Enhancing Sustainable and Inclusive Growth in the Central African Economic and Monetary Community

Prepared by IMF's African Department and World Bank's Africa West Region

JOINT IMF/WORLD BANK POSITION NOTE

Enhancing Sustainable and Inclusive Growth in the Central African Economic and Monetary Community

Suggested Policies and Structural Reforms

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the World Bank's Africa West Region

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An Update on Developments since 2022

The IMF and World Bank remain committed to help Central African Economic and Monetary Community (CEMAC) countries strengthen the foundation for inclusive growth and lay the ground for shared prosperity. This work is meant to support the authorities' agenda in this regard, but reflects analysis completed through 2021. However, the CEMAC authorities have made important progress, partly reflecting the advice included in this note. This includes:

- Strengthening Public Financial Management (PFM): The authorities have been working to enhance PFM, including through the preparation of action plans for strengthening the frameworks for preparation, publication, and follow-up of public spending audits, with plans to strengthen the relevant institutions (e.g., Cameroon, Gabon). Likewise, the authorities have made some progress towards establishing the single treasury account (to strengthen governance and enhance cash management) and ringfence social spending while securing credible consolidation paths (Congo, CAR). Some have started to tackle governance weaknesses, including through the publication of a governance diagnostic report and a governance strategy (Equatorial Guinea). Finally, some are taking steps to strengthen the monitoring of public enterprises and establishing performance contracts (Cameroon).
- Enhancing tax/customs administration, and foreign exchange law: Countries continue to improve revenue collection, combat tax evasion and fraud, and ensure the integrity of taxpayer records (Cameroon); several countries are working to ensure effective implementation of CEMAC's foreign exchange law, but gradually clarifying this requirement in new concessions related to commodity exports.
- Financial sector development: Progress in this area remains limited to the definition and approval of financial sector development strategies.
- Supporting health and strengthening investment in human capital: Overall, CEMAC countries made vigorous efforts to respond to the COVID crisis, maintaining or increasing health budget allocations. In the education sector, some countries moved from a purely input (budget allocation) to an output approach to measure impact. Some country tried to strengthen the performance dimension to secure government's budget by schools (Cameroon). At the same time, there was limited progress in promoting effective vocational training and introducing students to the know-how needed to adopt new technologies. Nevertheless, greater resources were allocated to strengthen social safety nets partially by reducing untargeted fuel subsidies.

CEMAC countries have made important strides to enhance PFM and protect social spending, but more can be done to improve pre-distributive policies and address the lack of effective investment in human capital. This note provides promising avenues for achieving these goals.

Executive Summary

The Central African Economic and Monetary Community (CEMAC) has been hit hard by two shocks, just a few years apart. The first shock in 2015–16 was triggered by a sharp decline in oil prices—CEMAC's main export proceeds and revenue source—just when many of these countries were ramping up public investment programs. CEMAC countries responded by putting together a coordinated effort relying on large fiscal adjustments under IMF- and World Bank Group-supported programs. External balances were on the path of recovery when, in the first quarter of 2020, the world experienced its largest economic shock since World War II with the spread of the COVID-19 pandemic and, again, a collapse in oil prices. A large demand and supply shock ensued, exacerbated by the social and economic cost of mitigation measures to contain the contagion. This second crisis hit the region before fiscal and external buffers had time to fully recover from the previous one and threatened to erase the hard-won gains made since the previous shock.

CEMAC authorities had been trying to set in motion a process to address the root cause of the region's vulnerability—a largely undiversified economic basis overly dependent on oil. The CEMAC Commission had put in place a large-scale strategy of CEMAC Economic and Financial Reform (PREF). This plan defines a set of reforms, organized around five pillars, to create the basis for more diversified, inclusive, private sector–led growth and enhanced governance of the public sector. Initial measures focused on engaging in closer financial relationships with the IMF and other development partners. As the first generation of IMF-supported programs are ending, and most CEMAC countries have benefited from the IMF's sizable emergency financing to cope with the social and economic fallout of the COVID-19 crisis, the next step is to identify key reforms that will underpin second-generation programs to boost progress on the PREF and focus on addressing growth bottlenecks.

This note responds to this need. It highlights a set of priority reforms at the national and regional levels that can guide the second generation of IMF programs and support the objective of putting CEMAC on a more sustained and inclusive path. This note is a joint effort of staff of the International Monetary Fund and the World Bank, led by Joël Toujas and Genevieve Verdier (IMF), and Abebe Adugna and Elisabeth Huybens (World Bank) and coordinated by Samuele Rosa (IMF) and Raju Singh (World Bank), with inputs and suggestions by Eric Lautier, Loic Lanci, Jean Portier, Bruno Imbert, and Gilles Montagnat-Rentier (IMF) and FNU Besong Joseph Neiville Agbor, Ioana Botea, Mazen Bouri, Armel Jean-Louis Castets, Paula Cerrutti, Carine Clert, Agnes Couffinhal, Patrick Hoang-Vu Eozenou, Henri Fortin, Melise Jaud, Jean-Christophe Maur, Joana Monteiro Da Mota, Fabienne Mroczka, Inoussa De Youba Ouedraogo, Yevgeniya Savchenko, and Emmanuel Skoufias (World Bank). It builds on progress the regional institutions and country authorities have already achieved as part of the PREF. This note reflects work and analysis performed by the two institutions in the framework of the regular surveillance or policy work in the recent past, ongoing dialogues with CEMAC authorities, and several discussions between the teams of the two institutions. It also proposes a new set of reforms to address bottlenecks to human capital, a key component of CEMAC economic diversification and now a major feature of recent national development strategies in most CEMAC countries.

The main recommendations are summarized in Table 1. While these recommendations provide a framework to guide reforms to bring about inclusive growth, it will be up to the regional and national authorities to translate these recommendations into specific actions, with support from the IMF and the World Bank Group. As the remainder of this note highlights, the main obstacle to create the condition for more inclusive and resilient growth can be the lack of buy-in, including at the highest level, on a strong and focused reform agenda.

Table 1. Main Recommendations

Pillars	Reforms	Responsible Institutions	Timeframe
Public Financial Management	Strengthen the Directorate of Public Finances at the Central African Economic and Monetary Community (CEMAC) Commission.	CEMAC Commission	
	Step 1: Hire public finance specialists to oversee the implementation of the regional directives.		End-2021
	Step 2: Conduct and publish an evaluation of the implementation of the regional directives.		Every semester starting January 2022
	Step 3: Conduct strategic thinking on new reforms at the regional level.		Mid-2022
	Boost countries' efforts to implement the regional directives on public finances.	CEMAC Commission/ Ministry of Finance (MoF) at each CEMAC country	
	Step 1: Adopt reform strategies in every country consistent with the 2024 deadlines and the regional guidelines established in collaboration with the World Bank.		Early 2022
	Step 2: Establish units in charge of following up on the strategies.		Early 2022
	Establish and strengthen supreme audit institutions (SAIs; Cour des comptes).	CEMAC countries	
	Step 1: Generalize institutional and legal conditions for effective SAIs in every country (for example, new legal framework).		Mid-2021
	Step 2: Develop SAIs' capacity to produce audits consistent with International Organization of Supreme Audit Institutions standards.		End-2024
	Expand the comprehensiveness of Treasury Single Accounts (TSAs) and improve the timeliness, accuracy, and disaggregation of budget execution reports.	CEMAC countries	End-2021
	Step 1: Draft a standardized template of a convention between the Bank of Central African States (BEAC) and national treasuries to provide a common operational framework.		Mid-2021
	Step 2: Implement a new information technology (IT) system for TSA operations.		2021 Q3
	Step 3: Operationalize TSAs for all CEMAC countries.		End-2021/ mid-2022

continued

Table 1. Main Recommendations *(continued)*

Public Financial Management	Ensure adequate financing of social sectors, education, health, and social protection to address the immediate effects of COVID-19 and build more resilient and effective systems.	MoFs, social ministries	12–24 months
Management of Public Investment Program	Strengthen national legal frameworks of public investment management to establish clear procedures and responsibilities.	MoF, with coordination with CEMAC Commission (reflecting CEMAC public financial management [PFM] directives)	Medium term
	Improve and centralize project planning functions and project implementation monitoring.	MoF	Medium term
	Publish project selection criteria and selected contractors.	MoF, with CEMAC Commission (reflecting CEMAC PFM directives)	Short term
	Improve budget documentation to better estimate fiscal risks associated with public investment projects.	MoF, with CEMAC Commission (reflecting CEMAC PFM directives)	Medium term
Management and Reform of State-Owned Enterprises (SOEs)	Build the capacity of the ministries of finance to monitor the performance of SOEs and prepare aggregate reports on the SOE portfolio.	MoF	Short/medium term
	Publish audited financial statements of all systemically important SOEs.	MoF and SOEs	Short term
	Publish an annual aggregate (portfolio-wide) report on SOE performance and financial situation.	Cabinet/MoF	Medium term
Business Climate	Define, under coordination by the CEMAC Commission, a regional strategy to revise the tax regime to simplify the tax structure and implement online solutions to allow online tax filing and payments.	MoFs/tax authorities	Two to three years
	Revise the code of civil and commercial procedures to incorporate international best practices of commercial justice.	Ministries of justice	Two to three years
	Enhance the judiciary system and commercial courts by building specific capacity to deal with commercial and financial crimes.	Ministries of justice	Two to three years

continued

Table 1. Main Recommendations *(continued)*

Tax and Custom Administration	Improve customs modernization and introduce automated solutions in the goods-clearing procedures, through the adoption of a community tax procedures code and the establishment of the regional observatory.	MoFs/ Ministries of customs/commission	One year
	Approve regulation and customs procedures to ensure application of the foreign exchange regulation and agree on data exchange procedures for implementation.	MoFs/ customs/BEAC	One to two years
	Step up capacity to monitor oil trade by tracking flows and exchanging data with importing jurisdictions.	MoFs/ customs/BEAC	Two to three years
Regional Market and Agriculture	Fully and effectively operationalize the single transit regime.	Ministries in charge of customs and transportation, custom agencies, and CEMAC Commission	To be determined
Financial Sector Development and Inclusion	Ensure payments systems' interoperability.	Banking Group of Central Africa/BEAC	12 months
	Promote digital financial services through fintechs and rollout of financial inclusion action plans.	BEAC/Banking Commission (COBAC)/ national governments	18 months
	Activate capital markets through regular, market-based government issuances and consider partial listing of viable SOEs.	BEAC/Central African Financial Market Oversight Commission/ national MoFs	12–18 months
	Enhance the enforcement of collateral by establishing effective registries and commercial courts.	BEAC/COBAC/MoF/ ministries of justice	12–24 months
	Promote the creation of partial credit guarantee schemes to support viable small and medium enterprises and micro, small, and medium enterprises development in growth sectors.	MoFs/national governments	12–24 months
	Promote market discipline in the financial sector by revising transparency and disclosure requirements for banks.	BEAC/COBAC	12–24 months

continued

Table 1. Main Recommendations *(continued)*

Protecting and Investing in People's Health	Ensure broad access to COVID-19 vaccines by ensuring supply from COVID-19 Vaccines Global Access Initiative COVAX and other sources, mobilizing domestic and other financing sources, and developing robust deployment plans	MoF/ministry of health	Immediate
	Expand and reprioritize domestic financing of the health system in keeping with commitments under the Africa Leaders' Meeting Declaration.	MoF	12–26 months
	Strengthen health systems with a focus on primary health care.	Ministry of health	12–24 months
	Enhance the capacity of countries to prevent, detect, and respond to public health emergencies.	All relevant ministries accounting to a joint action plan	12–24 months
	Address multisectoral drivers of nutrition and health outcomes, including putting in place pro-health taxes (for example, alcohol and tobacco) and expanding access to water and sanitation services.	All relevant ministries accounting to a joint action plan	12–24 months
Boost Learning Outcomes as Foundations for Future Productivity	Ensure safe return to full-time education process and provide remedial programs for the period lost.	Ministries of education and relevant stakeholders	Immediate
	Protect education funding while improving efficiency and transparency of resource allocation and funds flow within the education sector.	Ministries of finance and education	Immediate
	Strengthen governance, management, planning, and accountability of the sector, including a focus on the teachers/civil service reforms throughout the education cycle.	Ministries of finance and education, public administration	12–24 months
	Address equity and resilience issues in access to quality education, school infrastructure, and the education system (scale up use of technology and remote learning).	Ministries of finance and education	12–36 months
Strengthen Skills Systems	Enhance digital skills development across the whole system.	MoFs/social ministries (for example, education, labor, skills development)	12–24 months
	Strengthen post-basic education for economic diversification, particularly by improving the market relevance of skills-development programs, including ensuring employer involvement in design and delivery of skills-development and higher education programs.	MoFs/social ministries (for example, education, labor, skills development)	12–24 months

continued

Table 1. Main Recommendations *(continued)*

Build and/or Expand Social Protection Systems to Help Households Manage Shocks and Protect and Invest in Their Human Capital	Continue expanding coverage prioritizing the most vulnerable.	MoFs, with ministries in charge of social affairs	Immediate
	Diversify social protection instruments and expand coverage vertically by supporting nonpoor informal sector workers currently excluded by the social protection system.	MoFs, with ministries in charge of social affairs	Immediate
	Expand the fiscal space for social protection and redirect funding to poverty-targeted social assistance away from regressive spending (for example, energy subsidies, public pensions); Continue leveraging social safety nets to incentivize investments in human capital.	MoFs, with ministries in charge of social affairs	12–24 months
	Build inclusive and shock-responsive delivery systems to facilitate identification, registration, and provision of services (for example, social registries, foundational ID systems) and accelerate the adoption of digital payments.	MoFs, with ministries in charge of social affairs	12–24 months
	Strengthen the strategic and institutional framework for designing, implementing, and managing social protection programs.	MoFs, with ministries in charge of social affairs	12–24 months
Invest in High-Return Cross-Cutting Investments to Accelerate Progress in Human Capital	Invest in early years, focusing on malnutrition, early childhood development, and preschool education.	Ministries of planning, with relevant sectoral ministries	12–24 months
	Pursue comprehensive strategies to empower girls and women and tackle early pregnancies.		12–24 months

This note is organized as follows. The first chapter provides background on the economic fallout of the COVID-19 pandemic and highlights the importance of setting the stage for more pro-growth and inclusive policies. The second chapter provides a peer group comparison of the performance of CEMAC economies over the past two decades in terms of inclusive and equitable growth. The third chapter assesses policy challenges and offers key recommendations to secure inclusive growth in the different dimensions considered in this note. This chapter also starts a discussion on policy challenges and recommendations for protecting and boosting human capital as a key component of inclusive growth. The fourth chapter sets the framework for ensuring that the reform momentum is inclusive and broadly communicated to involve a wide group of stakeholders. The communication needs to highlight the costs of not carrying the reforms, which should increase accountability and signal a break with the past.

1. Fighting the Pandemic—Planning the Future

The world has been hit by the most severe crisis since the Great Depression, with a pandemic that has largely stalled economies and "evaporated" markets globally. COVID-19 has imposed a freeze in the working of modern and interdependent societies, causing twin shocks to supply and demand. This health crisis has affected the African continent, with a succession of COVID waves, and the risk that new variants may emerge if vaccination effort is not maintained. The likely human and economic toll is still to be evaluated as the situation evolves, although it seems that, so far, the pandemic has been less acute in Africa than in other parts of the world. More critically for CEMAC, oil prices have collapsed, due to the sharp decline in aggregate demand and a disagreement in the global governance of this commodity among main producers.

