same period in 2017. Revenues from the mining and oil sectors account for almost 30 percent of all fiscal revenues: they increased (first three quarters of the year) from US\$608 million (1.6 percent of GDP) in 2017 to US\$1.331 billion (2.9 percent of GDP) in 2018 (World Bank 2018a).⁵⁴ The new mining code provisions that increase copper and cobalt royalties should further raise the contribution of the mining sector to fiscal revenues.

MAP 4.3 LOCATIONS OF MINERAL RESOURCES IN THE DEMOCRATIC REPUBLIC OF CONGO



Source: Jeune Afrique, 2000.

SOEs play a key role in the mining sector (see table 4.3). GÉCAMINES is the largest SOE in the country, and it focuses on cobalt and copper production. GÉCAMINES was a leading producer of cobalt and copper in the Democratic Republic of Congo in the 1980s and 1990s. In the 1990s, it started selling off its most valuable concessions and since then, it has become a gatekeeper of the mining sector, controlling a significant number of mining permits (including permits in some of the most reserve-rich areas). As a result, any private player investing in the mining sector in the Democratic Republic of Congo has to engage with GÉCAMINES, often through a joint venture. According to the latest Extractive Industries Transparency Initiative (EITI) report,⁵⁵ there were 38 such joint ventures. The state has also a majority stake in nine other extractive companies, and minority stakes in numerous others.

There are three main types of private sector players in the mining sector in the Democratic Republic of Congo: (a) traditional players who have established a footprint in the country and have enjoyed close links with past governments, (b) state-owned and private Chinese companies that are rapidly increasing their presence in the country, and (c) international companies. In addition to these formal players, artisanal miners are widespread and play a key role in the mining sector. As of 2014, artisanal miners accounted for almost all of the output of diamond mining, as well as almost 25 percent of gold, 15 percent of tantalum, and 27 percent of tin.

TABLE 4.3 MINING SOES

	State share (%)		State share (%)
Oil			
SONAHYDROC	100.00	FOXWELP	15.00
JAPECO	20.00	CAPRIKAT	15.00
SOREPLICO	20.00	SOCOREP	15.00
SOLICO	20.00	KINREX	12.75
Mining			
GÉCAMINES	100	SAKIMA	100
SODIMICO	100	COMINIÈRE	90
SCMK-MN	100	MIBA	80
SOKIMO	100	SACIM	50
FRONTIER	5	CROWN MINING	5
KGL SOMITURI	5	CHEMAF	5
METALKOL	5	ALPHAMIN BISIE	5
KAMOA COPPER	5	SEK	5
MURUMBI MINERALS	5	CONGO MINERAL EXPLORATION	5
GOLD DRAGON RESOURCES RDC	5		

Source : ITIE (Initiative Pour la Transparence des Industries Extractives), "Rapport de Conciliation ITIE-RDC 2016, Réalisé pour le Compte du Comité Exécutif de l'ITIE RDC" (Annual report, Ernst & Young RDC, Gombe-Kinshasa, 2018).

Following the Sicomines agreement between state-owned Chinese construction companies and GÉCAMINES in 2007, Chinese investment and engagement in the Democratic Republic of Congo has increased significantly in exchange for grants and interest-free loans to develop infrastructure (see Box 4.2). As of 2014, 80 percent of the mineral processing plants in ex-Katanga were owned by Chinese companies and 90 percent of the minerals extracted from mines in ex-Katanga were exported to China.

BOX 4.2 SICOMINES: THE DEAL OF THE CENTURY

In 2007 China and the Democratic Republic of Congo signed a resource for infrastructure (RFI) agreement. The agreement involved several Chinese state-owned enterprises: China Railway Engineering Company, Sinohydro, and Zhejiang Huayou Cobalt Company. The agreement consisted of infrastructure in exchange for mining rights previously owned by GÉCAMINES in the Kolwezi region. The agreement led to the creation of the Sicomines JV, in which the Congolese state owns 32 percent.

The exact content of the deal was not made public. Initial estimates put the value of the RFI at up to \$6 billion, and mining production at Sicomines was expected to produce 200,000 tons of copper in phase one (first two years), rising to 400,000 tons in phase 2 (third and subsequent years). The initial interest rate for the loan was 6.6 percent.

In the final contract amended in 2009, it was agreed that Chinese companies would dedicate—in addition to the loan for developing the mine—a maximum of US\$3 billion to finance infrastructure covering the construction and rehabilitation of various components, including railways, roads, hospitals, universities, and hydroelectric dams. For phase one, infrastructure loans are capped at US\$1.053 billion. The amount was not fixed but rather a line of credit up to that amount. The interest was revised downward to 4.4 percent. Production of Sicomines was revised

downward to 125,000 tons during phase 1 and 250,000 tons in phase 2. Reserve estimates were lowered by 35 percent. The infrastructure loan is guaranteed by the government. Production at the mines started in November 2015.

Twelve priority projects have been funded under the project, covering several urban infrastructure projects in Kinshasa (refurbishment of the square of the Palais du Peuple and three roads), the Hospital du Cinquantaire in Kinshasa, works on national roads RN4 (Beni-Luna) and RN5 (Lumumbashi-Kasomeno), housing in Kinsangani, and fiber optics and solar panels (countrywide).

The International Monetary Fund puts liabilities from Sicomines at almost 40 percent of the Democratic Republic of Congo's external debt,^a meaning that Sicomines debt is equivalent to about US\$2.5 billion (including the mining loan).

Analysis of the deal and its implementation are inconclusive on whether the RFI was financially advantageous to either party, especially because metal prices are very volatile and the project bears significant risks, and it has faced delays. However, the nontransparent nature of the deal and oversight mechanisms are certainly suboptimal. There are, for instance, concerns about the quality of infrastructure projects delivered under the agreement.

Sources: IMF (International Monetary Fund), "Democratic Republic of the Congo: Staff-Monitored Program and Request for Disbursement under the Rapid Credit Facility" (Report 19/388, IMF, Washington, DC, 2019); David Landry "The Risks and Rewards of Resource-for-Infrastructure Deals: Lessons from the Congo's Sicomines Agreement" (CARI Working Paper 16, School of Advanced International Studies, Johns Hopkins University, Washington, DC, 2018); and Andoni Maiza-Larrarte and Gloria Claudio-Quiroga "The Impact of Sicomines on Development in the Democratic Republic of Congo," *International Affairs* 95, no. 2 (2019): 423–46.

a. IMF, "Staff-Monitored Program and Request for Disbursement under the Rapid Credit Facility."

While the Democratic Republic of Congo is making progress in implementing the Extractive Industries Transparency Initiative, continued reform is needed in the sector. Poor governance and mismanagement have restricted the benefits of the mining resources. Because of limited oversight and accountability, there is a lack of transparency regarding the transactions and revenues of GÉCAMINES and other SOEs in the sector. In 2011, GÉCAMINES was incorporated as a commercial enterprise, and this has further minimized its accountability to the government. ITIE estimates indicate that GÉCAMINES earned over US\$1.5 billion from its partnerships with investors between 2009 and 2015, but less than 5 percent of this was sent to the Congolese treasury in the form of tax payments and dividends. In addition to this, anomalies were reported in bookkeeping and accounting: estimates indicate that US\$750 million that should have been received by GÉCAMINES through joint ventures between 2011 and 2014 were not registered in GÉCAMINES' accounts. Other reported avenues of leakage include GÉCAMINES' defaults on surface rent payments to the government (as of 2015, GÉCAMINES had failed to pay surface rents for 70 of its 90 mining permits), sale of assets below market value, and other opaque, direct payments to GÉCAMINES.

Opportunities

In addition to the traditional mineral resources (copper, gold, diamonds, tin), growing demand for other relatively untapped mineral resources (cobalt, tantalum, lithium) could be a game-changer for the Democratic Republic of Congo. Mining could contribute much more to the Congolese economy. In addition to large unexploited reserves in copper, gold, diamonds, coal, and tin, there are major opportunities in mining new strategic minerals such as rare earth, tantalum, coltan, and cobalt, for which the country is the main global custodian. These minerals are in high demand from the rapidly growing electronics and rechargeable lithium-ion batteries worldwide industries.

According to mining investors, the Democratic Republic of Congo has an unheard-of quantity and quality of minerals. The country also has unexploited opportunities along the oil and gas value chain.

Constraints and possible solutions

Some key changes have been made under the new mining code. These include the standardization of the stability clause on all mining agreements up to five years (previously, companies could negotiate “special terms” and there was no standard stability clause), limiting the duration of exploration licenses and exploitation licenses (5 years and 25 years respectively), an increase in mining royalties (up to 10 percent on strategic minerals), and a tax on super profits. The government defined a list of strategic minerals that include cobalt, lithium, and germanium and increased the royalty on them to 10 percent (the government is justified in setting a levy applied to the sale of “strategic” minerals, and it should be noted here that since mining is a sector subject to “economic rents,” its fiscal treatment should be markedly different from other sectors). The cumulative effect of this new mining taxation is said by some operators to be too heavy, especially considering other factors, including sources of costs such as paratariffs and the presence of SOEs. According to sector exports, taxation has already affected investments in-country.

Mining companies have been fighting the new versions of the mining code. Glencore, which operates the largest cobalt mine in Mutanda, announced in the summer of 2019 that it was closing its operations. While the lower price of cobalt was a reason, the decision was also believed to be a reaction to the new fiscal regime.