CEMAC economies are being severely impacted by both the COVID-19 pandemic and the oil price shock. New data and revised forecasts point to a severe contraction in global demand and reduced international trade. The CEMAC region, highly dependent on oil exports, is particularly affected by this shock, which is occurring concurrently with the sharpest decline in oil prices in decades. These factors are curtailing both export proceeds and tax revenues, which in turn are undermining external and domestic stability, even worse than was seen in the 2014–16 crisis. In addition, the spread of COVID-19 in the region and the mitigating measures implemented by authorities have disrupted production and logistic chains, depressing domestic demand and further weakening growth.

This shock threatens to undo the hard-won, yet fragile gains CEMAC countries had achieved following the oil price decline of 2014–16. Over the past three years, the authorities of CEMAC countries embarked on a coordinated policy response supported by the international community, including the IMF and the World Bank Group. Collectively, they delivered a sizable fiscal adjustment of about 7 percent of GDP in 2017–19, largely through a sharp reduction in capital spending. Together with external support, this adjustment allowed regional foreign exchange reserves to reverse their worrisome decline.

This crisis has increased the urgency of the need to lay the groundwork for broader-based and inclusive growth in CEMAC. The COVID-19 crisis and the sharp reduction in oil prices exposed the root cause of CEMAC vulnerability. The region is heavily dependent on commodity exports, mainly oil, as the main source of tax revenue and foreign exchange to finance its development and balance of payments needs. Relying so heavily on this fragile revenue and economic base presents significant risks because commodities are both exhaustible and subject to large demand and price swings.

The CEMAC region is particularly affected by this conjuncture. Oil and other commodities account for 64 percent of CEMAC's total exports and 41 percent of its budget revenue. The level of activity in the commodity sector directly affects the financing of budget spending as well as, given the size of the public sector in the region, domestic demand and overall growth. Because of the relatively large footprint of the public sector in CEMAC economies, fiscal impulse, which depends on oil revenue swings, affects overall growth to a large extent. Reducing CEMAC economies' vulnerability and strengthening their resilience to external shocks will involve increased capacity and readiness to engage in countercyclical fiscal policies.

Despite sustained higher spending during the years of high oil prices, social indicators, including on inclusion and human capital, have been disappointing. Income distribution is skewed toward a small share of relatively affluent people. At the same time, quality health and education still reach only a small part of the population because the informal sector, people who have little social protection and low access to finance, is so large.

Expanding the economic base beyond commodity exports and ensuring more inclusive growth is imperative deepen inclusions. These actions are needed to secure social cohesion as CEMAC implements deep reforms to put the region on a sustainable path of domestic and external stability. Without a more diversified and inclusive economy, the region would remain at risk of crises, despite the large fiscal adjustment undertaken in recent years to restore domestic and external stability.

After having buffeted by the oil-price shock starting in 2016, this second crisis, linked to the COVID-19 pandemic, is an opportunity to rethink policies and public spending to rebuild stronger and more resilient systems that can protect and increase the human capital of CEMAC countries. While the COVID-19 crisis has hit CEMAC countries hard, it is also revealing the benefits of early human capital investments in some of those countries. Some CEMAC countries (Cameroon, the Republic of Congo) are now able to scale up the coverage of their social safety nets to support impoverished households and informal workers. The outbreak is also shedding light on key priorities to strengthen the resilience of human development systems, while also highlighting their limitations.[1] A large population of children, especially in remote, rural areas and from poor households, were not able to access remote learning programs, for instance. As schools reopen, it is critical to protect education funding, ensure safe return to full-time education process, scale up successful remote learning interventions, provide remedial programs, strengthen school infrastructure with focus on resilience, and strengthen post–basic education for economic diversification.

Now more than ever, addressing the root cause of the crisis triggered by the COVID-19 pandemic requires setting the stage for a more diversified and inclusive economy. The challenges brought about by this deep crisis suggest that the path to higher growth cannot rely primarily on a larger resource envelop. Instead, CEMAC countries need to unleash the sources of growth that had been constrained by poor policies in the past. One key lesson from the past is that sustained growth requires a leapfrog improvement in transparent governance of public funds and the fight against corruption. Advancements in this area have been slow, but they will be key to laying the groundwork for private sector–led growth, once the crisis recedes, for years to come. Because enhancing governance is also largely a budgetary-neutral reform path and can aid efficiency in the use of resources, fast-tracking advancements in this area is even more imperative. Moreover, inclusive outcomes require an inclusive process from the beginning. Engaging the different shareholders in the process of updating and validating the reform strategy and policies is vital to the outcome creating the needed support.

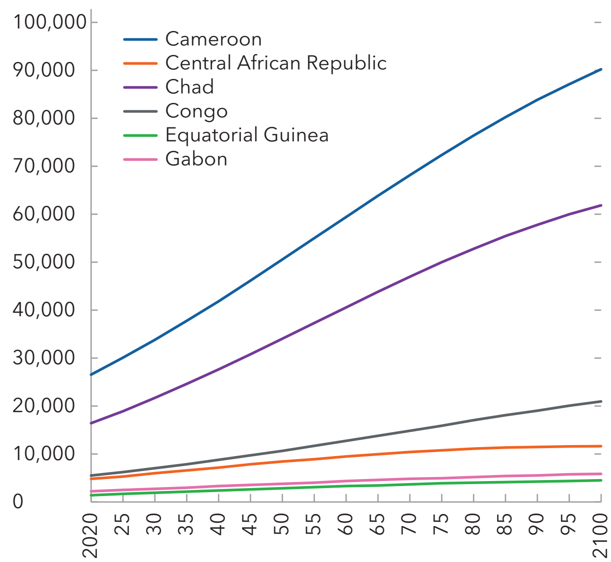
[1] All CEMAC countries adopted some methods of remote learning (for example, radio and TV programs or in some cases online classes) during school closures.

2. Where Do We Come From?

A. CEMAC—Lackluster Growth Performance over the Past Decade

The need to expand job opportunities for CEMAC's growing and young population is an imperative. Based on United Nations (UN) projections, the CEMAC population is set to increase by 60 percent between now and 2040. As a result, about 34 million young people will enter the job market in the next two decades, each of them seeking the opportunity to build a comfortable life for themselves. This population growth could be one of CEMAC's strongest assets, compared with other regions around the world marked by a shrinking young population basis, if more jobs can be created for them. Otherwise, this large and young population cohort would not recognize the social pact that usually bonds the new generation with the former, which requires the creation of opportunities as a key element for ensuring social cohesion. Observing the different experiences of discontented and less-included younger citizens in various parts of the globe over the past two decades suggests that this dissatisfaction over a lack of opportunities could take different forms—including very antagonistic ones.

Figure 1. Population Growth Forecast
(Thousands)

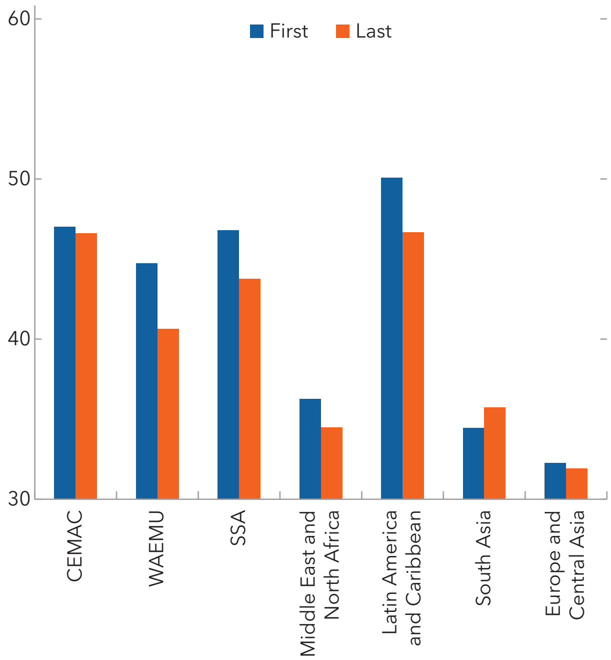


Source: United Nations, Department of Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition. Rev 1.

The dynamism of non-oil sector growth, which offers the greatest potential for job creation, has weakened in recent years. The high oil prices from 2007 through the end of 2014 supported a ramping up of public spending to finance both current outlays in some countries (including the wage bill) and an increase in infrastructure investment. The consequence was a large increase in aggregate demand by the public sector, financed by large budget oil revenues and public debt. The private sector played a largely ancillary role, supporting and executing large public works in CEMAC. The banking sector was heavily involved in financing this dynamic through direct or indirect lending to CEMAC states and their suppliers. With the collapse of oil prices, CEMAC countries undertook a coordinated policy response to preserve external and domestic stability and avert a near crisis in balance of payments. Total public investment in CEMAC collapsed from 13.4 percent of GDP in 2014 to 5.0 percent in 2019. Consequently, non-oil sector growth plummeted to historic lows.

Despite the years of buoyant oil revenue and increased public spending, real incomes in CEMAC stagnated over the past three decades. Between 1990 and 2018, real income in constant 2011 terms increased by a very small amount, and even declined in some cases (Central African Republic, the Republic of Congo, Gabon). An exception is Equatorial Guinea, one of the poorest countries in the 1990s, which saw an impressive increase in GDP per capita after the discovery of oil. After some boost since the early 2000s due to oil discoveries, CEMAC's real income per capita stagnated and declined in recent years. On balance, CEMAC countries did not experience the steady increase in GDP per capita that took place in other parts of the continent, including in West African Economic and Monetary Union (WAEMU), where real GDP per capita has

Figure 2. Gini Inequality Index



Source: World Bank, World Development Indicators, 2018.
Note: Values reflect earliest (early 1990s) and latest (late 2010s) Gini index for reporting countries in the region. Index is calculated as a simple average for each region.

been on a strong upward trend since 2011. Growth in the oil sector was therefore not enough, given the dynamics in the rest of the economy, to keep up with the pace of CEMAC's population growth.

Indicators of income inequality suggest that CEMAC's economies are much less "inclusive" compared with others. Income inequality is higher in sub-Saharan Africa compared with many other regions around the globe, except for the Latin America and Caribbean region. Within sub-Saharan Africa, however, CEMAC has a higher income inequality index, measured by the Gini index, compared with WAEMU and the rest of the continent. Moreover, this index suggests that inequality has stagnated in CEMAC, whereas it declined in WAEMU, sub-Saharan Africa, and other regions (except in South Asia).

CEMAC remains a largely undiversified economy over-dependent on oil, and with still untapped internal regional market.[2] CEMAC's export structure has been changing, pushed by deep changes related to the increase of the role of Asia, but remains concentrated in low-value-added activities. Between 2010 and 2017, the destination of non-oil exports has experienced a reallocation from the EU (which remains the largest importer of CEMAC goods) toward Asia. During the same period, the share of non-oil exports in total exports increased from 14.6 percent to 20.2 percent, whereas total exports dropped, led by a deterioration in the terms of trade. Non-oil exports outside the region remain of limited importance (the share of non-oil exports in non-oil GDP has stagnated below 12 percent since 2011). CEMAC non-oil exports also remain largely concentrated in traditional commodity sectors, which have significant (but totally untapped) potential for development and more value creation.

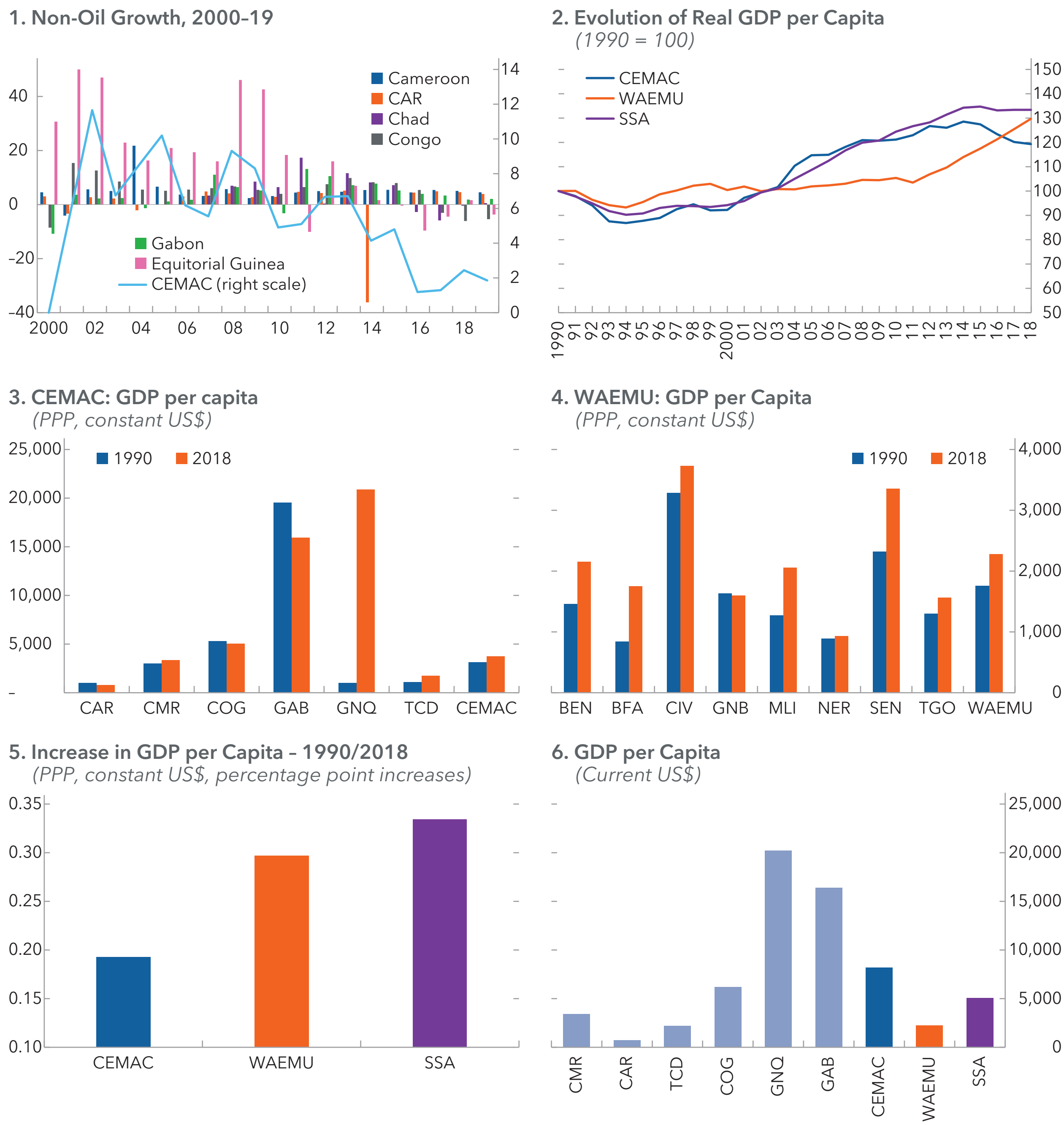
Intraregional trade in CEMAC remains very low. Despite having established an economic and monetary union, with the explicit objective to enhance trade among CEMAC countries and thereby reduce the dependency on foreign exchange, CEMAC intratrade is by far the lowest compared with other regions in sub-Saharan Africa and around the world. It has even declined in the period under this analysis. As a comparator, the intratrade in WAEMU is four to five times higher and increased in 2010–16. This may in part reflect a data quality issue, related to the informal sector and smuggling, but is first an indication of the lack of progress in deepening the regional market despite the potential to reduce dependency on a set of goods, including foodstuffs. In fact, a large part of private investment in CEMAC targets the oil and mining sector, whose production is almost entirely traded outside CEMAC.