Measures that would further improve the performance of the sector, and its contribution to Congolese development include the following:

- **Clarify how the windfall tax on “super profits” is to be calculated, ensuring in particular that it includes super profits from the reselling of mining licenses.** The treatment of underground mining relative to surface mining should also be clarified (surface mining being best left to artisanal miners). So far, the former is encouraged and is conducted in areas where the latter can be easily implemented. Moreover, cases of industrial mines using security forces to repress artisanal miners are often reported.
- **Review when balance-of-payment constraints ease** (the requirement to deposit 60 percent of mining revenues into a commercial bank in the Democratic Republic of Congo). It imposes unnecessary costs and risks on mining companies.
- **Improve the government’s capacity to negotiate and monitor mining contracts** (including those that govern cross-border ventures) with the opportunity to rely on world-class third parties, at least initially, as Guinea is successfully doing. The monitoring should include much tighter controls at border crossings to limit underreporting and illegal mineral smuggling. As in the case of forestry concessions, a lack of capacity combined with governance issues can lead to serious insecurity for investors.
- **Conduct geological surveys to attract investors in remote poor regions such as Kasai and Tshopo.**
- **Reform the main mining SOE, GÉCAMINES, which has been prone to serious governance and performance issues at high cost to the budget.** One option would be for the state to directly hold the shares in mining ventures, sell off GÉCAMINES’ assets, and establish the fair treatment of its workforce.
- **Develop transport and power infrastructure through PPPs (some with mining companies) to promote the competitiveness and development of the sector.** These would include rehabilitating the railway connection to Angola as well as rehabilitating dams.
- **Invest in the development and monitoring of artisanal mining (preventing child labor, ensuring environmental sustainability and traceability) and in partnerships with the private sector and local communities (concessions designed, for instance, to allow artisanal miners to mine shallow deposits while industrial miners mine deeper deposits).**

- **Increase transparency of the processes by which oil and gas exploration and exploitation licenses are awarded, which, if resolved, could increase government revenues by 5 to 10 percent.** This should include provisions to ensure the end of gas flaring either by developing a gas-powered power plant at Matadi or by bringing the gas through a pipeline to Inga-Kinshasa, thereby improving the cement industry's efficiency and reducing its carbon footprint while enabling the development of other construction material industries (bricks, tiles, glass).
- **Conduct a strategic assessment of the worldwide cobalt value chain** to ensure that the Democratic Republic of Congo benefits maximally from its unique endowment.

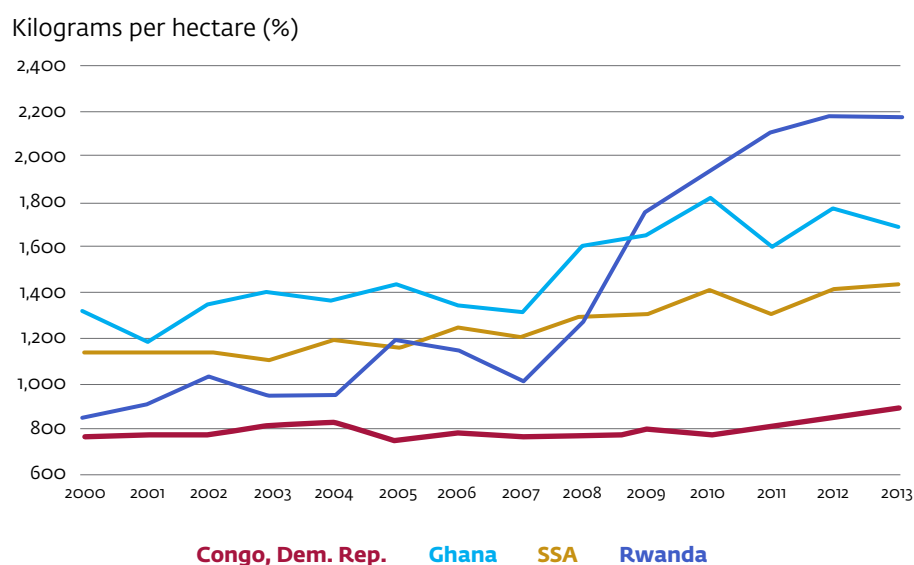
Other constraints to mining companies include the nonpayment of value added tax (VAT) reimbursements by the government. The tax regulation provides for VAT reimbursements to export companies and petroleum or mining companies in the research and development phase, and to companies that rely on heavy investments in new equipment. As a result of foreign exchange shortages in 2016, the government stopped reimbursing the companies for VAT. In 2018, the government instituted a policy of providing tax rebates to mining companies to offset their VAT payments (this was not retroactive and did not cover previous VAT dues). Given the limited institutional and implementation capacity and the absence of further guidance on the process, corruption and backdoor deals struck to obtain the necessary rebates have increased.

Agribusiness

Current performance

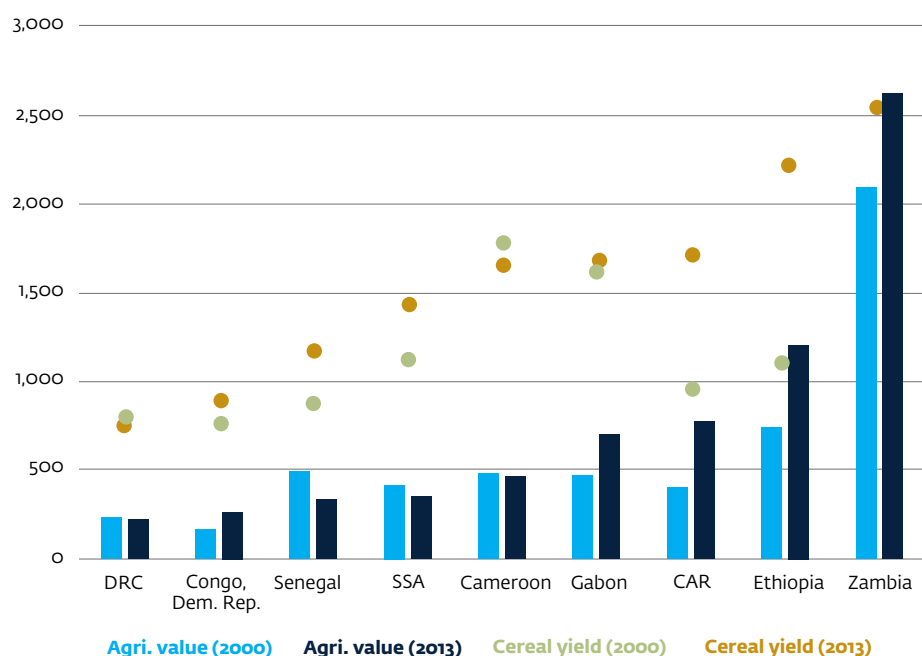
Agriculture is the country's primary source of income and employment, employing 62 percent of working-age men and 84 percent of working-age women.⁵⁶ Agriculture's share of GDP was estimated to be 21 percent in 2015, and the 4.7 percent annual growth came mostly through the growth of traditional, intensive low-yield agriculture, which is the biggest threat to the second-largest forest in the world.⁵⁷ It is important to note that growth in agriculture is two to three times more effective in reducing poverty than an equivalent amount of growth generated in other sectors.⁵⁸ Agricultural development has been hampered, though, by the nationalization that occurred during the 1970s (Zaireanization) and the two civil wars that were fought in the country (1996–97 and 1998–2003), which led to millions of hectares of prime farmland being abandoned. The Democratic Republic of Congo now imports a large share of the food it consumes (US\$1.1 billion of food imports in 2016) and exports very little.

The Democratic Republic of Congo's declining agricultural productivity relative to neighboring countries is mainly due to underinvestment at the farm level and in agricultural public goods and services, especially relative to market access. Since 2000, the country's agricultural value added per worker and cereal yield per hectare have remained the lowest in the world, even as these indicators have improved in neighboring countries (figure 4.13). In 2013, the agricultural value added per worker was US\$224, and the cereal yield was 767 tons per hectare, a little more than one-third and one-half, respectively, of the Sub-Saharan African average (figure 4.14).⁵⁹

FIGURE 4.13 TRENDS IN CEREAL YIELDS, 2000–13

Source: World Bank, "DRC Agriculture Sector Review: Africa's Future Agriculture Powerhouse," World Bank, Washington, DC, 2017.

Note: SSA = Sub-Saharan Africa.

FIGURE 4.14 AGRICULTURE VALUE ADDED PER WORKER (2005 US\$) AND CEREAL YIELD (KILOGRAM PER HECTARE), 2000 AND 2013

Source: World Bank, "DRC Agriculture Sector Review: Africa's Future Agriculture Powerhouse," World Bank, Washington, DC, 2017.

Note: Agri. = agricultural; CAR = Central African Republic; DRC = Democratic Republic of Congo; SSA = Sub-Saharan Africa.

The Democratic Republic of Congo now imports a large share of the food it consumes (US\$775 million of food imports in 2020) and exports very little. Kinshasa has to import a large share of its food at very high cost, including products such as palm oil, which the Democratic Republic of Congo used to produce competitively. More than 70 percent of fruits and vegetables sold by supermarkets in Kinshasa are imported and sold at prices four times higher than local produce, which is not of sufficient quality to be sold in supermarkets. Food security has become a major issue, even in the rich province of ex-Katanga, which is regularly faced with food shortages when Zambia closes its border to address its own food shortages (usually when copper prices go down, which cripples the financial capacity of the Zambian government to support agriculture).

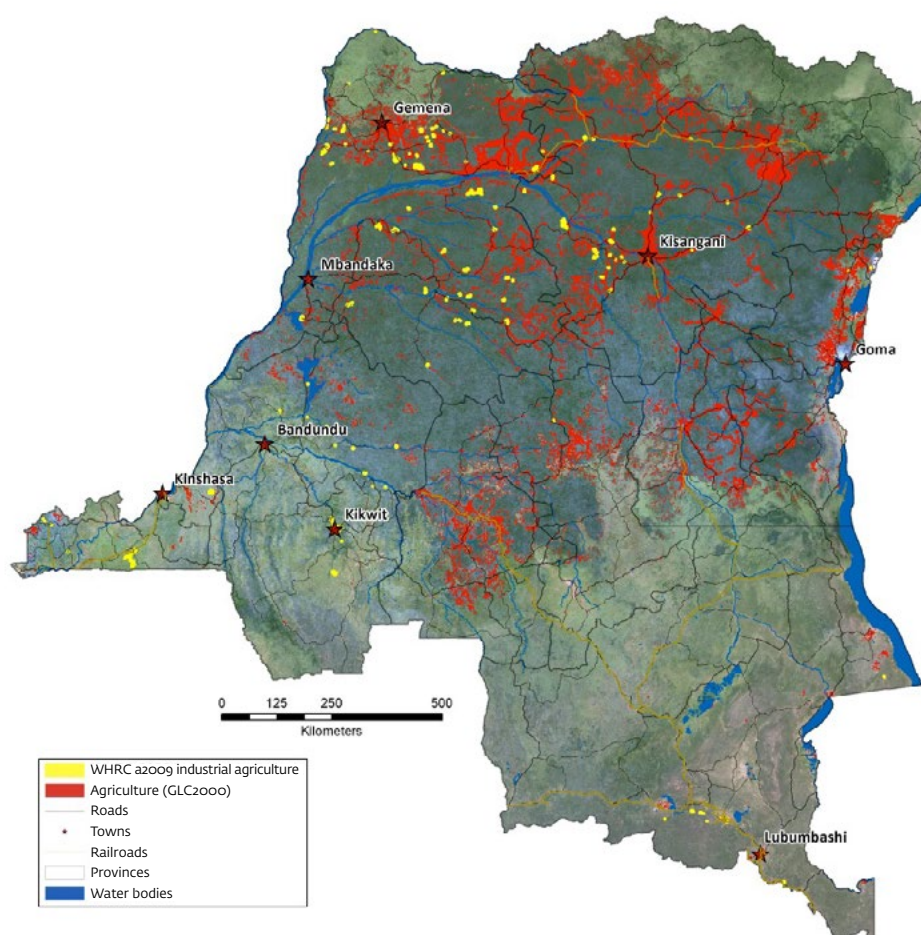
TABLE 4.4 FORMAL AGRICULTURE COMMODITY TRADE, DEMOCRATIC REPUBLIC OF CONGO, 2020

Commodity	Exports, US\$ millions	Imports, US\$ millions
Coffee and tea	18	32
Oil seeds and oleaginous fruits	13	2
Fisheries	3	94
Gums and resins	3	2
Animal or vegetable fats and oils	1	71
Vegetables	1	24
Products of the milling industry	0	121
Live animals	0	7
Fruits and nuts	0	4
Dairy	0	37
Cereals	0	169
Other animal products	0	5
Meat	0	236
Total	39	775

Source: UN Comtrade, using mirror statistics

The sector is dominated by small-scale and subsistence farmers with only a few large-scale industrial players scattered along the Congo River as well as in North Kivu (see map 4.4). These large-scale players are primarily producing cash crops such as palm oil and rubber, and with improved river transportation are not far from becoming competitive again. Small-scale agriculture producers suffer primarily from the lack of market access due to very poor rural roads, which also increases the price of key inputs such as seeds, fertilizers, pesticides, and vaccinations. Small farmers also suffer from the lack of watershed protection, weak access to information on market and prices, and a lack of warehousing and agro-processing facilities that results in large post-harvest losses for crops, dairy products, and fisheries.

MAP 4.4 INDUSTRIAL AGRICULTURE IN THE DEMOCRATIC REPUBLIC OF CONGO



Source: Nadine Laporte et al., "Mapping Industrial Agriculture in Central Africa: Democratic Republic of Congo Case Study," Working paper, Woods Hole Research Center, Woods Hole, MA, 2016.

Note: WHRC = Woods Hole Research Center; GLC2000 = Global Land Cover 2000

Sustainable agriculture is also becoming a priority, because agriculture is becoming the primary cause of deforestation due to the reliance on traditional intensive agriculture combined with rapid population growth and urbanization. The key will be to increase yields and develop agro-forestry.

Opportunities

The Democratic Republic of Congo's immense agriculture potential is based on the following: an estimated 51 million hectares of unexploited cultivable land, climatic and ecological conditions favorable for various agricultural activities, the potential to develop export crops (coffee, cocoa, rubber, cotton, tea), and an important and rapidly growing regional market of over 200 million inhabitants that is young and rapidly urbanizing. Available pastureland is believed to be capable of supporting as many as 40 million head of cattle, and the country has the potential to produce an estimated 700,000 tons of freshwater fish a year. There is the opportunity to develop commercial horticulture in the Bas-Congo to supply the large Kinshasa market.

Cash crops are concentrated along the Congo River (primarily palm oil and rubber) and the North Kivu (tobacco, coffee, tea, cocoa), a province endowed with fertile volcanic soil, ample rainfall, a temperate climate, and access to East African markets.⁶⁰ Cotton was produced in the former Bandundu and Kasai regions; however, production in these regions declined when public and private marketing structures collapsed. Existing major players are looking for financing to develop more than 50,000 hectares (mostly along the Congo River) of palm oil as a substitute for large import volumes⁶¹ and rubber for export, commodities for which the Democratic Republic of Congo used to be an export powerhouse. These products would represent thousands of new jobs in the short term in some of the poorest areas and would confer major benefits on households through improved education and health care services provided by the large players. In the medium term, there is a potential to develop out-grower schemes (plantations villageoises). Other groups in diverse industries that include the cultivation and processing of palm oil in Equateur—have announced the availability of over 20,000 hectares for further agriculture exploitation that could be developed if the country provided less regulatory and fiscal harassment and a viable financial and technical partner, which would be enabled by the removal of the restriction on foreign investment (article 16 of the 2011 Agriculture Law).

Kinshasa, home to 11 million people, is food-deficient and poorly connected to its own hinterland because of very poor rural roads, a condition that leads to a high level of imports. The market has led to the emergence of urban farming specializing in high-value fruit and vegetable production. Currently, 22 percent of urban workers report that agriculture is their main activity, making the agricultural sector the second-largest employer for urban workers after the trade sector.⁶² Urban farming is not unique to Kinshasa: Lubumbashi, Kisangani, and Mbuji-Mayi have large market gardening areas as well. Lubumbashi itself has more than 720 hectares under horticulture, producing at least 60,000 tons.⁶³

Commercial livestock farming remains undeveloped. Given surging demand met through meat and dairy imports from the European Union (US\$124 million), declining per capita protein intake (39.5 grams a day),⁶⁴ and the country's potential to support 40 million cattle,⁶⁵ the market potential for a modern meat and dairy value chain is great. At present, the sector is dominated by small-scale livestock farming, undertaken by 47 percent of rural households as an income diversification strategy. Livestock production is affected by animal diseases and expensive feed.

Because of access to Lake Tanganyika and an extensive network of rivers, the Democratic Republic of Congo is one of the world's top producers in terms of inland water capture of fish—227,700 tons in 2015—in a sector that is primarily artisanal and helps to address nutrition needs among poor fish farmers. Nonetheless, literature indicates an inland fishing potential of more than three times current production. Given the high domestic demand for fish, this production shortage translated to an import bill of more than US\$130 million for fish and processed fish products in 2015. Inland fish production is concentrated along the country's eastern border and the Congo River basin and is highly dependent on waterways, thus resulting in short, slow-moving supply chains.

Constraints and possible solutions

The main constraints affecting the sector together with possible solutions are as follows:

- **By requiring that 51 percent of the shares of commercial agriculture firms be allocated to Congolese, article 16 has effectively stopped FDI in the sector.** A revised agriculture law without this restrictive provision has been submitted to Parliament. Passage of the revised law will be particularly important for the country in realizing its short-term potential in cash crops. The passage of the new law will also enable cash-strapped existing players to develop technical and financial partnerships with world-class players. The revised law would also enable a badly needed infusion of technical and financial resources into the horticulture and livestock sectors to serve the vast, fast-growing and underserved urban markets. This reform would enable the entry of “strategic first movers” that could link with small farmers throughout grower programs, as is happening in other African countries like Ghana and Kenya.
- **Fiscal and parafiscal harassment add to the risk and cost of doing business in agriculture, as in most other sectors.** The most recent and damaging parafiscal measure is the tax (recently lowered from 4 percent to 2 percent of sales) to be paid to ONAPAC, a government agency responsible for promoting agriculture development, on 15 of the most common agricultural commodities. ONAPAC provides no clear value-added services in exchange for the tax, and the agency has a very large stock of unpaid wages and pensions. Resolving the issue of fiscal and parafiscal harassment is of paramount importance and must focus, for starters, on the agricultural sector and on the cancellation of this new provision for ONAPAC. Beyond this short-term measure, there is a need to consolidate and rationalize tax and nontax payments at the level of the Ministry of Finance by providing an easy-to-use digital interface for information and payments, together with an effective recourse against undue harassment encompassing both the national and subnational governments.