The financial sector remains shallow and mostly bank based, well below sub-Saharan Africa averages and comparators like the WAEMU region, Ghana (except on ratio of credit to GDP), and Kenya.

- The depth of the banking sector is limited, with credit to the economy accounting for only 24 percent of CEMAC's 2018 GDP, well below the level of a peer region, like WAEMU (35.5 percent). The contribution of the banking sector, which includes state-owned enterprises, represents only 13.8 percent of GDP.

[2] See "A Regional Approach to Enhancing Governance and Reducing the Potential for Corruption," IMF Selected Issues Paper, January 19.

Figure 3. Selected Macroeconomic Indicators



Sources: World Bank; World Development Indicators, 2018; and IMF staff estimates.

- The collapse of oil prices in 2016 has taken a toll on the banking sector. Nonperforming loans (NPLs) in the banking sector already had reached 11 percent in 2014, when the oil crisis hit the region. They continued to increase to 21.1 percent at the end of 2019, ranging from about 10.5 percent in Gabon to about 47 percent in Equatorial Guinea. Net NPLs to regulated capital stand at about 52 percent and are mostly attributed to local small and medium enterprises (SMEs) facing liquidity problems linked to government arrears but also to large construction companies in a country like Equatorial Guinea, where there have been massive infrastructure projects in recent years.

Figure 4. Intraregional Trade
(Share of GDP)

Source: UNCTADstat database.

- Market capitalization of the stock exchange is only about 2 percent of regional GDP. However, there is significant borrowing by governments from the regional Treasury bills, with the bond market representing about 3 percent of GDP in 2019. This debt is principally held by the banking sector.
- The strong nexus between sovereigns and banks constrains local banks' ability and willingness to engage with the private sector. This nexus ranges from the credit guarantee side and to the direct purchase of government securities, including large exposures to state-owned enterprises (SOEs) in some countries like Cameroon and the Republic of Congo.
- The payment infrastructure is aging, and interoperability remains a key constraint for the development of digital financial services.
- Finally, bank resolution capacities remain weak due to insufficient political support, and the regional banking commission (COBAC) is still in the process of operationalizing the regional deposit guarantee fund (FOGADAC). Table 2 summarizes limitations of financial intermediation and access to financial services by CEMAC inhabitants.

To sum up, CEMAC remains a highly undiversified economy, marked by large income inequality. CEMAC has not kept pace with other regions in terms of increase in per capita GDP and more equitable income distribution. Its growth model has largely relied on the oil sector exports and related revenues or other commodities exported without adding much value (and thus missing opportunities for job creation). Export proceeds (in particular, oil related), in turn, were used to drive a large increase in domestic demand through 2014, led by public spending, with the private sector playing an ancillary role mainly in the area of public works. The fall in oil prices has exposed the limits of this growth model as states had to curtail public spending while there was little non-oil private sector activity.

A shift in the growth model paradigm is therefore urgently needed. This will require creating the conditions to expand the economic base outside the dominant role of the state, lay the groundwork for stronger private sector–led growth, and thereby create job opportunities for its growing young population, a real asset in economic terms if well managed. These shifts will, in turn, require more ambitious and comprehensive policies on education and skills development. The Economic and Finance Reforms Program (PREF-CEMAC) adopted in 2017 has laid the foundations for a coordinated effort to restore macroeconomic stability in the subregion and develop stronger, more sustainable, and more balanced growth. However, progress on structural reforms and regional integration has been slower (see Box 1).

B. CEMAC's Procyclical Growth Performance—A Growth Accounting Approach

The analysis that follows confirms that the source of value creation remains overly concentrated and dependent on oil production, whereas little progress has been achieved in diversifying the foundations of growth. Over the past decade, the oil and extractives industry accounted for 84 percent and 39 percent, respectively, of the primary and industrial sector output, leaving the region largely exposed to commodity

Table 2. Financial Sector Intermediation Indicators

	CEMAC	WAEMU	SSA	Ghana	Kenya
Credit to the Economy	24.0%	13.8%	15.0%	31.0%	26.0%
Credit to the Private Sector (IMF/World Bank)	35.5%	25.7%	24.4%	35.0%	31.4%
Percentage of Firms with a Bank Loan/Line of Credit (World Bank Enterprise Survey)	30.6%	21.7%	21.7%	43.2%	34.4%
Percentage of Adults Owning a Transaction Account (Fundex)	26.6%	11.2%	23.3%	57.7%	49.5%
Usage of Digital Financial Services (Findex)	43.2%	27.9%	33.9%	81.6%	79.0%

Source: Findex, 2019, World Bank Enterprise Survey.

Note: CEMAC = Central African Economic and Monetary Community; SSA = sub-Saharan Africa; WAEMU = West African Economic and Monetary Union.

Box 1. Progress Achieved in the Implementation of the PREF-CEMAC

The Economic and Finance Reforms Program (PREF-CEMAC) 2017–21 is structured around five pillars: (1) fiscal policies, (2) monetary policy and financial systems, (3) structural reforms, (4) regional integration, and (5) international cooperation. Noticeably, a dedicated structure (a steering committee and a secretary) ensure a regular monitoring of the multiyear strategy at the highest levels of both national and regional authorities. At the end of 2019, 70 percent of the objectives for the year had been achieved, a significant improvement compared with the previous year, and 61 percent of the objectives for the period 2017–21 had been met. The coordinated measures adopted under the framework created by the PREF-CEMAC successfully contributed to the stabilization of the macroeconomic environment, with the tightening of fiscal and monetary policies leading to improved fiscal and external positions in a context where all CEMAC countries entered IMF-supported programs and most of them benefited from the World Bank's budget support. Important milestones have been reached, such as the creation of a single stock exchange and the entry into force of the free movement of people regime. However, progress on both the structural reforms (Pillar 3) and regional integration (Pillar 4) fronts have been slower. Regarding structural reforms that aim to diversify the economy, strenghten the role of the private sector, improve the business climate, and develop new forms of financing, only 38 percent of the actions had been undertaken at the end of 2019. As for regional integration, 54 percent of the actions had been undertaken at the end of 2019. The social and economic impact of the COVID-19 pandemic has led CEMAC authorities to adapt the PREF-CEMAC to add some measures already taken by the Bank of Central African States and the Development Bank of Central African States to cushion against the impact of the crisis..

price fluctuations and external shocks. During this period, the oil sector's share in national GDP reached 30 percent in the Republic of Congo and Equatorial Guinea, while nearing 20 percent in both Chad and Gabon. Failure to address widespread reliance on commodity-generated revenues remains CEMAC's main weaknesses: oil dependence and its negative consequence on regional competitiveness through poor governance, misallocation of public spending, and impaired business climate.

The growth accounting exercise reveals that the oil cycle is driving public and private capital stock contributions to real GDP growth (see Annex 1). The large trade shock following the sharp downturn in commodity prices in 2014–15 put the CEMAC region on the verge of a balance of payments crisis. Public capital stock contribution to growth peaked at 1.84 percent in 2012 and plummeted to an average of 0.4 percent over 2015–19, as public investment was severely curtailed under the adjustment effort. In parallel, the share of private capital accumulation in growth fell to 0.7 percent after averaging 1.5 percent over 2008–14, when the Brent was above $90 per barrel. These findings point to important deficiencies in public capital stock accumulation in CEMAC economies and the inability of governments to build on the oil price momentum to lay the foundation of a more inclusive and sustained growth path. They also reveal that up to 50 percent of the private sector contribution to growth is related to oil sector dynamics and can easily evaporate. Therefore, it is essential to incentivize the growth of a vibrant non-oil private sector.

Empirical analysis shows that governance and business climate reforms are CEMAC's greatest missed opportunities for growth (see Annex 1; see also World Bank, Deepening Regional Integration to Advance Prosperity). Cross-country results suggest that a 10 percent improvement in governance and business climate scores translates, respectively, into a 5.8 and 0.6 percent increase in real GDP per capita. At the subregion level, the impact of productivity-enhancing factors is captured under the total factor productivity (TFP) and estimate that governance and business climate performances in CEMAC dragged down real GDP growth by up to 2.2 points over the past decade. This contrasts significantly with WAEMU, where the TFP contribution to growth averaged 1.2 points and the number of business climate reforms was double that in CEMAC. A transparency shock in the institutional and business environment structures is therefore critical to incentivize the development of a thriving private sector that will provide game-changing opportunities to the new generation. Moreover, IMF analysis suggests that enhancing the governance and accountability of public funds is key to supporting a thriving private sector.[3]

Fully leveraging the region's human capital potential is CEMAC's second-greatest missed opportunity for growth. Findings further suggest that human capital contribution to growth remains low and constant at 0.5 percent over the past two decades. This is well below the progress recorded in lower-income group comparators and WAEMU, where the human capital share in growth jumped along with public capital stock contributions to a sustained average of 0.8 percent since 2011. This low contribution of human capital to growth suggests that the public capital spent during the years of the oil price windfall failed to lay the foundations for higher human capital accumulation, which is paramount to productive growth creation and economic diversification.

C. Poverty and Inequality in CEMAC: A Multifaced Phenomenon

The higher inequality within CEMAC countries noted above is accompanied by large disparities in the incidence and depth of income poverty between urban and rural areas. Gabon and the Republic of Congo, both members of CEMAC, are two of the most urbanized countries in the sub-Saharan region. Although the incidence of poverty is generally lower in urban areas, in these two countries, the number of poor is higher in the cities due to the concentration of the population in urban areas. In contrast, in Cameroon, Chad, and in the Central African Republic, poverty, both in terms of incidence and in terms of the number of poor, is concentrated in the rural areas of the country, or in specific regions, such as in the northern and far northern regions of Cameroon.

Income poverty is accompanied by food insecurity and deprivation in access to many basic services. Most of the poor in rural areas derive their incomes from farming and herding activities, relying on traditional techniques, with limited access to markets and services (see FAO, Sustainable Agricultural Mechanization, a Framework for Africa). High fertility rates and high dependence on rainfall keep the population (women

[3] See IMF CEMAC Selected Issues Paper, January 2019.

in particular) economically inactive for a large part of the year. High vulnerability to poverty associated with climate change and increasingly unpredictable weather conditions combined with the small scale of most family farms deters private investment, which is deemed too risky, and perpetuates a low equilibrium situation of stagnating agricultural yields and rural livelihoods. Insecurity arising from local conflict and potential displacement is also a serious deterrent of investment and entrepreneurship in the rural areas of Cameroon, the Central African Republic, and Chad.

D. Human Capital: An Untapped Potential

Investment in human capital is critical for countries to grow economically, reduce poverty, and foster more inclusive productivity and growth; it is even more critical as CEMAC countries seek to diversify their economies (De la Briere, Ringold, and Filmer 2017). The wealth of nations is not just in their natural resources or produced capital. It is in their people: in their health, their skills, and their resilience to shocks, as evidenced by the recent COVID-19 outbreak and its ensuing crisis. People, and human capital, are pivotal to the transformation of and diversification of African economies.

Unfortunately, recent World Bank estimates show that the average child born today in CEMAC countries will be only 37 percent as productive as he or she could be (see World Bank, Investing in Human Capital to Boost CEMAC's Growth Potential). The Human Capital Index (HCI), which measures the contribution of health and education to the productivity of the next generation of workers, shows that the CEMAC region lags behind the sub-Saharan African average (Table 3), while being in line with the global average for low-income countries. For CEMAC countries with data available over time, the HCI calculated for 2010 and 2020 showed only modest improvement (Table 4). The HCI is composed of health (stunting and under-5 mortality rate), education (learning outcomes and expected years of school), and adult survival indicators, and their value. Two indicators stand out as dragging the CEMAC HCI average down: expected years of school and adult survival rate.[4]

Furthermore, utilization of human capital is suboptimal. According to the Utilization-Adjusted Human Capital Index (UHCI) methodology introduced by the World Bank in 2020,[5] only 20 to 25 percent of children in CEMAC countries are expected to reach their potential and be employed in the private sector as adults.[6] While unemployment rates are on the rise in the region, especially among youth, low productivity and informality remain the main employment challenges. The private sector remains weak, with formal job creation lagging behind rapid population growth and urbanization. In addition, skills developed through either the formal education system or technical and vocational education training centers are often not well aligned with the demands of the market. In the current labor market, the informal sector remains the default both for those with higher education, who cannot find a job in the formal sector, and for the poor, who are further disadvantaged by lower education and lack of access to resources. In addition, many women choose lower-earning informal work because they need the flexibility to balance their heavy domestic responsibilities. Key determinants and binding constraints contributing to the low HCI in CEMAC countries include (1) limited improvements in health and nutrition outcomes; (2) persistent access issues and poor learning outcomes; (3) inadequate social protection in the face of persisting, and now increasing, poverty and vulnerability levels; (4) weak levels of girls' and women's empowerment overall, which is associated with high or slowly declining fertility rates; and (5) gaps in access to identification. In addition, key binding constraints relate to financing, overall management of key social sectors, and related service delivery (see World Bank, Investing in Human Capital to Boost CEMAC's Growth Potential).

4 For more details on the Human Capital Index, see World Bank (2020).

5 UHCIs adjust the HCI for labor market underutilization of human capital, based on the fraction of the working-age population who are employed or are in the types of jobs where they might be better able to use their skills and abilities to increase their productivity.

6 UHCI full scores are 0.23 for Cameroon, 0.20 for the Central African Republic, 0.20 for Chad, 0.24 for the Republic of Congo, and 0.25 for Gabon.

Table 3. Human Capital Index 2020 and Components for the CEMAC Region

Indicator	Cameroon	Central African Republic	Chad	Gabon	Equatorial Guinea	Republic of Congo	CEMAC average*	Sub-Saharan Africa (SSA)
HCI Component 1: Survival								
Probability of Survival to Age 5	0.92	0.88	0.88	0.96	0.91	0.95	0.92	0.93
HCI Component 2: School								
Expected Years of School	8.7	4.6	5.3	8.3	4.1	8.9	7.2	8.3
Harmonized Test Scores	379	369	333	456	-	371	381	374
HCI Component 3: Health								
Survival Rate from Age 15 to 60	0.70	0.59	0.65	0.79	0.69	0.74	0.70	0.74
Fraction of Children Under 5 Not Stunted	0.71	0.59	0.60	0.83	0.74	0.79	0.70	0.69
Human Capital Index (HCI) 2020	0.40	0.29	0.30	0.46	-	0.42	0.37	0.40

*Central African Economic and Monetary Community (CEMAC): Cameroon, Central African Republic, Chad, Gabon, Equatorial Guinea, Republic of Congo. Please note that Equatorial Guinea is excluded from the CEMAC average due to missing test score data which is neccessary to calculate an HCI.

Table 4. Human Capital Index for CEMAC Countries, 2010 and 2020

Country Name	2010	2020
Cameroon	0.38	0.40
Central African Republic		0.29
Chad	0.29	0.30
Congo, Rep.	0.41	0.42
Gabon		0.46
Equatorial Guinea		
CEMAC (average)	**0.36**	**0.37**

Note: Empty cells indicate "data not available".