- As shown by the recent 2019 Enabling the Business of Agriculture report, the Democratic Republic of Congo is one of the most restrictive countries in the world regarding the import and certification of badly needed seeds.⁶⁶
- When asked why they were not investing in backward agriculture linkages, representatives of the main supermarket chains supplying Kinshasa said that rural road and security conditions are not sufficient to enable competitive horticulture (this is true even in the vicinity of Kinshasa). Deficient rural roads, combined with expensive diesel generators, make the production, transportation, and conservation of high-value perishable goods prohibitive. High transportation costs also result in high input prices that lead to low input use and low yields. Lack of security in rural areas further compounds the problem by forcing farmers to remain small or invest in very onerous security services. In addition to national rural road programs, community-driven, development-type solutions to the development and maintenance of rural roads like those in Colombia should be explored.
- Given the size of the Democratic Republic of Congo, digital innovations need to reach more farmers with the most up-to-date knowledge at lower cost. Mobile and social media platforms offer new models of financial, training, and extension services. In addition, remote sensing technologies are enabling an “uberization of agriculture” with greater access to on-demand services for farmers, agribusinesses, and service-related enterprises.
- PPPs should be engaged to improve seeds development, food safety, and veterinary services.
- Producer organizations and value-chain actors need to be reinforced so that they can coinvest in processing and storage facilities as well as help fight against widespread theft.
- There are key gaps along the agriculture value chains (particularly relating to cold storage) that PPPs could fill.

Forestry

Current performance

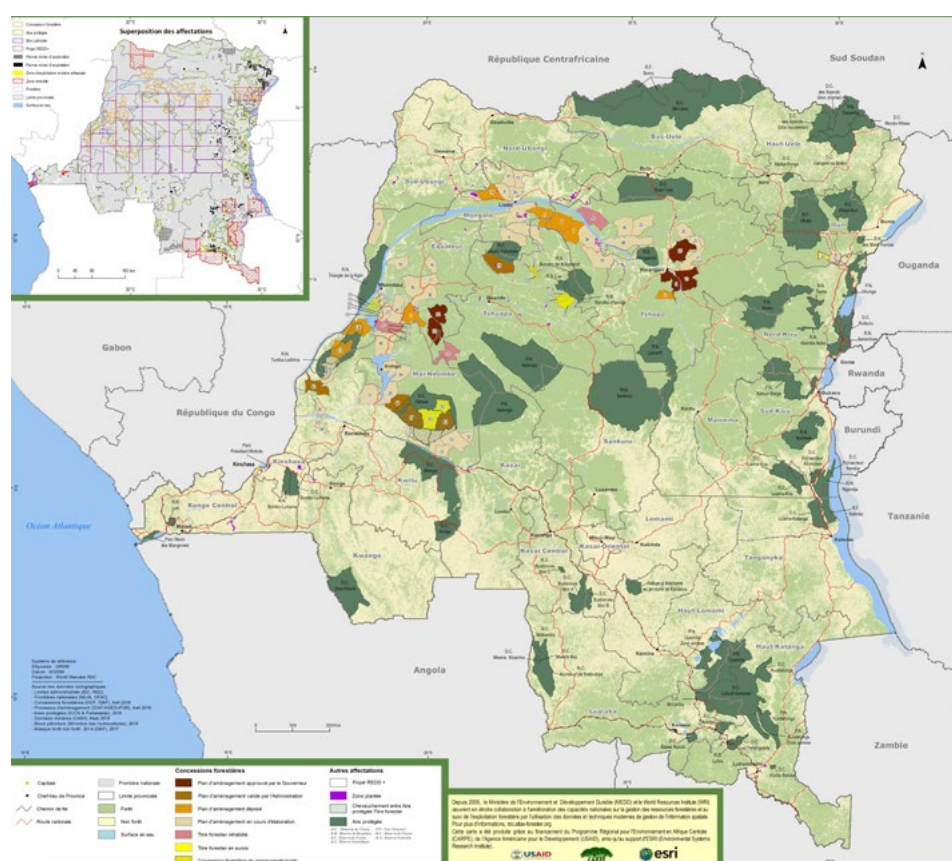
The Democratic Republic of Congo’s forest (102 million hectares) is the second-largest swath of rainforest in the world after Brazil’s Amazon. As such, it is a major asset in the fight against climate change, the planet’s so-called second lung. The forest is threatened and loses 1.3 million hectares each year primarily owing to land clearance for traditional agriculture and the provision of cities with charcoal wood.⁶⁷ Ten million hectares are under formal forestry concessions, generating US\$55million of exports (mostly unprocessed logs) in 2017 (only 0.8 percent of total exports).

Opportunities

As discussed in the previous section on agriculture, there is an opportunity to slow down deforestation by improving agricultural productivity (the growth of traditional intensive agriculture is the main cause of deforestation) together with developing agro-forestry farms on bare savannah land to provide cities with more sustainable charcoal, food, and wood for construction.

The forestry industry in Gabon has shown that sustainable commercial exploitation of the forest can be a very effective way to protect it, whereby the private sector exploits a small fraction of the concession every year (with only a few trees cut per hectare) while committing to secure and protect the nonexploited remainder (more than 80 percent of Gabon's forest is under such concessions). The limited share of forest under production concession (less than 10 percent) underlines the sector's potential (see map 4.5). A moratorium established in 2002,⁶⁸ extended further by presidential decree in,⁶⁹ has banned the allocation of new logging concessions, new issuances, and reallocations of felling permits until certain governance-related conditions are met. This addressed the need to further suspend concessions until greater control over the forestry sector was achieved. Developing the industrial forestry sector in the Democratic Republic of Congo and developing high-value sustainable wood exports requires an improved government capacity to strengthen the economic governance of the sector and enforce sustainable management plans with existing forestry concessions.

MAP 4.5 FORESTRY CONCESSIONS IN THE DEMOCRATIC REPUBLIC OF CONGO



Source: World Resource Institute 2018, <https://cod.forest-atlas.org/?l=fr>.

Illegal logging can be fought by strengthening the capacity of the administration in the field and by establishing strict controls at border posts (large logs are not easy to smuggle) as well as with satellite-based surveillance as in Gabon. Partnership with public and private international entities and private sector mechanisms such as third-party voluntary certification can help promote sustainable forest management as an economically viable land use option.

Leveraging the Reducing Emissions from Deforestation and forest Degradation (REDD+) strategy adopted in 2012, the government should provide financing and secured rights to local communities and farmer entrepreneurs to develop agro-forestry farms on bare savannah land near urban centers to supply them with charcoal, food and wood for construction. Such a plan was successfully piloted in the Kinshasa supply basin and highlighted in a 2018 feasibility study to scale up these pilot projects.⁷⁰ It is important to note that the priority for securing the forest should focus on the existing and future transportation axis.

Finally, there is an opportunity for the government to leverage carbon finance and reward actions by large corporations that have sought to reduce their carbon footprint by shrinking or avoiding carbon emissions (forest preservation, for instance) or by storing carbons (plantations, natural regeneration).

Manufacturing

Current performance

Manufacturing accounts for nearly 20 percent of GDP in the Democratic Republic of Congo. Light and heavy manufacturers account for just 3 percent of total export revenues, meaning that most of Congolese domestic factory output is used for servicing domestic needs. As in the case of agriculture, the country almost entirely lost its industrial base because of the past 40 years of political turmoil (hundreds of factories were dilapidated and left abandoned). Between 2010 and 2014, the growth rate in manufacturing reached 4.8 percent on average, with agro-industries, which now amount to 80 percent of manufacturing activities,⁷¹ being the most dynamic component. Factory production has contributed little to economic growth because of poor linkages with local markets and the overwhelming reliance on imports (Signé and Johnson 2018).⁷²

Business climate constraints, porous borders, and weak links between the capital and the periphery, as well as between the regions, have rendered the Democratic Republic of Congo an import-based economy. Low-cost consumer goods and foodstuffs smuggled into the country from Angola and Zambia have undercut local production.

Light manufacturing is represented by the production of bottled drinks, textiles and garments, wood processing and paper, chemicals and plastics, glassware, construction materials (bricks, nails), and petroleum refining. Local products, though, are often more expensive than even legal imports and are of lower quality. Soft drink and beer producers, for example, reported that the quality of the glass bottles produced locally leads to 10 percent extra waste in the production cycle because of breaking. Overall, local inputs are either not available or not price- and quality-competitive.

According to the 2014 Enterprise Survey, most of the manufacturing jobs (60 percent) are created by large companies located in large urban centers, mostly with foreign partnership. The few large foreign investments took place to manufacture bulky (hence expensive to import) products for the domestic market such as cement and beverages.⁷³ Even these large investors are struggling, though, because of limited demand (cement plants, for instance, are operating at only one-third of their capacity) and the very costly and risky business environment.

The rest of the manufacturing activities are dominated by MSMEs, most of which are informal.⁷⁴ According to a recent MSME ecosystem report,⁷⁵ 19 percent of the MSMEs in two of the most important economic centers (Kinshasa, Lubumbashi) operate in manufacturing, the second business area in which they are most represented following the services sector. In Matadi, the manufacturing sector (40 percent) and retail trade (16 percent) are even more highly concentrated.

The use of modern technologies by local manufacturing firms is limited. The cost of imported instruments is very high because of import taxes, and there is a lack of financing for investments in growth. Digital technology is also underused, which leads to operational inefficiencies. Only around 17 percent of the formal firms in the country have their own website, as compared to 65 percent in Sudan, 47 percent in Kenya, and 45 percent in Malawi. Furthermore, only around 31 percent of the formal firms in the Democratic Republic of Congo communicate with clients via email, as compared to 83 percent in Togo, 80 percent in Malawi, and 73 percent in Kenya.⁷⁶

All firms noted the lack of workers in the Democratic Republic of Congo who possess technical skills and soft skills like motivation to work. Large companies have training and retraining programs for their workers, and they reported that the productivity of trained and experienced workers is comparable to other countries and can be even higher than in Asia, especially for manual labor. Performance-based contracts are difficult to implement in the Democratic Republic of Congo because production is often interrupted by external issues like energy cuts or delays at customs that affect the timely arrival of necessary imported inputs.

Opportunities

Improvements in the business environment and infrastructure should open opportunities to develop domestically oriented manufacturing (construction materials, agro-processing, wood processing, simple tools and consumer goods, packaging). The potential varies by cities and regions: agro-processing, construction materials, and packaging material for Kinshasa and Matadi; mining industry linkages in Lubumbashi (industrial clothing, metal working, furniture); wood processing and textiles in Kisangani; and agro-processing in Goma. Improving the business environments and coordinating and integrating multistage value chains should also help reconnect SMEs to the formal economy.⁷⁷

Constraints and possible solutions include the following:

- **Manufacturing firms source almost half of their electrical power from generators and on average lose 11 percent of annual sales due to electrical outages**, while a few larger players (cement factories, mining companies) benefit from stable dedicated power lines. Transportation costs that can double the cost of fuel, exacerbating this situation: US\$1 per kilowatt-hour is not unusual, whereas US\$0.20 is a more typical average cost in most other countries. Extremely high transportation costs affect all players, preventing distribution and competition within the Democratic Republic of Congo and export competitiveness. Transporting a 20-foot container from the port of Pointe Noire, Republic of Congo, to Kinshasa, for instance, costs US\$3,600 (more than the US\$3,200 it costs to transport the container from Shanghai, China, to Pointe Noire) and another US\$3,000 to transport it from Kinshasa to Kisangani. Pilots are under way for privately operated “plug-and-play” industrial zones (SME hubs) to facilitate access to industrial land and basic infrastructure.
- **As in most other sectors, fiscal harassment and nontax payments are a major constraint.** Manufacturing firms report paying over 100 different taxes. A European Commission study concluded that the application of all the taxes on manufacturing (national and subnational taxes combined) does not allow legal businesses to be profitable. Although large investors are better equipped to defend themselves and can benefit from partial and time-bound exonerations (investment codes, strategic partnerships) they can be subject to competition with large or small players who may get away with not fulfilling all of the fiscal obligations (the beverage industry being one prominent example).⁷⁸ Government reforms are pointing in the right direction toward revenue mechanisms like a single window payment system, but they cater mostly to the larger firms and do not cover illegal harassment.
- **Technical skills are in short supply and affect smaller firms disproportionately.** Large formal firms have been able to hire foreign workers and rely on training, and they have reported that trained, experienced workers are as productive as in other countries. Performance-based contracts are difficult to implement in the Democratic Republic of Congo because the threats to production processes from energy cuts and input delays at customs. As in other countries, improvement in the quality of primary and secondary education, together with the development of private sector-led TVET, would help significantly.
- **Economic crises and wars have reduced the collaboration of large and small firms with respect to the construction and maintenance of transport networks (such as the association of coffee producers in Orientale and North Kivu), the coordination of financing mechanisms (cotton farmers in Codenord), and the economies of scale gained by managing public goods (electricity provision throughout Codenord).** There are several government initiatives aimed at facilitating the integration of small businesses into value chains, but they can be counterproductive. For example, the overly prescriptive 2017 Subcontracting Law made it mandatory for large firms to subcontract additional and related activities to locally owned “pre-qualified” SMEs (the basis for this qualification is not clear) or the equally problematic tax holidays foreseen under the value chain regime (one more tax exemption regime that could open the door to abuses and distortions).

Digital services

Current performance

Digital services are key to improving the operations of firms in most sectors: the government sector through e-government (including e-payment of taxes and utilities), which would go a long way to improving governance and the budget; e-commerce; e-agriculture; e-learning; and e-health. Digital services can also be exported over the internet.

As shown by figure 4.15, the use of digital services is limited in the Democratic Republic of Congo. Only 17 percent of formal firms in the country have their own website, compared to 65 percent in Sudan, 47 percent in Kenya, and 45 percent in Malawi. Furthermore, only 31 percent of formal firms in the country communicate with clients via email, as compared to 83 percent in Togo, 80 percent in Malawi, and 73 percent in Kenya.⁷⁹

FIGURE 4.15 DEMOCRATIC REPUBLIC OF CONGO RANKINGS IN TECHNOLOGICAL READINESS AND INNOVATION INDICATORS

a. Technical readiness rankings, of 139 countries

Int'l internet bandwidth	137
Fixed broadband internet subscriptions	135
Individuals using internet	133
Availability of latest technologies	131
Firm-level technology transfer	127
FDI and technology transfer	124
Mobile broadband subscriptions/100	110

b. Innovation rankings, of 139 countries

Gov't procurement of advanced tech	128
Capacity for innovation	127
PCT patents, applications/million	119
Company spending on R&D	118
University-industry collaboration in R&D	110
Quality of scientific research institutions	101
Availability of scientists and engineers	82

Source: World Economic Forum, Global Competitiveness data, 2017–18.

Note: Lower rankings are better. FDI = foreign direct investment; Gov't = government; Int'l = international; PCT = Patent Cooperation Treaty; R&D = research and development.

Business process outsourcing (BPO) as a form of subcontracting involves the delegation of specific business functions to third-party service providers, often over the internet.

Interviews with BPO providers indicate that large companies represent an estimated 80 percent of the BPO market, with the mining industry being the key customer. Public sector contracts represent around 12 percent of the market (government and international agencies), and the demand from local companies, though small, has been growing over the last two years. In terms of the types of services, industry-specific services, mining, cement, financial and accounting services, and human resources services constitute the bulk of the portfolio for the “big four.” More recently, there is a growing demand for information technology outsourcing (particularly to call centers), especially from telecom, transport, and logistics companies.

Opportunities

In addition to improving the operations of firms in most sectors, there is also the potential to develop digital e-government services (including e-payment of taxes and utilities) that would go a long way to improving governance and the budget, e-commerce as well as e-agriculture, e-learning and e-health. Large companies (construction, cement, mining) indicated the need for BPO especially in the areas of human resources, logistics, and facility management.

Constraints and possible solutions include the following:

- **The digital infrastructure sector needs to be liberalized.** The lack of reliable and affordable broadband internet connection capability limits opportunities for expansion, especially for IT service outsourcing and call centers. See the previous section on digital infrastructure for more details and possible solutions.
- **The cost of imported IT equipment in the Democratic Republic of Congo is very high due to import taxes that should be removed, given the transformative nature of the sector.** The cost of imported IT equipment should be lowered.
- **Public procurement could become a source of market growth, but existing BPO providers note that the lack of transparency, corruption, and payment issues are important deterrents from working with the government.**
- **All the BPO providers noted workers’ lack of skills, especially for more advanced services like accounting and financial services.** Most employees and executives are from expat or diaspora communities. As a result, BPO providers in the Democratic Republic of Congo report that the costs of their services are 20 to 50 percent higher than in countries like Kenya, Rwanda, and South Africa. Local BPO providers take on the training and retraining of staff. The CCC, for example, trains over 100 staff members per year on digital skills (employees work on the basis of two-year contracts and have to leave the company after that period). Targeted training programs could lower the labor costs of BPO providers and create jobs for the Congolese, especially women who work in sectors like cleaning and security and workers with more advanced skills like digital skills.

- **The ecosystem in the Democratic Republic of Congo is concentrated mostly in Kinshasa, Goma, and Lubumbashi.** The entrepreneurship ecosystem remains nascent, and scalable business models have not yet emerged. The agricultural and extractive sectors have limited employment potential, and given the high rate of underemployment, there is a need and increasingly numerous opportunities to develop the entrepreneurship ecosystem to provide productive opportunities for youth. Given the large domestic population, the largest Francophone market in terms of the number of consumers, and the lack of traditional systems and service providers, there is a captive market for cross-cutting digital solutions. Further, the growing urban centers are home to an increasingly tech-savvy population.
- **The start-up ecosystem is constrained by the lack of supporting facilities and a challenging business environment.** What start-up ecosystem does exist is not balanced: while there are several incubators to support start-ups in Kinshasa, other key actors in other sectors such as finance and training have a limited presence. The ecosystem also suffers from poor technological readiness and limited innovation. The World Economic Forum's Global Competitiveness Index finds that the Democratic Republic of Congo lags on all indicators relating to technological readiness and innovation, ranking 127th among 139 countries for technological readiness and 116th among 139 countries for innovation (figure 4.16). Secondary and tertiary education, including TVET, do not include courses on entrepreneurship, and most facilities are ill-equipped to impart critical thinking and skills-oriented education. In addition to this, the dearth of funding and of affordable supporting services like coaching and mentoring also constraints entrepreneurs. The lack of access to finance, especially a venture-capital ecosystem, also restricts entrepreneurial activity. Most entrepreneurs reported that their activities were restricted by their ability to self-finance.