Limited Improvements in Health and Nutrition Outcomes

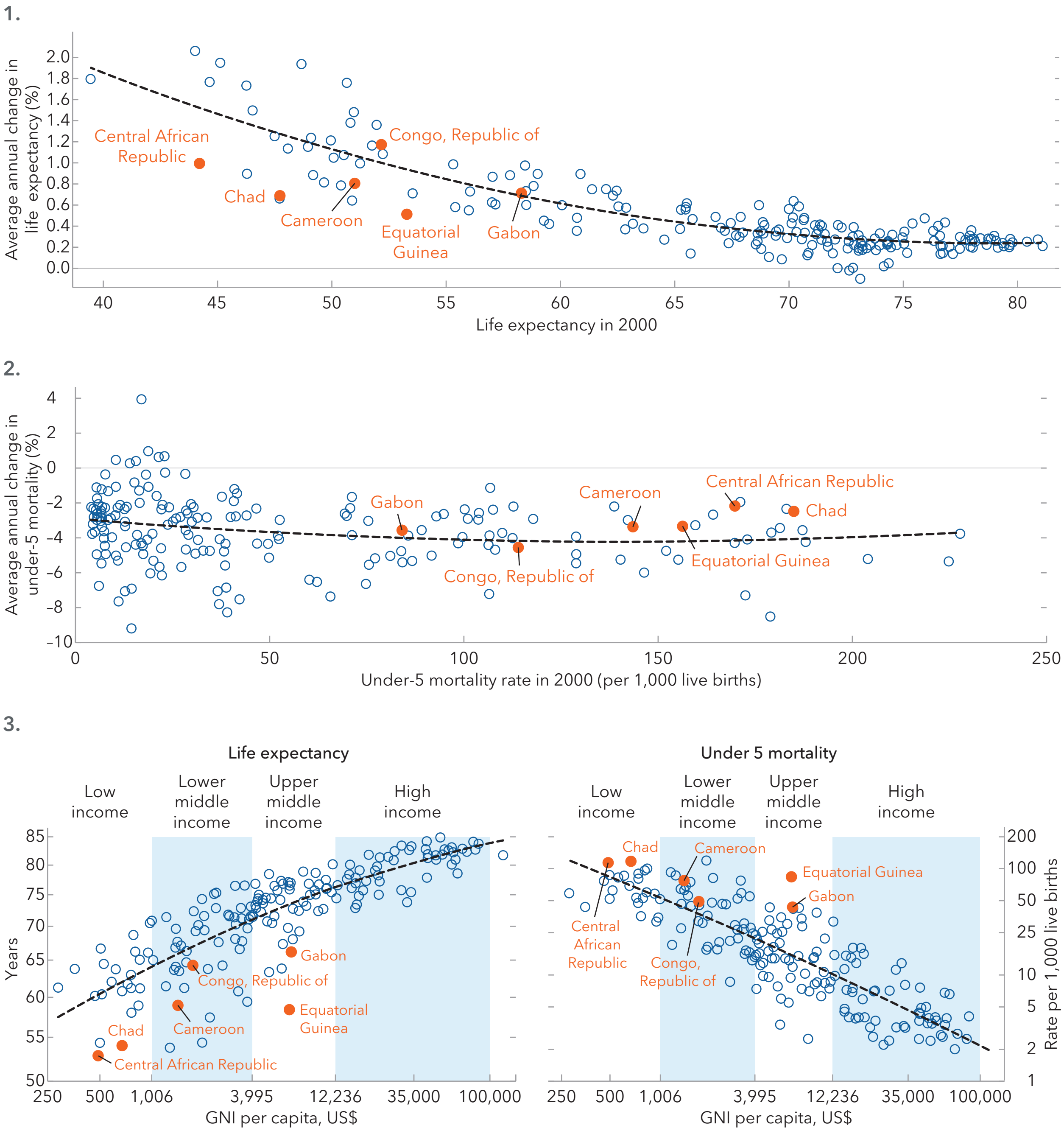
Despite notable progress over time in improving life expectancy and child mortality, health outcomes remain below expected levels given CEMAC countries' level of income. Between 2000 and 2018, in CEMAC countries, life expectancy increased by about 0.8 percent annually on average and child mortality fell by 3.2 percent annually. While in the Republic of Congo and Gabon these improvements have been on par with the expected performance experienced in other countries starting at similar outcome levels, the pace of improvement remained slower than expected in the other CEMAC countries.

Chronic malnutrition also contributes to the low HCI index of CEMAC countries. Stunting, a key HCI indicator, is associated with weaker immune responses, and stunted children have elevated morbidity and mortality risks. Additionally, stunting, which occurs in childhood and is after largely irreversible (Black and others 2013), is detrimental to cognitive development and productivity in later life (Currie and Vogl 2013; Galasso and Wagstaff 2019). Stunting rate estimates from the Institute of Health Metrics and Evaluation suggest that CEMAC countries managed to reduce stunting by about 2.2 percent annually between 2000 and 2017. While estimates for Central African Republic and Chad remain high, with more than 40 percent of children under 5 years old being stunted, chronic malnutrition has converged around 20 percent for the Republic of Congo, Equatorial Guinea, and Gabon.

Poor Learning Outcomes, Skills Shortages, and Mismatches

CEMAC countries made progress over the past decade in bringing children to school; however, the quality of education remains extremely low, and learning poverty is high. The primary school enrollment rates have increased over the past 10 years in almost all countries; for example, from 2011 to 2017 the net enrollment rate in primary education went from 89 percent to 93 percent in Cameroon and from 62 percent to 73 percent in Chad. However, CEMAC countries still haven't reached the Sustainable Development Goal (SDG) 4 on universal access to primary education. A significant variation exists in expected years of schooling in the region—from 4.1 years in the Central African Republic to 8.7 in Cameroon and 8.9 in the Republic of Congo. There is also substantial variation in access to schooling within countries by rural and urban areas, by socioeconomic status, and by gender. Furthermore, the quality of learning as measured by standardized test scores is low across the CEMAC region, with Gabon performing better compared with other countries, and learning poverty remains high, especially in CEMAC countries that are affected by fragility, conflict and violence. The low quality of education combined with access issues, which remain unaddressed for most CEMAC countries, results in a low-skilled labor force that hampers economic development. The literature suggests that increases in both the overall education level of the labor force and in the quality of education

Figure 5. Long-Term Changes in Life Expectancy and Child Mortality, 2000–18

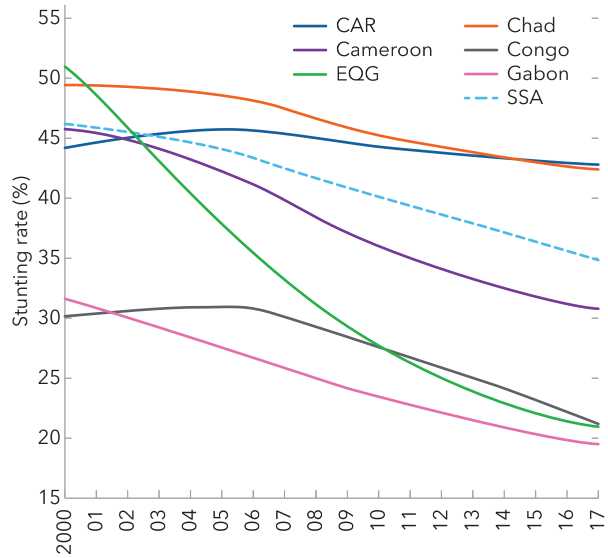


Source: World Bank, World Development Indicators (2020); and Latest available data (2018).
Note: In panel 3, both *x* and *y* axes are expressed in logarithmic scale.

would translate into GDP growth (see comprehensive review by Hanushek and Wößmann 2010). Low learning outcomes are direct consequence of system-wide weaknesses both on the demand and supply side (see part C of Pillar 3).

Furthermore, CEMAC countries also face serious skills shortages and mismatches, which present a major bottleneck for economic development, competitiveness, and diversification. CEMAC countries rank low on the Global Competitiveness Index, especially on the skills pillar. Furthermore, employers face challenges in finding skilled labor, which hampers economic growth and diversification. For example, in Cameroon about 35 percent of employers mention that lack of skilled and qualified labor represents a major constraint to business growth and development (Arias and others, Balancing Act).

Figure 6. Stunting Trends



Source: Institute of Health Metrics and Evaluation.

Inadequate Social Protection

Most CEMAC countries have yet to develop adequate social protection systems despite persistent poverty and vulnerability that severely constrain households' ability to invest in and protect human capital. Social assistance spending is well below the regional average in all CEMAC countries except for the Central African Republic, which allocated 2.6 percent of GDP in 2015.[7] Social safety net coverage has been gradually expanding over the past decade but remains well behind the 30 percent Africa Human Capital Target for 2023 (Word Bank 2019). Gabon stands out as a regional outlier (31 percent) due to its generous health insurance subsidies. Without access to safety nets or other forms of reliable social protection programs, poor households increasingly exposed to shocks (for example, climate related, conflict) may adopt negative coping strategies that perpetuate the intergenerational transmission of poverty. For instance, households may no longer be able to afford school fees and pull their children out of school or as documented across the region in response to droughts, see no other option but to marry daughters early (Corno and others 2020). Inclusive and shock-responsive social protection systems are, therefore, critical for mitigating these risks and protecting human capital.

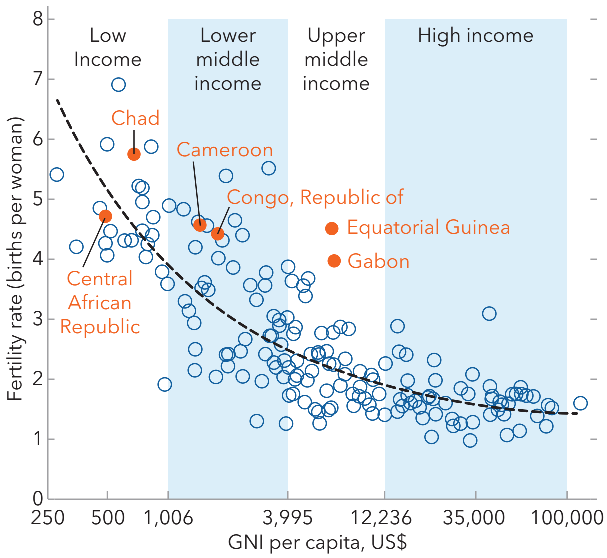
Labor market vulnerability intersects with other vulnerabilities and affects young parents' abilities to invest and protect their most critical assets, their health and education. The formal sector has failed to create quality jobs that promote human capital accumulation. Most workers in the CEMAC region are self-employed in low-productivity informal activities in subsistence agriculture or services. Informality is widespread beyond agriculture, with more than three-fourths of nonagricultural workers in the region (82 percent in Cameroon, 90 percent in Chad, and 73 percent in the Republic of Congo) holding informal jobs. The public administration is the main provider of formal wage jobs. In the Republic of Congo, for example, 14 percent of the workers are employed by the state or a parastatal firm, while another 13 percent are employed by formal large firms (5 percent) and SMEs (8 percent). Informal workers have been the backbone of economic growth in the past decade, but they are exposed to multiple vulnerabilities, not least the health and economic effects of the COVID-19 pandemic. Although they are a heterogenous group with varying capacity to cope with shocks, many of them have no safety net to be able to handle economic setbacks and avoid being trapped in poverty.

Ineffective Identification Systems

A lack of effective identification systems limits CEMAC governments' capacity to deliver basic services, further limiting the potential for human capital development. Moreover, the lack of legal identification disproportionately affects poor and vulnerable groups—including women, children, minorities, migrants, and refugees—and often prevents them from accessing economic opportunities and social services. Lack of

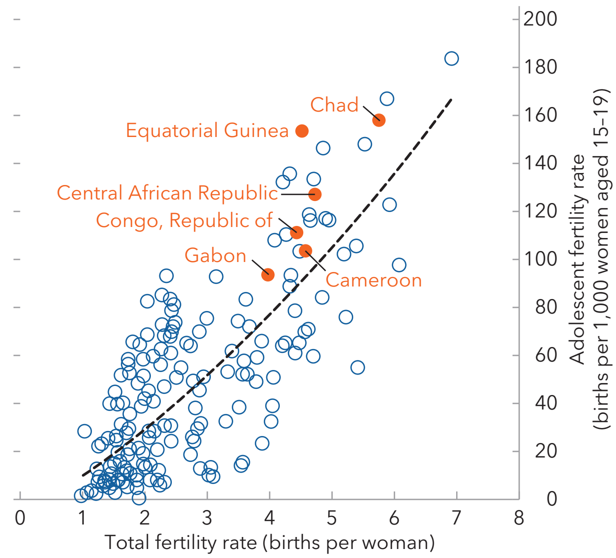
[7] Based on the 2020 Human Capital Index briefs, social assistance spending was 0.0 percent (2016) in Cameroon, 0.7 percent (2018) in Chad, 0.5percent (2016) in the Republic of Congo, and 0.1 percent (2014) in Gabon.

Figure 7. Total Fertility Rate



Source: World Development Indicators (World Bank 2022).

Figure 8. Adolescent Fertility



Source: World Development Indicators (World Bank 2022).

identification also sometimes hampers progression through the education system, especially for girls and the poorest individuals. In some countries an ID is required to register for exams at the end of the primary school; in others an ID is needed to received cash transfers. The absence of reliable data on national ID coverage is a symptom of the underlying weaknesses of these systems, including a lack of coordination and planned integration among identity stakeholders; limited administrative, fiscal, and technical capacity; unrealized technology potential; and problems with vendors and procurement.[8] Nevertheless, countries have made significant progress in improving the coverage of their identification systems—birth registration in particular—over the past decade. Notably, the Republic of Congo and Gabon have achieved 91 percent and 90 percent birth registration coverage, respectively.[9]

Demographic Challenges and Weak Levels of Girls' and Women's Empowerment

Fertility rates in CEMAC countries are high, especially among adolescents. Total fertility rates in CEMAC countries are among the highest in the world and, except for the Central African Republic, well above those of countries at comparable levels of income. Moreover, adolescent fertility rates are higher than expected given the average total fertility rates in all CEMAC countries. Adolescent mothers and their children are at greater risk of poorer health outcomes than are older mothers.

High Fertility Is Both a Driver and a Consequence of Low Human Capital

Many children per woman is often associated with less investment in human capital (at both public and at the household level). Conversely, high child mortality, which contributes to low HCI, is a key determinant of high fertility. Nearly all adolescent girls who have ever been pregnant are out of school in many sub-Saharan African countries. Teenage pregnancy often equals a colossal loss of educational opportunity; a myriad of health issues, including the increased risks of anemia, postpartum hemorrhage, and poorer birth outcomes;

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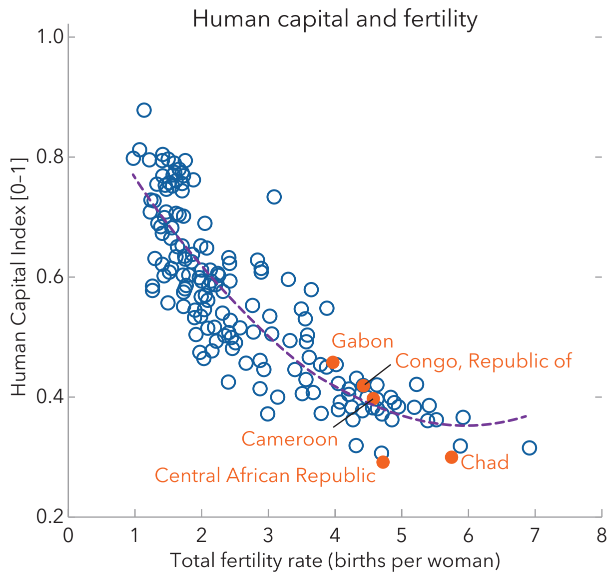
[8] World Bank Group. 2017. The State of Identification Systems in Africa : Country Briefs. World Bank, Washington, DC. https://openknowledge.worldbank.org/bitstream/handle/10986/26504/114628-WP-68p-TheStateofIdentificationSystemsinAfricaASynthesisofIDDAssessments-PUBLIC.pdf.