(Eco) Tourism

Current performance

The tourism sector in the Democratic Republic of Congo represents only 0.2 percent of GDP (there were only 351,000 international visitors in 2016), not surprising considering the country's fragile status and repeated health-related crises. Most tourists to the country are business travelers, family members of Congolese, development professionals, and some adventure and eco-tourists.⁸¹

Opportunities

The Democratic Republic of Congo has exceptional natural and cultural endowments. Volcano trekking and wildlife excursions provide unique opportunities for adventure tourism, and there are seven national parks and 57 reserves and hunting areas, including five areas included on the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage list (Virunga, Kahuzi Biega, Garamba, Salonga, and the Okapi fauna reserve); four indigenous species, including mountain gorillas, which are more numerous there than in Rwanda and Uganda; one of the largest biodiversity reserves and tropical forests in the world; cultural and historic heritage and a culture of arts and crafts. There are three high-potential areas:

- **Goma area.** The Democratic Republic of Congo has the potential to capture the excess tourism demand spilling over from Rwanda, which is a well-established tourism destination that has recently increased prices and restricted the number of visitors to its mountain gorilla sites. The lake region and the active volcanoes also constitute attractive tourist circuits that could be further developed. There are already adventure tourists visiting Goma and established, reputable operators. Adventure tourism is small scale, but it has high profit margins and creates quality jobs for locals. Additionally, the proximity to Kigali Airport and the road network on the Rwanda side facilitate access to international travelers. Goma Airport is also serviced by international airlines like Ethiopia Airlines. New private-public initiatives, such the yearly Amani art and film festival in Goma, demonstrate the potential for creating local content for tourism.
- **Kinshasa and Lubumbashi.** Business-related travel presents an opportunity for the hotels, restaurants, and SMEs specializing in local tourism, particularly because business travelers tend to be more affluent and less seasonal than leisure tourists.

Constraints and possible solutions

- **Physical security and health concerns are the main deterrent to developing tourism in the Democratic Republic of Congo.** The U.S. State Department has issued 10 travel warnings for the country in the past two decades, which is one of the highest numbers in the region. Internal conflict in the eastern and northern parts of the Democratic Republic of Congo has hindered the development of eco-tourism because rebel forces have taken control of the national parks, killed park rangers, and hunted rhinos for trade. Possible solutions include secured tourism zones with health services in the high-potential areas.
- **Air travel to and within the Democratic Republic of Congo is very expensive.** Travel within country is twice as expensive as in Kenya and Tanzania, three times as that in Latin America, and four times that in the United States. In the Democratic Republic of Congo, spontaneous changes in fees can cause the cost of landing an aircraft to fluctuate from US\$1,000 to over US\$12,000 with little warning.⁸² The departure tax

and the internal airport taxes add additional costs to visitors. In addition, service is unreliable with complex itineraries. Road transport is also costly and risky.

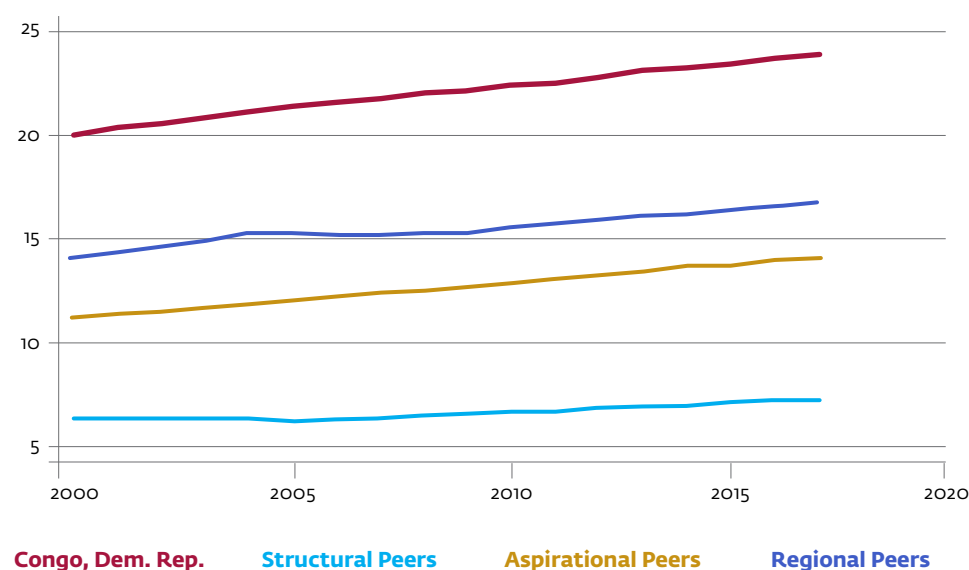
- **Visa procedures are slow, costly, and unpredictable.** Most countries have now put in place effective online visa services as well as visa services available on arrival. Rwanda, for example, has profited from implementing relatively simple and inexpensive visa requirements compared to the Democratic Republic of Congo to attract visitors interested in the mountain gorilla population that straddles the border of the two countries.

Urban sectors (housing construction and retail)

Current performance

The Democratic Republic of Congo is rapidly urbanizing with an average growth rate of 4.1 percent; 30 million out of 80 million people lived in cities in 2016 (see figure 4.16). The urban population in the country is the third-largest in Sub-Saharan Africa after Nigeria and South Africa. With an estimated population of 12 million in 2016, Kinshasa is Central Africa's largest and fastest-growing urban system (World Bank 2018c) and will become the largest megacity in Africa by 2030.⁸³

FIGURE 4.16 POPULATION IN URBAN AGGLOMERATIONS OF MORE THAN 1 MILLION, % OF TOTAL POPULATION



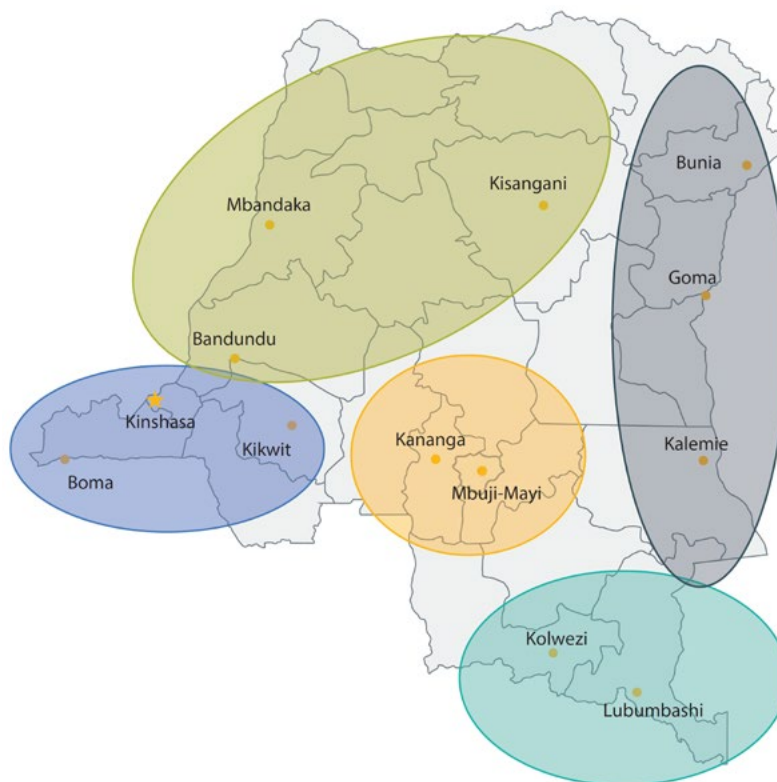
Source: World Development Indicators.

Note: Structural peers are Ethiopia, Madagascar, Mozambique, Niger, and Uganda. Aspirational peers are Côte d'Ivoire, Ghana, Tanzania, Uganda, and Zambia. Regional peers are all the other countries in Sub-Saharan Africa.

Much of this growth has been due to the push factors of conflict and inadequate rural services rather than the pull factors of better working and living opportunities in cities. The country has five economic regions (see map 4.6) that are urbanizing at different rates. From the very rural Congo Basin to the highly urbanized Bas-Congo centered on Kinshasa, the conflict-affected East, and the mining-dominated South, each region presents different urbanization patterns:

- Kinshasa and Bas-Congo provinces had 14 million people in 2010, the urban population (80 percent of the total) growing an average of 4.8 percent per year.
- The South, which includes the province of ex-Katanga, had 9 million inhabitants, and its urban population (42 percent) has been growing at 3.4 percent per year.
- The central region enclosing the Kasai provinces had 11 million inhabitants in 2010, with 35 percent in urban areas.
- The Congo Basin region, which includes Equateur, Bandundu, and Orientale provinces, has the lowest urbanization rate, containing 22 million people. Urbanization consists of small towns except for Kisangani, which has 1 million inhabitants.
- The East, which includes the Kivu provinces and Maniema, has relatively low urbanization (17 percent), but it has the fastest urban growth, mostly driven by Goma, which has recorded an average annual growth rate above 10 percent since 1984.