[9] The State of identification systems in Africa – a synthesis of country assessments (English). Washington, DC. https://openknowledge.worldbank.org/bitstream/handle/10986/28310/119065-WP-ID4D-country-profiles-report-final-PUBLIC.pdf?sequence=1&isAllowed=y.

and negative effects on girls' and women's future earnings prospects. Overall, CEMAC countries can be characterized by high fertility and low human capital.

Figure 9. Stunting Trends



Source: World Development Indicators (World Bank 2022).

To boost human capital outcomes, CEMAC countries need to tackle the intertwined challenges of adolescent girls' empowerment and early pregnancies since high or slowly declining fertility rates in CEMAC represent missed opportunities for girls' education and employment. Poverty combined with social norms and family preferences contribute to the economic marginalization of women by limiting their educational and labor market opportunities. Affordability as well as early marriage and pregnancies are among the main reasons for children, and especially teenage girls in rural areas, not being enrolled in school. Low female education limits labor market opportunities and contributes to high child mortality as well as high fertility. This, in turn, increases the challenges for CEMAC countries to afford pressures on social services, tackle poverty, and generate a rate of new job creation that exceeds the rate of growth of the population (Beegle and Christiaensen 2019).

Low human capital together with high or slowly declining fertility rates combine to delay the onset of the demographic transition and the potential for a demographic dividend in CEMAC. The demographic dividend is the social and economic benefit to a country that can be derived from a change in the age structure of the population. Faster rates of decline in the birth rates can lead to a period when a country has a larger share of working-age people and a smaller share of dependents (leading to a lower dependency ratio). With fewer dependents to support and higher savings, the maturing young population cohorts can boost the economic growth of the country if investments in education, health services, and infrastructure, as well as economic policies conducive to inclusive income growth and sustainable management of natural assets, are implemented. If the right policies are in place to exploit the demographic dividend, GDP per capita in CEMAC countries could be between 40 and 59 percent higher. According to estimates by Thakoor and Wakeman-Linn (2016), growth can be substantially higher, and low-income countries stand to benefit the most from exploiting the demographic dividends because the magnitude of the dividend declines as economies mature. For example, in the Central Africa Republic, a country with one of the lowest GDPs per capita in the set of 46 countries studied, factoring in demographic dividends increases GDP per capita by 59 percent over the baseline, which is the highest among CEMAC countries.[10] In contrast, in Equatorial Guinea, factoring in demographic developments causes GDP per capita to rise by 40 percent over the baseline, which is the lowest increase (as a percentage) among CEMAC countries.[11]

The COVID Toll on Human Capital

In CEMAC countries as in other parts of Africa and the world, the COVID-19 crisis has further exacerbated all the challenges that contribute to low human capital. The COVID-19 outbreak has generated both direct and indirect expected impacts on poverty and human capital more generally. Direct impacts include the

[10] See Appendix 2 in Thakoor and Wakeman-Linn (2016).

[11] The corresponding increases in GDP in the other CEMAC countries are Gabon: 44 percent; Republic of Congo: 46 percent; Chad: 50 percent; and Cameroon: 52 percent.

loss of lives. Indirect impacts are economic, including impacts on labor income due to the loss of earnings and employment, specially from most affected sectors (tourism); nonlabor income impacts due to the loss of remittances and private transfers; and disruptions to service delivery in social sectors, which are expected to have negative impacts on human capital and asset losses—particularly health, education, and nutrition services. Regional and international research has therefore estimated an increase in both poverty headcount and the poverty gap if no policy actions are implemented. Pandemic-related job losses and deprivation are hitting already poor and vulnerable people hard while also creating thousands of "new poor." Specific impacts in service delivery for the social sectors include threats to hard-won maternal and child health outcomes by constraining access to reproductive and maternal health care or further damage on the nutritional status of vulnerable groups. In education, at the peak of the pandemic, schools were closed in all CEMAC countries, leaving millions of learners out of school. Preliminary simulations produced with very conservative assumptions suggest that, for an average country in sub-Saharan Africa, the learning-adjusted years of schooling could go down by approximately 18 percent given the combination of less schooling and lower levels of learning (see World Bank, Simulating the Potential Impacts of COVID-19). This would translate into an average loss of $400 in annual earnings per student, which in turn represents very large economic losses for countries as a whole, since the loss of human capital will turn into economic losses. Evidence from other countries suggests that isolation, economic stress, and lockdowns can exacerbate tensions and already-existing issues of domestic violence and abuse, as well as increase risks of early pregnancies.

E. Key Messages

Progress in income per capita has been modest despite large natural resources. Income inequality in CEMAC is high compared with peers and has hardly improved over the past decade. The years of high oil prices have not translated into more inclusive and diversified economies. Non-oil growth, key to generate work opportunities for its large young population, has declined in recent years. Pro–inclusive growth policy advice from development partners has underscored the importance of enhancing governance of public funds, transparency, and reforms to improve the business climate. Implementation in the past few years has been weak in many areas

Diversifying the economy away from dependence on natural resources is central to placing CEMAC on a path for sustained and inclusive growth. At a time when the financial resources envelope is drastically reduced, refocusing spending priorities toward generating the synergies to propel non-oil sector growth momentum is critical. At the center of the strategy are deep-reaching structural governance reforms, investment in the human capital of individuals, and the suppression of corruption that is impairing the business environment and equal access to opportunities for all. Only through this dual transparency[12] and human capital shock will CEMAC lay the groundwork to incentivize formal private sector dynamism, boost the non-oil economy, and provide development prospects to the new generation.

[12] See Newiak, Segura-Ubiergo, and Wane (2022).

3. Reforms and Policies to Enhance Inclusive Growth: A Three-Pillar Approach

Pro-inclusive Growth Reform Pillar 1. Governance of the Public Sector: Enhancing Governance of Public Funds Including Oil Revenue, Improving Efficiency and Management of Public Investment, and Recasting the Role of State-Owned Enterprises

A. CEMAC Regional Standards for Budget Preparation and Execution

i. Assessment

The legal and institutional framework for defining the standards related to budget preparation and execution are defined at the CEMAC regional level (Box 2). The foundational CEMAC directive 06/11 on transparency and good governance plays a key role (Table 6). This directive serves as the general framework for all the other directives and lays the foundation for (1) the attribution and responsibilities of each public institution; (2) the economic context in which the policy decision in the area of fiscal policies are embedded; (3) the elaboration and presentation of the budget law; (4) the activities related to revenue collection and expenditure; (5) the information to be provided to the public; and (6) a participative process, with involvement by the civil society, in defining key policy decisions. While any regulatory changes will have only a limited immediate effect on behaviors, this directive, by design, provides a strong basis for governance. It also delineates clear-cut responsibilities and provides a strong requirement of transparency, both of which are critical to support an environment that limits the potential for corruption.

Implementation of this directive remains problematic. First, regional coverage is only partial since Equatorial Guinea, a top oil producer in the region, has not transposed this central directive. In addition, some crucial principles of this directive are not actually implemented in the countries that have adopted it. Fiscal reporting on natural resources management provides an emblematic example. While the directive requires the publication of financial operations concluded by the public sector, the key fiscal parameters of contracts with the oil sector are seldom made available in the budget documents to the public in a full and transparent manner. Public procurement is another example. The directive stresses that regulations on public procurement must comply with international standards. Based on these standards, open competition should be used as the preferred or default method of procurement and a complaints review mechanism should be in place. Finally, the effectiveness of this central directive is undermined by the limited implementation of the principle of asset declaration of elected or high-level public officials and the need to establish sanctions for noncompliance. These standards are not systematically observed in practice, which creates vulnerabilities to corruption and poor value for money in public investment management.

The limited implementation of the other CEMAC directives on the budget law perpetuates inefficiencies and poor PFM practices in several areas while also increasing corruption risks. First, transactions to and from the SOEs, including SOEs that are part of profit-sharing agreements in the extractive sector, are not systematically covered by central governments' fiscal reporting. This weakens the scope of internal and external controls in this key area, potentially allowing leakage of public funds to go undetected. Second, tax exemptions and other tax expenditures are rarely detailed and assessed in the budget documentation or they are maintained for several years without clear legal basis and economic justification. This may create governance problems and even provide undue ground for favoritism, distorting market operators'

Box 2. The Institutional and Legal Framework for PFM in CEMAC

Because CEMAC standards are set through the legal instrument of a "directive," their provisions need to be transposed into national laws to become applicable in member states. This transposition requires that member countries submit the relevant draft law to the CEMAC Commission for the latter's assessment of conformity. Recommendations of the CEMAC Commission are then embedded in the finalized law, which can be approved. This process is meant to ensure coherence between the regional framework and the national level. A set of implementing regulations then follow the approval of national legislations to ensure that processes and procedures, as well as specific obligations in the area of data reports and audits, are well defined and guide work practices in the public administration.

Transposition of these PFM directives has advanced in some, but not all, CEMAC countries.[1] This means that key standards in this area could potentially lack standardization and adherence. CEMAC central directives on governance and transparency (06/2011) and on the budget law (01/2011) have been transposed into national legislation by all CEMAC countries, except Equatorial Guinea. Transposition of all other directives is also partial because two countries (Cameroon, Equatorial Guinea) have not transposed these into national legislations.

Beyond transposition, a key challenge will be implementing the new laws and achieving actual improvements in PFM practices and public sector transparency and accountability. To that effect, a massive and continued effort to build institutional capacity for core PFM functions will be needed. This could include peer-to-peer exchange activities among member states or with other countries in Francophone Africa to leverage their experience. Moreover, considering existing capacity constraints, CEMAC countries will need to elaborate robust, fit-for-purpose reform strategies reflecting adequately sequenced and prioritized actions that will pave the way for a high level of compliance with the PFM directives. International financing institutions operating in CEMAC countries are supporting PFM reforms through their analytical/advisory and financing operations.

[1] The CEMAC directives have been transposed and are being implemented; an evaluation by the CEMAC Commission concluded that they have been implemented at a rate of about 35 percent. The transposition of these directives has been supported as policy actions through successive World Bank budget support programs.

incentives. Third, the consolidation and the full operationalization of the Treasury Single Account (TSA) still needs to be completed. The TSA is not used extensively for the domiciliation of the state's share in the extractive industry or for some external financing. In such cases, holdings related to the central government are even kept in foreign accounts. While the directive prohibits the deposit of public funds in commercial banks, maintaining fragmented banking arrangements outside of the TSA reduces the ministry of finance/treasury oversight of all government cash flows and weakens budget control and monitoring. This practice directly creates potential for weak governance, not least by complicating external audit of public funds deposited in commercial bank accounts. Moreover, it incurs high costs for governments that deposit funds with the same banks from which they borrow at much higher interest rates. Finally, an inefficient cash management system in all CEMAC member countries, combined with inadequate control and accounting of commitments, is the main cause of payment arrears accumulation.

The implementation of the CEMAC directive on public accounting also needs to be completed to strengthen expenditure controls, fiscal reporting, and external oversight to reduce fiscal slippage. Challenges in this area are of two types. First, expenditure controls are not effective and, in practice, not streamlined in most CEMAC countries, as exceptions to the regular expenditure procedure defined by the

Table 5. CEMAC: Key Directives on Public Financial Management: Scope and Issues Covered

CEMAC Directive #	Adoption Date	Scope	Issues Covered
06/2011	12/11/2001	Code of Good Governance and Transparency in the Management of Public Resources	Key principles to ensure transparency, good governance, and participation of civil society in the are of fiscal policy, and budget formulation and execution
01/2011	12/19/2001	The framework for budget law preparation and implementation	General rules on the nature, coverage, presentation, preparation, and adoption of the budget law
02/2011		General rules in the area of public accounting	Operational and procedural framework underpinning budget execution and controls
03/2011		Structure of the State's accounting - the balance sheet	General rules defining the object of the state's public accounting plan, and the rules of its production so as to track status/evolution of the state's assets and liabilities
04/2011		The nomenclature and presentation of budget operation	Key principles related to the presentation of operations of the general budget, of annexed budgets, and special accounts of the Treasury
05/2011		Table/presentation of the financial operation of the state	Defines principles (concepts and methodologies) for the production of statistics on budget executions (follows international statistical standards – e.g. GFSM)

directive have multiplied in practice. This creates incentives for expenses that are executed outside the normal spending chain, delinking budget execution from the resource envelope available and approved in the budget law. In turn, this practice explains the accumulation of large stocks of arrears, which tend to peak when commodity price shocks cause declines in budget revenues. It also severely weakens fiscal discipline and the legislative input to budget orientation.[13] The coverage of internal audits is limited, and internal audit activities do not apply standardized professional procedures. Also, the timeliness, comprehensiveness, and accessibility of fiscal reports remain limited. Operations of autonomous agencies, EBFs, and unorthodox spending are not systematically included in ex post financial reports, and information technology (IT) systems used to manage revenues, expenditures, wage bill, cash, and debt are not interconnected. This limited fiscal transparency also hinders the implementation of external controls and safeguards needed to deter or reveal potentially fraudulent activities. Furthermore, the limited independence of the court of accounts undermines the quality of external audit. Legislative scrutiny of the court's reports is also poor. Finally, despite a legal framework encouraging the publication of budget documents and fiscal information, much of this information is not accessible to the public and, if accessible, is made available with significant delays or in a user-unfriendly form.

ii. Recommendations

Strengthening PFM and tax/revenue administrations remains an imperative to enhance governance and reduce the potential for corruption in CEMAC. Progress in this area requires steps on different fronts:

[13] This occurs before the adoption of the financial act in the framework of the budget orientation debate.

Table 6. Selected Provision of Directive CEMAC 06/2011 on Transarency and Good Governance

Article	Provision
	Section I - Legality and Publicity of Public Financial Operations
1	No public expenditure can be committed if it is not defined by a legislative or administrative law, regularly published
3, 4	The regulation related to public tenders need to be cohered with CEMAC 06/2011. The selling of "public goods" are to be disclosed to the public and open for competitive bidding.
5	All contracts between the (central) administration and (public or private) enterprises related to the exploitation of natural resources (and concessions of public service) are made available to the public. This principle covers both the allocation of the contract as well as its specific content. Such contracts are controlled by the Court of Accounts as well as the competent legislative bodies. The interaction of the government with the private sector will have to be conducted in transparency.
	Section II - Attribution and Responsibilities of Institutions
1	Establishes that allocation of competences, expenses, and public resources within all level of public administration would have to be communicated in a comprehensive and coherent way.
	Section III - Economic Framework
1	Establishes the requirement that the budget law be encapsulated into a medium-term fiscal policy framework
	Section IV - Preparation and Presentation of Public Budget (Laws)
8	Mandates the publication, in the budget law, of detailed information on all the (fiscal and nonfiscal) revenues, including those related to the exploitation of natural resources
9	The nature and budgetary costs of all (tax) derogations are to be included as part of the annual budget; their validity is to be presumed only for the year of presentation into the budget document
	Section V - External Control
3	All the operations involving public funds are subject to the external (and independent) control of the Court of Accounts, whose creation is obligatory for each member states

- Effectively coordinating work to improve PFM would require strengthening the CEMAC Commission's capacity to strategically supervise adherence to regional standards in this area. Key actions would include measures to strengthen the Directorate of Public Finances at the CEMAC Commission through more dedicated human resources and a precise program to ensure regular reports on the status of implementation of the key CEMAC directives. The directorate should also support more strategic thinking on new reforms regarding priority areas (also as described in this note such as public-private partnerships, tax exemptions, SOEs).