MAP 4.6 THE FIVE ECONOMIC POLES OF THE DEMOCRATIC REPUBLIC OF CONGO



Source: World Bank, "Urbanization Review: Productive and Inclusive Cities for an Emerging Democratic Republic of Congo" (Directions in Development: Environment and Sustainable Development report, World Bank, Washington, DC, 2018).

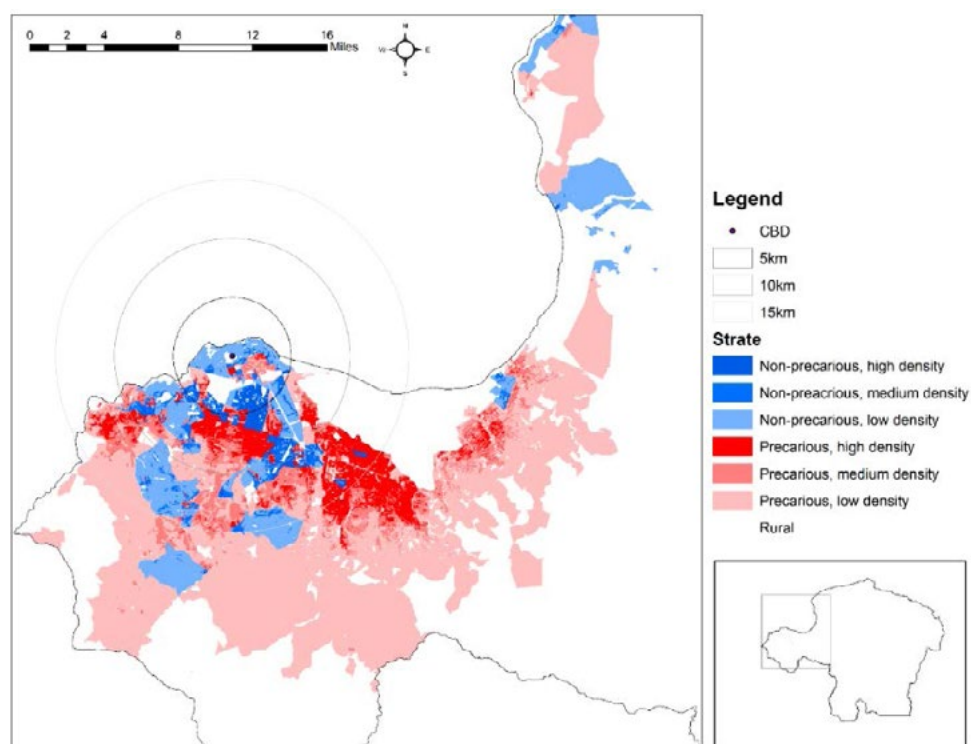
Although the Democratic Republic of Congo is urbanizing rapidly, the quality of this fast urbanization is problematic. Most of the urban population (74.8 percent) lives in slums and urban poverty.⁸⁴ The urban poverty rate is relatively close to the rural poverty rate (64.9 percent). Many of the 1.5 million new urban dwellers every year join the ranks of the poor, and over 80 percent of unemployment is found in urban areas.

Most urban jobs are in low-productivity activities such as subsistence urban farming, street vending, and housing construction in slum neighborhoods. Modern stores such as supermarkets are very few and cater only to the wealthy at very high prices, offering mostly goods imported at high costs.

Informal construction leads to low-productivity urbanization with low-rise slums sprawling along the few main roads leading to areas characterized by poor economies of agglomeration and stretched infrastructure. Housing complexes and multistory apartment buildings are few and limited to the very high-end, high-priced market.

Conditions in sprawling slums are very poor, and shortages of basic, decent, affordable urban services (security, water, power, waste collection) and flooding are common. Unplanned growth has resulted in the proliferation of neighborhoods with low livability and walkability that suffer from poor services and various environmental, disaster risks. Kinshasa, where precarious neighborhoods have developed outside the city center, may become the largest slum in Africa unless urbanization is properly managed (see map 4.7).

MAP 4.7 DWELLING CONDITIONS IN KINSHASA AND THE BAS KONGO



Source: World Bank, "Concept Project Information Document, Kinshasa Multisector Development and Urban Resilience Project" (Concept Stage Report PIDC27359 for project P171141, World Bank, Washington, DC, 2019).

Note: CBD = Central Business District

Opportunities

Urbanization is expected to continue to grow quickly as a result of both pull (job opportunities fueled by derived demand from drivers of export such as mining) and push factors (people escaping insecurity and harsh living conditions in rural areas). The urban population is expected to grow from 30 million in 2016 to 44 million by 2030. At its current growth rate, Kinshasa will be home to 24 million people by 2030 and will be the most populous city in Africa, ahead of Cairo and Lagos.

The opportunity and challenge is to increase the level and productivity of private investments in key urban sectors such as housing construction and retail.

Constraints and possible solutions

- **Land management practices undermine sound land use, and the pattern of urban growth increases vulnerability to water-borne disease and climate-related risks such as floods, which regularly claim lives.** Formal land development and titling procedures are often not used, and sometimes obtaining a certificate of registration may require as many as 27 stages. Eighty percent of court cases reportedly concern land issues.⁸⁵ The situation leads to inadequate, haphazard settlement patterns that result in precarious housing situations such as construction in flood-prone areas. Although investors have noted a recent improvement in the Kinshasa land market as a result of the increase in the number of notaries (from one to four) and one-stop land transaction shops, the urban land market remains costly and risky. The situation also discourages people from investing in their dwelling and prevents local governments from monetizing the rapidly increasing land value through property taxes. Securing land property rights will need to go hand in hand with improving commercial justice.
- **In addition to reforming the transport, power, water, and digital infrastructure sectors, reforming the urban land markets should generate financial resources for local governments to finance local infrastructure, which in turn will increase the land value and thus property tax revenues.** This will generate a virtuous circle leading to productive urbanization.
- **There is an urgent need for improved urban planning, especially in Kinshasa, where the latest urban plan was approved in 1967.** A strategic orientation plan for metropolitan Kinshasa was approved in 2016 but limited revenues of the City-Province of Kinshasa and the 24 communes, as well as weak urban management capacity and expenditure governance, limit the ability to plan and deliver services. Again, improving urban land markets will generate the financial resources (and incentives) for local government to continuously improve, update, and enforce urban planning.

- 1 Documentary compliance captures the time and cost related to complying with the documentary requirements of all government agencies of the origin economy, the destination economy, and any transit economies. Compliance includes the time and cost spent obtaining, preparing, processing, presenting, and submitting documents. See World Bank, Doing Business, <https://www.doingbusiness.org/en/data/exploretopics/trading-across-borders/faq#5>.
- 2 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports en République Démocratique Du Congo, Rapport Phase 1: Diagnostic Intégral des Transports,” 2017. The Louis Berger-SYSTRA study mentions the Pointe Noire corridor but does not attribute significant traffic to it. The situation may have changed with the new road connecting Pointe Noire to Brazzaville, which was finished in 2017. This assessment, however, seems somewhat contradicted by the fact that significant volumes transit between the two capitals, an amount estimated between 340,000 and 400,000 tons (see rest of the text).
- 3 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports .”
- 4 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports.”
- 5 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports.”
- 6 World Bank, “Implementation Completion and Results Report (IDA-H5950; IDA-H8590) on a Grant in the Amount of US\$425 Million to the Democratic Republic of Congo for the DRC Multi-Modal Transport (P092537), Additional Financing (P129594)” (Report 133218, World Bank, Washington, DC, 2018).
- 7 ÉLAN RDC, “Étude sur le Transport Routier sur L’Axe Kinshasa-Matadi: Rapport Final” (Working paper, ÉLAN RDC, Kinshasa, 2018).
- 8 ÉLAN RDC, “Étude sur le Transport Routier sur L’Axe Kinshasa-Matadi.”
- 9 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports.”
- 10 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports.”
- 11 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports.”
- 12 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports.”
- 13 Louis Berger and SYSTRA, “Etude Du Plan Directeur National Intégré des Transports.”
- 14 See “L’agrandissement de la aéroport de Kinshasa divise les Congolais,” DW.com, May 3, 2018, <https://www.dw.com/fr/lagrandissement-de-la-%C3%A9roport-de-kinshasa-divise-les-congolais/a-43632637-0>.
- 15 In the rail sector, investment is limited to rolling stock. In the road concessions sector, it seems that they do not include road maintenance, which is still carried out by the road fund.
- 16 The government has recently announced that it is prioritizing the port of Banana project. See <http://www.rfi.fr/fr/afrique/20200311-rdc-construction-pont-kinshasa-brazzaville-priorit%C3%A9>.
- 17 According to recent reports, the government will no longer be prioritizing the building of the bridge. See <http://www.rfi.fr/fr/afrique/20200311-rdc-construction-pont-kinshasa-brazzaville-priorit%C3%A9>.
- 18 SCTP (Société Commerciale des Transports et des Ports, ex-SONATRA), SNCC (Société Nationale des Chemins de Fer du Congo), RVA (Régie des Voies Aériennes), RVF (Régie des Voies Fluviales), CFUF (Chemins de fer des Uélé-Fleuve), CVM (Congolaise des Voies Maritimes), AAC (Autorité de l’Aviation Civile), Congo Airways, LAC (Lignes Aériennes Congolaises ex-Air Zaïre), LMC (Lignes Maritimes Congolaises), STUC (Société de Transports Urbains du Congo), and Transco.
- 19 World Bank, “Implementation Completion and Results Report (IDA-H5950; IDA-H8590).”
- 20 World Bank, “Enabling the Business of Agriculture in DRC” (Working paper, World Bank, Washington, DC, 2019).
- 21 COPIREP has a broad mandate that covers a number of areas, including (a) undertaking all activities relating to the state’s divestment in SOEs; (b) managing the reform of the SOE sector, including sector-specific and company-focused reforms; (c) supporting relevant institutions in carrying out the SOE reform process; and (d) preparing plans for addressing staffing and related issues in SOEs, such as overstaffing and delayed salaries. World Bank, “Democratic Republic of Congo: Governance of State-Owned Enterprises.”
- 22 Tracking SDG7 reports 19 percent in 2017 with significant disparities between urban and rural areas (versus 42 percent on average in Sub-Saharan Africa). See <https://trackingsdg7.esmap.org/country/congo-dem-rep>.
- 23 World Bank, “Opportunities and Challenges to Increase Access to Electricity in the DRC” (Working paper, World Bank, Washington, DC, 2019).
- 24 World Bank, “Opportunities and Challenges to Increase Access to Electricity in the DRC.”
- 25 SNEL has been operating with high technical losses (17 percent) and nontechnical losses (9 percent). Overall, SNEL grids are in urgent need of rehabilitation.
- 26 Electricite Du Congo (Tshikapa), Socodee (Goma), Virunga Sarl (Rutshuru), Energie du Nord Kivu (Butembo-Beni), Sokimo (Bunia), Sicohydro (Busanga).
- 27 The supply of Kalemie through Bendera, Kamina through Kilubi, Gbadolite through Mobayi Mbongo, Kisangani through Tshopo, and Mbuji Mayi through Tsahala, for example.
- 28 Such as Virunga in Matebe, Hydroforce in Mbuji-Mayi, EDC in Tshikapa, Sinelac (Ruzizi II) in Bukavu, or Randgold in Kibali.

- 29 One in two firms identifies electricity as a major constraint to growth and nearly 9 out of 10 firms experience outages. In addition, 60 percent of firms own a generator because of unreliable electricity, compared with an average of 43 percent in the rest of Sub-Saharan Africa. Manfred Hafner, Simone Tagliapietra, and Lucia de Strasser, “The Challenge of Energy Access in Africa” in *Energy in Africa*, ed. Manfred Hafner, Simone Tagliapietra, and Lucia de Strasser (Basel, Switzerland: Springer International Publishing, 2018).
- 30 World Bank, “Opportunities and Challenges to Increase Access to Electricity in the DRC.”
- 31 IRENA (International Renewable Energy Agency), “Off-Grid Renewable Energy Solutions: Global and Regional Status and Trends” (Working paper, IRENA, Abu Dhabi, United Arab Emirates, 2018).
- 32 World Bank, “Opportunities and Challenges to Increase Access to Electricity in the DRC.”
- 33 See Morgan Bazilian and Debabrata Chattopadhyay, “Considering Power System Planning in Fragile and Conflict States” (EPRG Working Paper 1518/Cambridge Working Paper in Economics 1530, University of Cambridge, Cambridge, United Kingdom, 2015).
- 34 World Bank, *Democratic Republic of Congo Systematic Country Diagnostic: Policy Priorities for Poverty Reduction and Shared Prosperity in a Post-Conflict Country and Fragile State* (Report 112733-ZR, World Bank, Washington, DC, 2018).
- 35 The contract was for the entire Democratic Republic of Congo territory.
- 36 Commercial tariffs are higher. There are specific lower industrial tariffs for GÉCAMINES, SNCC, and breweries that are lower than the standard industrial rate.
- 37 “Mission d’Appui à la Mise en Oeuvre du Projet d’Alimentation en Eau Potable en Milieu Urbain (PEMU) et de Son Financement Additionnel, du 15 au 24 Octobre 2018” (Aide-mémoire, World Bank, Kinshasa).
- 38 “Mission d’Appui à la Mise en Oeuvre du Projet d’Alimentation en Eau Potable en Milieu Urbain (PEMU).”
- 38 World Bank, “WASH Poor in a Water-Rich Country: A Diagnostic of Water, Sanitation, Hygiene, and Poverty in the Democratic Republic of Congo” (WASH Poverty Diagnostic Series, World Bank, Washington DC, 2017).
- 40 The penetration of fixed line phones is 0.1 percent in the country, and most of this is in and around Kinshasa. There is also negligible fixed-line connectivity in the region.
- 41 World Bank, “Opportunities and Challenges to Increase Access to Electricity in the DRC.”
- 42 The subscriber base is much lower at about one-third of the penetration rate because many people access broadband connections through shared connections at school, at work, or in cyber cafes.
- 43 This is according to a leading telecommunications operator in the Democratic Republic of Congo interviewed in May 2019.
- 52 Because of the ownership of multiple SIM cards by subscribers and the underreporting of users by mobile network operators to reduce their tax burden, the real penetration rate in the country is unclear.
- 44 GSMA, “Reforming Mobile Sector Taxation in the Democratic Republic of the Congo: Enabling Economic Growth through a Supportive Tax System” (Working paper, GSMA, London, 2018).
- 45 There is a potential for expanding access to competitively priced broadband, which will unleash several transformative applications discussed in the ICT services section below.
- 46 Under the 2002 law, the state-owned telecommunications operator SCPT held temporary exclusive rights to the “national backbone,” raising the possibility that any national backbone should be commercially exploited by SCPT. Article 12 of the telecommunications law (No. 013 of 2002), however, allows the state to authorize (exceptionally) another operator (not SCPT) to install and exploit part of the national backbone via the telecommunications regulator.
- 47 This is consistent with the Enterprise Survey for DRC (2013), which noted that almost 40 percent of SMEs identified access to finance as a major constraint, the second-most pressing obstacle faced by the SMEs in the country after access to power. Less than 10 percent of the firms reported using banks to finance investments or working capital, which is significantly lower than the regional average for Sub-Saharan Africa (19.4 percent), as well as that of other peer countries. Most of the MSMEs reported that they internally financed their investments and working capital requirements.
- 48 Activa Assurance RDC, Rawsur RDC, and Société Financière d’Assurance Congo (SFA) in the general insurance sector and Rawsur Life in the life insurance sector, as well as two insurance brokers (Gras Savoye RDC and Allied Insurance Brokers Sarl).
- 49 See <https://edafricareport.caeruscapiatal.co/thebusinessofeducationinafrica.pdf>.
- 50 The INPP fee is 3 percent on salaries for firms with up to 50 employees and for SOEs; the rate is 2 percent for firms with 51 to 300 employees and 1 percent for large firms.
- 51 World Bank, “Emerging Social Enterprise Ecosystems in East and South African Countries” (Working paper, World Bank, Washington, DC, 2017)
- 52 World Bank, “Government Support to the Social Enterprise Sector” (Policy note, World Bank, Washington, DC, 2018).
- 53 The detailed DRC Mining Cadastre Map Portal can be consulted at <http://drclences.cami.cd/en/>.
- 54 World Bank, *Democratic Republic of Congo Systematic Country Diagnostic*.
- 55 ITIE (Initiative Pour la Transparence des Industries Extractives), “Rapport de Conciliation ITIE-RDC 2016, Réalisé pour le Compte du Comité Exécutif de l’ITIE RDC” (Annual report, Ernst & Young RDC, Gombe-Kinshasa, 2018).
- 56 World Bank, “DRC Agriculture Sector Review” (Working paper, World Bank, Washington, DC, 2017).

- 57 World Development Indicators.
- 58 World Development Report, 2008.
- 59 World Bank, “DRC Land Sector Review” (Working paper, World Bank, Washington, DC, 2016).
- 60 Eleven percent of households in Nord-Kivu grow cash crops as one of their three main livelihood activities, while the national average was 5 percent in 2011–12. Emmett Murphy et al. “USAID Office of Food for Peace Food Security Desk Review for Kasai Occidental and Kasai Oriental, Democratic Republic of Congo” (Working paper, USAID, Washington, DC, 2015).
- 61 In 2017, the Democratic Republic of Congo imported US\$31 million of palm oil and US\$16 million of vegetable oil. This most likely underestimates imports because food products are also imported informally.
- 62 World Bank, “DRC Land Sector Review.”
- 63 FAO (UN Food and Agriculture Organization), “Growing Greener Cities in Africa” (Working paper, FAO, Rome, 2010).
- 64 John Ulimwengu et al., “Paving the Way for Development: The Impact of Road Infrastructure on Agricultural Production and Household Wealth in the Democratic Republic of Congo” (IFPRI working paper, International Food Policy Research Institute, Washington, DC, 2012).
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- 66 World Bank, “Enabling the Business of Agriculture in DRC.” See the country data overview, 4, and the table on seed policies, 7.
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- 70 The World Bank report “Agroforestry in the Kinshasa Supply Basin. A Critical Analysis of Expansion Prospects and Impact on Development” (June 2018) analyzes opportunities and challenges for scaling up and diversifying agro-forestry systems promoted under past and ongoing projects in the Kinshasa supply basin for a transformational impact on poverty reduction, community livelihoods, and deforestation.
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- 81 See World Data.info, <https://www.worlddata.info/africa/congo-kinshasa/tourism.php>.
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