- Consistently coordinating the adoption of reform strategies in every country would help guide the implementation of the CEMAC PFM directives. If properly targeted, these strategies would help CEMAC countries achieve budget savings and fiscal sustainability by addressing chronic problems such as the accumulation of payment arrears and contingent liabilities. These strategies will also help CEMAC countries improve the outcomes of public spending in key growth-enhancing areas such as human capital and infrastructure development.

- To provide checks and balances and ensure the right incentives for good management of public resources, it is necessary to strengthen independent external oversight of budget execution. In the CEMAC PFM system, external oversight is provided by the Court of Auditors, which needs to be independent from political interference to be credible. Work in this area has progressed in some cases, but work remains.

- Completing the implementation of the TSA would help CEMAC governments save money by minimizing idle cash and reducing the need for short-term borrowing, thereby bringing down debt-servicing costs. TSAs can also help optimize the use of available cash for smooth budget execution and increase the comprehensiveness of budget execution reports, thereby improving the transparency of public finances. Relevant steps would include expansion of government entities executing their budgets through the TSA; reduction of government accounts and deposits in commercial banks; regular—ideally daily—consolidation of cash balances; and timing of funds releases to budget entities based on regularly updated cash plans.

Some specific areas could be covered by the establishment of country strategies:

- Strengthening commitment and expenditure controls will help CEMAC countries stem the recurrent accumulation of payment arrears. Clearance of outstanding arrears will provide liquidity for government vendors, and prevention of new arrears will strengthen vendor confidence, helping bring down the cost of public procurement contracts. Apart from the timely clearance of existing arrears, CEMAC countries need to take decisive actions to prevent the accumulation of new arrears. Actions may include changes to PFM regulations to strengthen ex ante commitment and expenditure controls, to minimize the grounds for recourse to emergency procedures, and to tighten conditions for the payment of vendor invoices to reduce the risks of unauthorized expenditures and fraudulent invoices. Improved practices would include recording new commitments at the time these are incurred and ongoing monitoring to ensure invoices are paid on time and commitments closed upon contract completion.

- Strengthening good governance in the whole region requires the implementation of CEMAC provisions related to transparency. Enhancing transparency builds public trust and strengthens the management of fiscal risks, thereby improving access to financial markets and overall investor confidence. As discussed, there is a serious lack of transparency in several areas, including the disclosure of contracts in the extractive sectors, the proper recording of transactions at the subnational level in budget documents, and issues related to state-owned enterprises. Budget documents are often incomplete, for instance, regarding information on tax exemptions, their economic rationale, and their estimated costs. From this standpoint, significantly enhanced transparency will be key. Relevant steps would include timely publication of budget execution reports and audited annual financial statements, which should—per the CEMAC directive—provide the government's balance sheet detailing all financial assets and liabilities, including extra-budgetary funds, debt obligations, and contingent liabilities. Other relevant measures include membership of the Extractive Industry Transparency Initiative (EITI) and continuous compliance with EITI transparency requirements for the extractive industries and the disclosure of tax exemptions as part of the draft budget documentation, with disaggregated information on the estimated amount of forgone revenue as well as the beneficiaries of each exemption or concession. Another suggestion is that the CEMAC Commission, in cooperation with country authorities, began publishing (starting at the end of 2020) a regular report on the *Status of Adherence to PFM Directives in the Area of Transparency*. This report would track the set of processes and documents (for example, preparation, execution) related to budget law that are required by the PFM directives, such as extractive industry contracts and regular budget execution reports. Given that this approach to verifying and communicating adherence to the directives can be quite resource intensive and considering current problems in staffing the Directorate Finances of the CEMAC Commission, an alternative approach could be to work toward this objective through a peer-review system under the coordination of the CEMAC Commission.

- Increasing transparency and competition in public procurement will enable CEMAC countries to achieve cost savings while providing opportunities to firms. This reform would involve robust laws and regulations to make open competition the default method of public procurement and minimize grounds for direct contracting. Steps toward e-procurement, starting with online publication of tenders and contract awards, would also help more firms participate in public tenders and bring down prices.

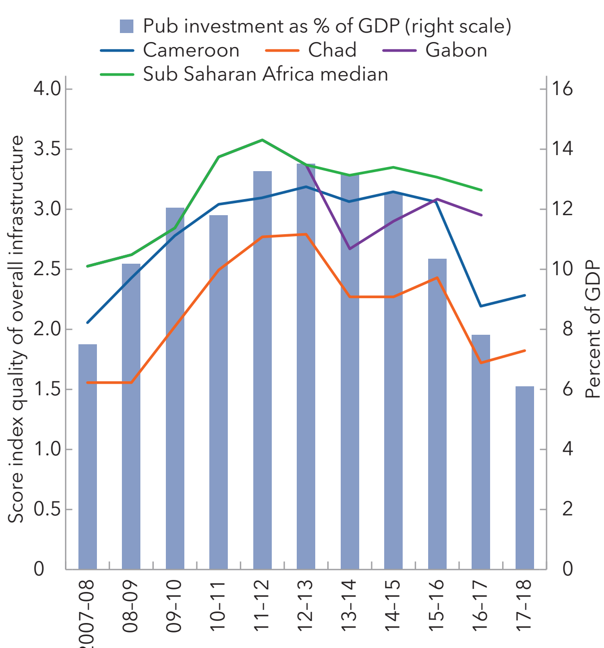
- Strengthening PFM and tax/revenue administrations remains an imperative to enhance governance and reduce the potential for corruption in CEMAC. Progress in this area requires steps on different fronts. Strengthening tax and customs administration to achieve sustainable increases in budget revenues will help CEMAC countries achieve fiscal sustainability and create fiscal space for growth-enhancing expenditures and much-needed investments in human capital. CEMAC governments could start by reviewing and rationalizing the numerous tax exemptions in effect in the region to expand the tax base and simplify tax regimes to facilitate tax compliance. At the same time, they need to invest in strengthening the institutional capacity of the tax and customs administrations to control compliance through information, communication, technology (ICT)-enabled risk-management systems, including the use of third-party information, business intelligence tools, and advanced audit techniques to detect patterns and instances of tax evasion and other fraudulent practices. At the same time, CEMAC countries need to simplify business processes and expand e-services (for example, e-filing, e-payments, automated customs clearance systems) to reduce the financial and administrative costs of taxpayer and trader compliance. Such reforms will help CEMAC countries improve their business environments and reduce incentives for firms to stay informal. Finally, investments in more efficient customs controls will help bring down the costs of cross-border trade and therefore play an important role in CEMAC regional integration initiatives.

B. Strengthening PFM in the Area of Public Investment Management

i. Assessment

Given the significant infrastructure gap in the region for power, water, digital, and transport services, the potential to unlock higher non-oil sector growth crucially depends on strategic infrastructure developments.

Figure 10. Overall Quality of Investment and Public Investment Level in Cameroon, Gabon, and Chad (2007–18)



Source: IMF, PIMA Country Reports.

- Past pushes for significant public investment efforts have failed to yield significant improvement in the perceived overall quality of investment in countries where data are available.

- With limited available fiscal space, strategic project selection and appropriate mechanisms to ensure effective implementation will be key to maximizing economic benefits from public investments.

- However, raising the quality of investment has proved to be a challenge in the CEMAC region: Recent Public Investment Management Assessments (PIMA) in member countries highlight important shortcomings that affect the quality and efficiency of public investments in the region. According to the PIMA metrics, critical weaknesses exist at the planning phase of the public investment management process, on both the institutional framework and its effectiveness. These weaknesses at the earliest stage of the public investment management (PIM) cycle have a direct negative impact on the efficient allocation of resources and the execution of capital budgets.

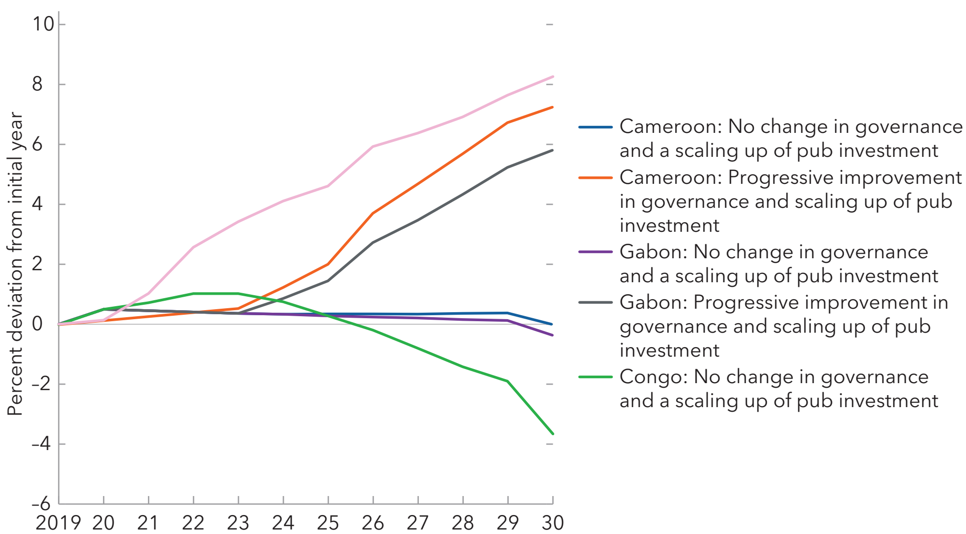
Box 3. Shifting the Focus on the Quality and Efficiency of Spending: Spending Better Rather than More—A DSGE Approach

The debt sustainability, public investment, and natural resources model[1] is an example of a small open economy with standard sector setup. It features two types of households (credit constrained and not credit constrained), three production sectors (oil, tradable, and nontradable), and separate prices for exports and imports. The model assumes perfectly competitive markets with flexible prices. As growth in this model is the endogenous variable, this approach offers interesting insights on the dynamics between investment, growth, and debt after initial conditions are specified.

We simulated how an improvement in governance would affect growth for three CEMAC countries (Cameroon, the Republic of Congo, Gabon), considering their respective macro parameters as of the end of 2019. We simulated three scenarios: (1) a scale-up in public investment spending of 20 percent of the current public investment to GDP ratio over 10 years with no change in governance; (2) a gradual improvement in governance over 10 years captured through three channels (see annexes) with no increase in public investment spending; and (3) a small increase in public investment spending and a gradual improvement in governance over 10 years.

We found that a comprehensive governance reform package delivers much higher growth for all countries covered in this analysis compared with a simple scaling up in public spending with no improvement in governance. A simple scaling up of investment spending in scenario 1 leads to crowding out of private demand (investment and consumption) in the long term, which reduces the positive impact on non-oil sector growth, locking countries in their current resource dependency

Box Figure 3.1. Evolution of Non-Oil GDP Growth over 10 Years with and without Change in Governance



Source: International Monetary Fund.

[1] The debt sustainability, public investment, and resource model draws from the DIGNAR-19, a Dynamic General Equilibrium (DGE) model of a real small open economy developed at the International Monetary Fund to help country teams with quantitative macroeconomic assessments and policy scenario analysis in Low-Income Developing Countries (LIDCs) and Emerging Markets (EMs) during the COVID-19 pandemic. It is an extension of the DIGNAR model that accommodates the effects of the COVID-19 pandemic. See Aligishiev, Melina, and Zanna 2021.

Box 3. Shifting the Focus on the Quality and Efficiency of Spending: Spending Better Rather than More—A DSGE Approach *(continued)*

conundrum. In fact, in a scenario with no governance improvements the Republic of Congo's debt trajectory becomes explosive, implying that the only sustainable path necessitates governance reforms to achieve higher growth.

The model dynamics confirm that improved governance has a wide impact on reducing distortions and produces windfalls that are larger than a simple scale-up in public investment. Improved governance effectively unleashes a crowding-in dynamic and reduces the generalized cost of production, boosting growth in the non-oil sector. In addition, because waste in public capital spending is reduced, the return per dollar spent is maximized and growth dividends are higher. Improved revenue collection also increases fiscal sustainability, leading to a downward trend in public debt and reducing the reliance on taxes on labor and consumption, thereby further boosting private sector growth (for a full background analysis, see Annex 2).

- Consequently, the poor state of infrastructure in the CEMAC region erodes its ability to transform its oil and mineral resources endowment into productive assets that will help diversify its economies.
- An important element of increasing the impact of existing and new infrastructure will be improving the management of PPPs (for example, transport, power generation) and exploring their expansion, while managing associated fiscal risks.

ii. Recommendations

Better governance of public investment can have a high impact. Given the significant infrastructure gap in the region, the potential to unlock higher and more inclusive non-oil sector growth crucially depends on strategic infrastructure development in the CEMAC region. The analysis points to a higher return of improved governance compared with a simple scaling up of public investment. Improving governance in public investment management will help CEMAC countries maximize the growth dividends from infrastructure development. The same is true for investment in human capital (for example, education, health). With limited available fiscal space and high public debt, the key to maximizing the economic benefits from public investments lies in strategic project selection and appropriate mechanisms to ensure effective implementation. This includes better transparency and a focus on evidence-based investment decisions, with rigorous cost-benefit analysis to maximize the rate of social return and avoid white elephant projects. Ultimately, better public investment management also crucially depends on the quality, predictability, and transparency of budget execution, which are essential to improve overall governance and reduce the risks of corruption. The focus will be largely to spend better, not more, and build capacity for better project implementation and asset management. The Development Bank of Central African States (BDEAC) can play an important role in securing financing and ensuring strong governance in the execution of regional infrastructure projects.

Improving governance in public investment management needs to focus on the regulatory framework, strategic planning and project selection, and improved implementation monitoring. PIM requires specific planning and budgeting processes, including transparent criteria for the selection of projects to be financed from the budget, which should ideally be regulated by law. The regulatory framework also needs to define implementation monitoring and reporting requirements to ensure accountability in the execution of the capital budget and enable timely adjustments to individual projects and the overall project portfolio. CEMAC governments will need to invest in their capacity for strategic investment planning and coordination, which needs to be based on evidence-based analysis of infrastructure gaps and policy-based prioritization of sectors. Decentralized preparation of capital budget submissions should be based on prioritized sector investment plans, with central project selection based on policy priorities, cost-benefit analysis, and budget availability. Parliaments could provide better scrutiny of capital budgets through a dedicated prebudget debate. The consolidated list of approved projects should be shared widely to ensure appropriate budget allocation and reporting.

Implementation monitoring of public investments needs to combine tracking of financial as well as physical progress of projects. CEMAC governments can draw on the experience of many countries around the world that use affordable ICT tools, including geotagging of project sites and remote monitoring through smartphones and drones, to track physical progress of capital projects and verify completion of works before paying contractors' invoices. Supreme audit institutions could also help improve value for money and overall governance of capital investments by developing their capacity for specialized audits of infrastructure projects, including audits of public procurement processes and contracts.

C. The CEMAC Framework for Governance in the Extractive Sectors

i. Assessment

Oil extraction and export plays a major role in the economy of most CEMAC countries. Oil accounts for about 20 percent of GDP and covers roughly 75 percent of the region's exports of goods. Tax and nontax revenues related to oil contribute to more than 40 percent of total revenues. Given the size of this sector and its importance in commanding public resources, good management in the oil sector is key to ensure governance in the rest of the economy.

The oil sector is very complex, by nature, and pushes capacity of public administrations to their limits. The industry is basically organized around two typical arrangements. In a profit-sharing agreement, the state (normally through an SOE) and a foreign private company (normally through a resident subsidiary) set up a partnership for the extraction and export of oil and agree on a profit-sharing scheme. In the concession scheme, the operator typically pays a royalty and an income tax for the right to extract and export oil. Sometimes a concession scheme includes sector-specific taxes, such as resource rent or additional profit taxes

The actual share of the oil transaction that will go to the state requires complex calculations, including the exact amount of oil produced and exported, its selling price, and various cost factors. An important share of oil production is sold on futures markets. As a result of the ever-growing complexity of this sector, in practice it takes time and steadfast investments for the state to build full capacity to manage and control such contracts and properly calculate (or audit) its share.

Available data and studies on CEMAC suggest that oil export data in official statistics are sometime prone to miscalculation.[14] First, an analysis of CEMAC balance of payments data suggests a strong correlation between recorded oil exports and recorded capital outflows. This is probably an indication that part of the counterpart to oil export is not repatriated into the exporting country and is recorded as capital outflow. Second, other studies suggest that the oil export sector is plagued by under-invoicing. Third, there is also evidence of very large deposits by CEMAC residents in foreign countries, which are likely not in full compliance with CEMAC foreign exchange regulations.[15] Given the importance of oil as a primary source for foreign exchange earnings (and the evidence regarding balance of payments), it is possible that part of such holdings is related to unrecorded oil export earnings proceeds.[16]

[14] See CEMAC SIP [_] for more background and details.
[15] See Lando, Rosa, and Suc 2019.
[16] See IMF Country Report No 19/215

Oil-exporting countries can refer to the EITI, an international standard widely used to enhance and report on governance in this area.[17] The EITI sets ambitious standards for strong governance and full accountability in the extractive industry. No formal relationship exists between the CEMAC Commission (or other regional institutions) and the EITI since membership is by countries only. However, there is a strong synergy between the (voluntary) EITI requirements and the CEMAC guidelines for PFM (which set specific requirements for CEMAC countries).[18]

Fortunately, CEMAC legal frameworks underpinning various obligations related to oil transactions provide a strong basis for a good governance; however, there are challenges in the practical implementation. The first problem is to ensure that customs are and remain scrupulously at the center of the declaration of export transactions and that this information is shared with the tax institutions (national level) and those charged with the governance of the monetary union (BEAC). CEMAC's framework in the field of customs legislation is clear: nothing can leave the region without prior declaration to customs and without authorization of customs. The second challenge is to fully implement the ex ante and ex post controls of oil transactions that are required by CEMAC PFM directives. The customs legislation in all CEMAC countries establishes the specific obligation to provide any additional information that the customs authorities may need to verify the plausibility of the customs declaration related to oil exports (volumes, prices, and timing). Finally, the customs law and the foreign exchange law also oblige CEMAC residents (including oil companies) to always include the invoice in the customs declaration (as part of this declaration) and to provide information on the expected timing and domiciliation of the oil exports; this is also necessary to comply with specific obligations related to the foreign exchange law.

In fact, CEMAC customs have a weak capacity to cope with this complex sector and have often not proactively applied these regulations (Box 3). Customs declarations are often incomplete or incorrect. The strict monitoring capacity of oil transactions is limited. It is often assumed that, given the presence of the state in several benefit-sharing agreements, customs should not impose an additional burden.

ii. Recommendations

First, the CEMAC Commission should work to ensure full implementation of the regional legal framework in this area, including by enhancing its own capacity. Given the lack of concrete implementation in many areas, member states should consider submitting an annual report to CEMAC on the status of implementation of guidelines consistent with the sound functioning of a customs union and of controls and monitoring in the extractive sector.

The foreign exchange law also requires full implementation. The issue of repatriation highlights an important difficulty that regional authorities need to consider in greater detail: the rule of law when individual members do not respect the regional legal framework. In particular, improvements could cover the banks' responsibilities in this area and the nature of (mostly ex post) customs verifications and sanctions of noncompliance. The law would need to cover oil traders and perhaps extend to banks involved in settling the transactions.

Given the complexity of extractive sectors, but also the importance of good governance to ensure its contribution to the budget, specific capacity should be built. In particular, it will be important to establish capacity at the regional level (ideally the BEAC) to assess the link between oil prices and volumes and expected tax revenues. This will be essential in determining whether the tax revenues that enter (and therefore the gross NFA inflows) are justified by the level of prices and output or if other policies are needed to strengthen external stability (including monetary policy at the CEMAC level or fiscal policies at

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[17] See https://eiti.org/.

[18] Four of the CEMAC countries are part of the EITI: Central African Republic, Chad, Cameroon, and Gabon

Box 4. Customs: An Assessment of Standards[1]

Customs' role is important in controlling the oil and gas sector. Customs' existing mandate to control exports should be effectively carried out to assist CEMAC with managing this sector, enhancing governance, and receiving the due amount of revenues from natural resources.

The CEMAC Regulatory Framework

The customs authorities of CEMAC member states have the unconditioned right and obligation to control introduction in and exit of goods from the community and authorize these operations only after compulsory import and export formalities have been accomplished. Regulation 05/01–UEAC-097–CM-06 of August 3, 2001, establishing the revised Customs Code (CC) of the CEMAC provides that exported goods shall be reported to customs (Article 94), subject to a customs declaration (Article 110–1) even if no customs duty is applicable (Article 110–3) and can be inspected (Article 127–1). Customs shall authorize boarding of exported goods on ships (combined Articles 84–2 and 145), and exit of goods from the territory is possible only when customs formalities have been completed (Article 146). The Customs Code is directly applicable by member states.

There is no exception, based on the law, to the fact that all resident economic agents exporting goods are subject to the obligations mentioned above. To oppose the exercise of customs functions is an offense (Artticle 62 of the CC). Article 2 of the CC provides that customs laws and regulations must be applied without regard to the quality of the persons; and goods imported or exported by the state are not subject to any immunity or derogations. As a result, there is no suspension of customs obligations in any way when the economic entity exporting consists of a partnership between a private entity (for example., an oil company, through its resident arm) and an SOE.

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[1] From the IMF's Fiscal Affairs Department, based on capacity development engagement.

the country level). Discussions with regional institutions suggested that one step in this direction would be revisiting the adequacy of the documentation model to be provided by petroleum companies to the customs and the reporting system envisaged with the BEAC.

It will be also vital to establish in the customs administration of the largest oil exporters a dedicated unit endowed with specialty knowledge of the oil sector (at the national level). Such a unit would have intelligence and risk analysis capabilities and would play a central role in directing, supporting, and monitoring overall customs control activities. In particular, it would define the exact information it will ask oil exporters to fill in order to monitor and respond to emerging governance risk (for instance, when otherwise available information on oil prices and production do not correspond to the customs declaration). In other words, the dedicated unit would need to establish a cartography of the risks for misreporting or nonreporting, in order to control these risks. The dedicated unit would benefit from having representatives of the state-owned oil companies, because SOEs may be in an ideal position to obtain critical data for the analysis of oil and gas contracts.

The CEMAC Commission needs to strengthen the implementation of the transparency provision included in the CEMAC Directive on Transparency and Governance (06/2013). In particular, it needs to urge member countries to provide a complete reconciliation of oil production and export data with the oil tax revenues included in the budget documents. Doing this would lay the groundwork for participation to the EITI membership, which should be encouraged.

D. Strengthening Management and Accountability of State-Owned Enterprises

i. Assessment

The governance of SOEs in CEMAC countries is going through a transition, with an ongoing effort to increase transparency and a focus on performance improvement. Cameroon is the only country to publish an SOE aggregate report. In other CEMAC countries (Chad, the Republic of Congo), either the government discloses audited financial statements of the individual SOEs or the SOEs disclose themselves (Cameroon's SNH). However, the reported data tend to lag by several years and, overall, SOEs' operations are characterized by a lack of transparency. Experience of company directors is not always aligned with the specific activity of the SOEs. Most SOEs in CEMAC countries are caught in a negative spiral of losses and lack of resources to improve their governance and management practices. For instance, many lack a modern management information system, have weak internal control environments, and face significant challenges in preparing financial statements. As a result, audits of SOE financial statements by reputable international firms rarely yield a clean opinion.

Weak governance, coupled with a range of operational and organizational challenges, have led to inefficiencies, poor service delivery, and chronic financial losses. The standard of service of CEMAC utilities—in terms of access, quality, and reliability—is among the lowest in sub-Saharan Africa. In addition, most utilities are loss-making, imposing a significant burden on public finances and generating fiscal risks. For instance, in Cameroon, the SOE portfolio generated aggregate losses each year between 2014 and 2018, with an average of CFAF45 billion, despite significant subsidies (see below).

SOEs also carry out significant quasi-fiscal activities, which often weigh heavily on their finances. The main form of QFA conducted through SOEs is below-cost tariffs in the electricity, oil, and water sectors. In some member states, like Cameroon or Chad, the state provides significant subsidies to cover some of those costs without a clear link to measurable performance indicators. In addition, many SOEs face difficulties in collecting revenues from government bodies, leading to liquidity problems.

SOE ownership arrangements are fragmented and weak. A centralized ownership entity is essential to monitor the fiscal risks associated with SOEs and to tackle the governance issues that give rise to these risks. To this end, Cameroon has established two dedicated SOE units within its ministry of finance. The Republic of Congo has established one within its ministry of economy. These are still at an incipient stage of development, and their powers are limited. The Central African Republic and Chad are considering establishing such units within their ministries of finance. In the Central African Republic's case, a new law adopted in January 2020 provides the legal basis for that. Typically, the line ministries still wield considerable power through the traditional system of *tutelle technique*.

ii. Recommendations

CEMAC governments need to improve the way SOEs are managed[19] and reduce the footprint of SOEs in sectors where the private sector can operate. SOEs have a large footprint in CEMAC economies and—in many cases—a substantial impact on public finances in direct budget costs and fiscal liabilities. The current crisis adds to the urgency of rationalizing SOE portfolios and strengthening incentives for improved SOE performance. This is a good opportunity for CEMAC countries to review their SOE portfolios and assess the need for maintaining SOEs in commercial sectors, especially in tradables sectors, and the operation of infrastructure through PPPs. Criteria for maintaining such presence (structural market failure and the provision of essential public goods) need to be elaborated in SOE policies. These policies should guide

[19] See "State-Owned Enterprises and Sectoral Distortion: Growth and Budget Implications," Cameroon: Selected Issues, IMF Country Report No. 22/76.

CEMAC governments' decisions about divesting from SOEs in selected sectors. This would involve selling government stakes in selected SOEs without necessarily going for full privatization. The sale of minority stakes can help CEMAC countries raise nontax revenue and also improve SOE performance by bringing in investors who can help strengthen corporate governance, transfer know-how, and help SOEs become part of regional or global value chains.

CEMAC countries need to develop regulatory frameworks and other mechanisms (such as performance contracts) to ensure that SOEs are financially sustainable. SOE regulatory frameworks should mandate that government financial support to SOEs (subsidies, loans, guarantees, or capital injections) be provided according to clear criteria and performance standards and be clearly reported in budget documentation. This is particularly pertinent to utilities, which need to have formal agreements with the government to specify their public service obligations—that is, the goods or services they are required to provide—even if these would be unprofitable without government subsidies.[20] Agreements on public service obligations need to specify unit costs as the basis for the payment of subsidies, as well as measurable indicators of the quantity of outputs and quality of services to be delivered. To enhance SOEs' incentives to improve their financial and operational performance, CEMAC governments could aim—to the extent possible—to redirect subsidies that cover SOEs' operational losses to targeted subsidies to consumers. Moreover, the policy and regulatory frameworks will need to ensure the principle of competitive neutrality through safeguards to reduce the risks of preferential treatment of SOEs in terms of sector regulators, taxation, and access to finance or public contracts.

SOE governance reforms typically focus on three issues: (1) strengthening the ownership function; (2) professionalizing boards and management; and (3) increasing the sector's transparency. These measures are mutually reinforcing. For instance, a stronger ownership entity is able to monitor the behavior or boards and the quality of the SOEs' reporting. Experienced board members are familiar with reporting, auditing, and disclosure issues. Enhanced reporting systems and effective audit arrangements help ensure that the boards and the ownership entity receive adequate, timely, and reliable information.

Strengthening the ownership and oversight function requires a significant investment in institutional capacity. This would involve establishing dedicated units in the ministry of finance (or dedicated agencies) with the mandate to monitor SOEs' financial performance and report on the performance of the overall SOE portfolio. Such units will require ministry of finance staff with specialized training or externally hired staff with skills in corporate finance, strategy, financial reporting, and auditing. They will also need appropriate ICT tools to collect, compile, and analyze SOE data. These units should also have the expertise and mandate to advise the government on policies to improve portfolio performance and reduce the fiscal burden and risks arising from SOEs. The revamping of the legal framework related to SOEs could also help create a strong foundation for improving SOE governance and performance. Ministries of finance should have a strong mandate to request all SOEs to provide regular reporting on financial indicators and submit audited financial statements and business plans. The dedicated units should review these documents, analyze SOE data, and prepare recommendations on financial support to SOEs, including subsidies, capital injections, loans, grants, and guarantees. They should also produce and publish annual consolidated reports on SOEs' financial performance. At a later stage, the SOE units could also play a key role in vetting candidates for key positions such as SOE chief executives and board members.

To increase financial transparency, two essential measures are (1) the systematic and timely publication of portfolio- and SOE-level financial information and (2) the identification and quantification of public service obligations. Aggregate reporting is essential to provide a clear picture of the composition and financial performance of the SOE portfolio to enable evidence-based policymaking and to support government accountability for its exercise of the ownership function. Publishing the annual audited financial statements

[20] See *Oil Wealth in Central Africa: Policies for Inclusive Growth* (IMF 2012); available here.

within a reasonable timeframe (less than six months) is essential to establish a basic level of transparency and accountability in each SOE. The identification of SOEs' public service obligations and the quantification of associated outputs and unit costs are critical to assessing an SOE's financial performance and operational efficiency as well as the need for government subsidies of its operations. Without defining and formalizing SOEs' public service obligations and measuring their cost, it will be extremely difficult to enable SOEs delivering public goods or services to achieve financial sustainability and reduce the associated burden on public finances.

Pro-inclusive Growth Pillar 2. Enhancing Competition and Making CEMAC More Attractive to Investors: Unlocking Growth Potential through Enhancing the Business Climate and Fostering Regional Integration

A. Business Climate

i. Assessment

There are two main premises to the work needed to enhance the business climate: creating space for the private sector and reducing the cost of compliance. First, creating the space and opportunity for a vibrant private sector requires that the footprint of the state is gradually reduced. This requires a credible plan to transfer commercial assets and activities (such as in agriculture) to private sector management or ownership. As a corollary, the focus of the state would move from being a largely prominent actor to strengthening its capacity to create the conditions for an inclusive, level playing field. Second, creating the space for more involvement of the private sector translates into more opportunity for the latter if the generalized cost of production is at par with main comparators. A key measure of the effectiveness of the state as facilitator would then be the extent to which regulatory efforts can practically and sustainably reduce the cost of compliance for businesses by improving the mechanisms and transparency for tax collection and adopting modern trade facilitation methods.

Progress of reforms in the investment climate in the CEMAC region has been among the lowest in sub-Saharan Africa. A few points are striking:

- According to the international property rights index,[21] which measures property rights along 11 dimensions including aspects of business environment, CEMAC member countries included in the survey ranked among the poor performing countries (about 119 out of the 129 countries surveyed).[22] Indeed, CEMAC average index (3,443) is below the sub-Saharan Africa average (4,077). The countries have common challenges, including in areas related to starting a business, dealing with construction permits, registering property, paying taxes, trading across borders, ease of access to credit, enforcing contracts, getting electricity, protecting minority investors, and resolving insolvency. However, some of them are already investing in one-stop shops to simplify administrative procedures for business operations including customs, land registration, trade, tax and other sectoral procedures, but their internal organization remains a challenge.
- On paying taxes, for instance, the corporate tax rates range from 30 percent to 35 percent, which is higher in comparison with other regions (for example, the corporate tax rate in the West Africa Economic and Monetary community ranges from 25 percent to 30 percent). This remains an impediment to private sector development and growth of the formal sector (because fiscal pressure creates an incentive for informality). In addition, turnover tax ranges from 1.5 percent up to 3 percent of corporate turnover, which is retained if the amount is higher than the corporate tax amount (and this is usually the case). This turnover tax levy has always been a controversial subject between private sector associations and the Governments in countries where it is required. Complex rules benefit entrenched interests only and discourage potential

[21] https://www.internationalpropertyrightsindex.org/#compare-container
[22] https://lpi.worldbank.org/international

national and foreign investors. FATF (https://www.fatfgaf.org/) also suggests that a key impediment to access to finance for businesses and FDI relates to the complex and transparent procedures needed to incorporate a company and fulfill the administrative obligations. Against this background, IMF staff have consistently encouraged the authorities to expand the tax base rather than increase the tax rate.

- Improving the tax and trade environment could impact private sector growth positively and significantly across the board. The Implementation of the provisions of the Organization for the Harmonization of Business Laws in Africa (OHADA) to improve business climate across CEMAC remains uneven.

ii. Recommendations

The private sector can seize opportunities to expand generally only if it operates in a favorable business climate. Leveling the playing field will open markets to more actors and make growth more inclusive. CEMAC lags in this regard to most comparators, including many sub-Sahara African countries.

Reforms should focus on concrete impact. The focus should be on identifying key reforms that can impact the economics space and, concretely, enhance competition. Bringing about more competition, in the framework of clear and well-communicated rules of the game in the region, would be key to set in motion a private sector–led revival. Multiple high-impact measures would benefit the investment climate environment:

Starting a Business

- Revising the legal and regulatory frameworks of starting a business to drastically simplify the existing procedures

- Making fully operational one-stop shops for business registration in the region, increasing the use of automated solutions, and streamlining their internal procedures[23]

Enforcing Contracts

- Revising the code of civil and commercial procedures to incorporate the international best practices of commercial justice[24]

- Enhancing the judiciary system and commercial courts

- Developing automated solutions and operational tools for the commercial courts to improve procedures and monitoring the performances of judges and lawyers involved on the process of managing the commercial cases

- Encouraging implementation of mediation in the commercial courts

- Fighting corruption and improving governance in public institutions

Paying Taxes

- Revising the corporate tax rate and eliminating the competing turnover tax

- Simplifying the tax regimen to reduce the number of declarations and payments

- Implementing online solutions to allow online tax filing and payments

- Enhancing transparency and streamlining inspections/tax audits by introducing a risk-based approach

[23] See "Republic of Equatorial Guinea: 2022 Article IV Consultation—Press Release; Staff Report; And Statement By The Executive Director for Republic of Equatorial Guinea," IMF Country Report No. 22/49.

[24] See Lando, Rosa, and Suc 2019.

Trading across Borders

- Improving customs modernization and encouraging effective use of automated solutions in goods-clearing procedures
- Developing and implementing true one-stop shops and joint approaches in preclearance documents collection, border management, and goods inspections and controls
- Reducing compliance cost by modernizing and simplifying customs procedures, including eliminating redundancies of formalities and verifications imposed by the agencies involved and ensuring a coordination by Customs.

B. Financial Sector Development and Inclusion

i. Assessment

Financial development and inclusion are a major constraint to equitable growth, and the BEAC has been spearheading initiatives to promote regional initiatives to promote financial inclusion. Main avenues of action include modernizing the regional credit registry, establishing the legal framework for private credit bureaus, updating the payments systems infrastructure and legal framework to promote fast/mobile payments and Fintech providers, and preparing a regional financial inclusion strategy. Other activities include implementing a risk-based approach to AML/CFT with simplified approaches to customer due diligence. On the national level, initiatives include work to establish moveable asset registries, partial credit guarantees, and national financial strategies. However, financial inclusion and deepening in CEMAC remains among the lowest in sub-Saharan Africa (see Figures 11, 12, and 14).

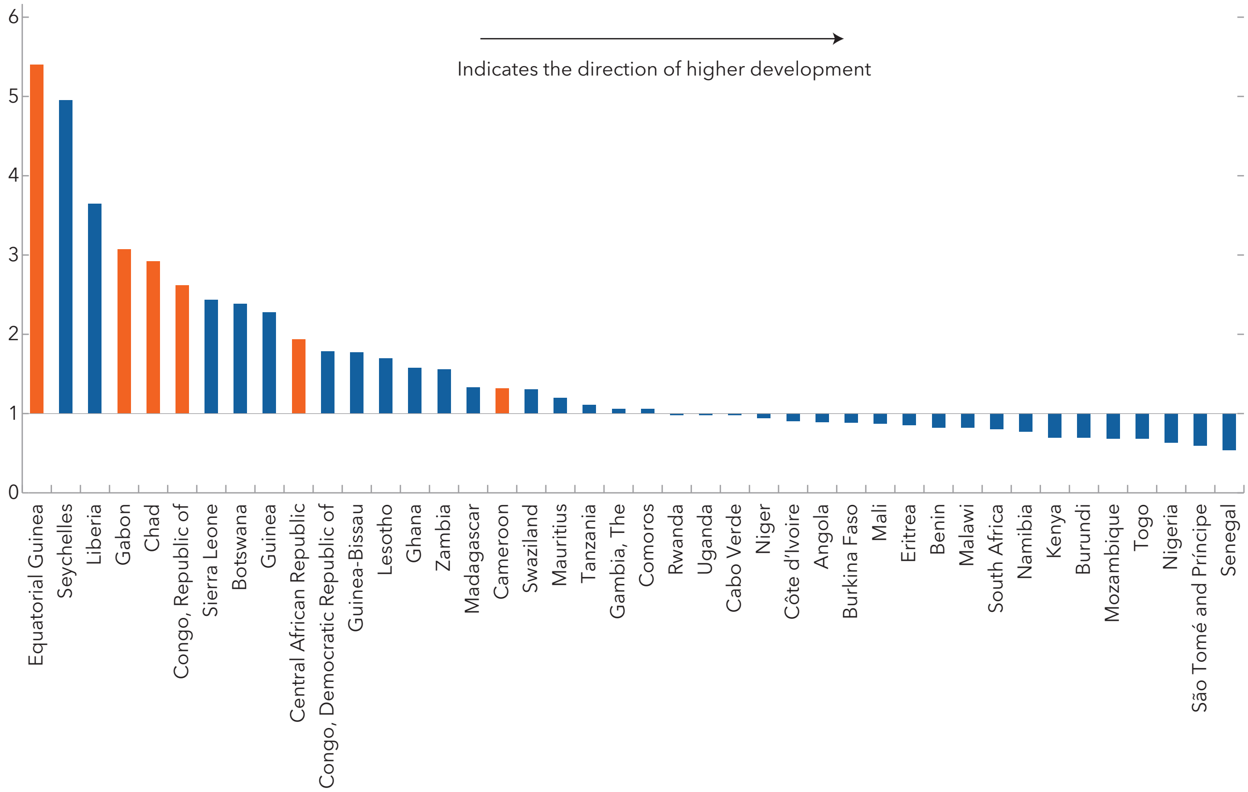
Little progress has been made, however, in the development of finance and of institutions in the CFA zone. The gap in financial development between the CFA zone and the rest of sub-Saharan Africa continues to be explained by differences in institutional quality, including in the availability of credit information and in the recognition and enforcement of property rights. Lack of progress in these areas also hampers the ability for greater financial deepening to translate into lower poverty. Since the creation of the merged regional stock exchange in July 2019, the development of the stock and bond market has remained stagnant.

Macroeconomic stability has a direct positive impact on the financial sector. Regarding this important dimension, it is important to note that CEMAC's monetary arrangement (a peg to the euro with guarantee from the French Treasury) has provided overall a lower inflation and a stable anchor to investment and trading. CEMAC's regional strategy in response to the slump in oil prices in 2014, encompassing a very large (and largely coordinated) fiscal adjustment, has also contributed to, first, averting a balance-of-payment crisis and, then, gradually increasing the level of BEAC foreign assets. Continued efforts to underpin macroeconomic stability will be key to supporting a healthy financial sector and, therefore, the sector's ability to reach a larger share of the population over time. However, CEMAC's banks are also plagued by a large stock of governments' payment arrears (about 6 percent of CEMAC's GDP as of mid-2019), which affects them directly and indirectly (through clients with difficulties getting paid by the government).

Financial Depth

CEMAC presents a large gap in terms of financial development. Alter and Yochai (2015) provide an overall assessment of the financial development gap for CEMAC and other sub-Saharan African countries. Their approach is to relate financial development (as a median of private credit to GDP obtained from early country regression) as a function of a set of explanatory variables (including GDP per capita and incidence of poverty) and dummy variables (including the importance of the oil sector and status as a landlocked country). This approach defines a financial development gap as the ratio between benchmark and actual

Figure 11. Financial Development Gap in Sub-Saharan Africa

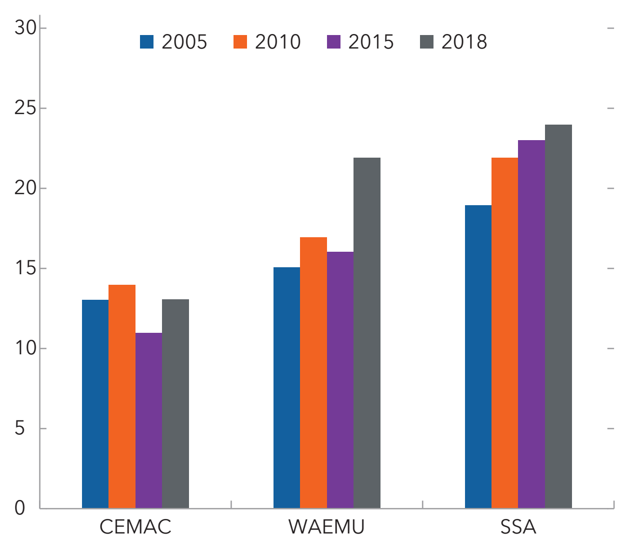


Sources: FinStats database; and authors' calculations.
Note: A value higher than one reflects that countries have an underdeveloped financial sector (as proxied by private credit to GDP ratio) compared to their expected benchmark, given their state of macroeconomic development (for example, income per capita levels, population). CEMAC countries are highlighted in orange.

private credit to GDP. The findings are that most sub-Saharan African countries deviate substantially from their benchmark, which highlights the degree of financial sector underdevelopment. According to this approach, CEMAC countries have among the least developed financial sectors in sub-Saharan Africa. In other words, CEMAC countries present the largest opportunity to make financial development an engine of inclusive growth.

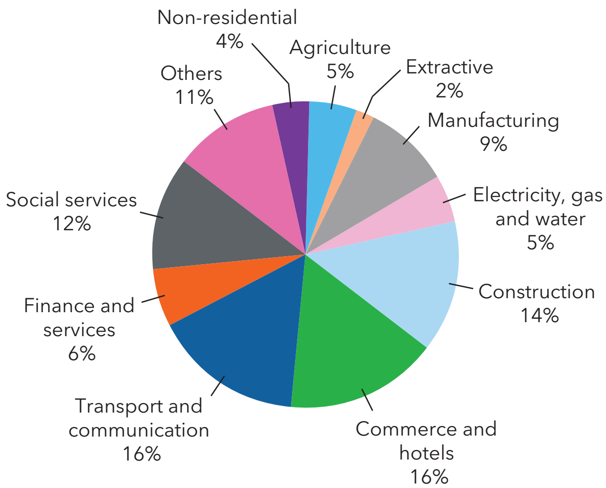
A key dimension of financial development is the extent to which credit supports the allocation of savings to investment opportunities. This function entails financial intermediaries assessing the risk profile and understanding and classifying hard and soft information on businesses and consumers and their role in smoothing the intertemporal consumption and investment possibilities of their clients through their ups and down in business cycles. The volume of credit to the size of the economy is, therefore, an indication of the extent to which financial

Figure 12. Credit as Share of GDP



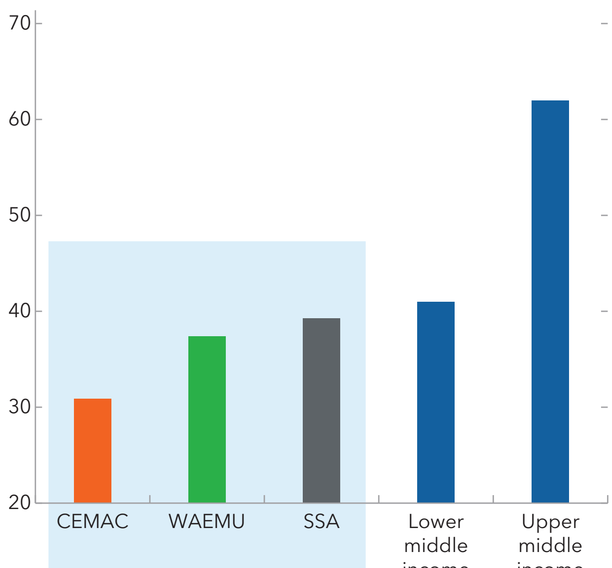
Sources: IMF (WEO); and World Bank (Financial Inclusion Index Database).

Figure 13. CEMAC Bank Loan Portfolio per Sector



Source: IMF staff calculations.

Figure 14. Access to Finance
(Percent)



Source: World Bank, Financial Inclusion Index Database.
Note: Percentage of respondents having an account with banks, other financial institutions, or mobile banking.

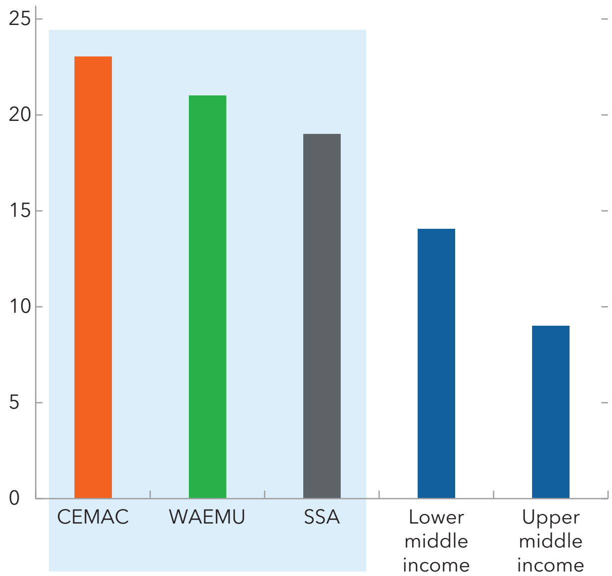
intermediaries help move an economy closer to its production frontier. With countries moving from developing to higher levels of economic development, the share of total credit tends to increase. Data indicate that credit as a share of GDP is lower in CEMAC compared with WAEMU, and both are lower compared with the average for sub-Saharan Africa. Moreover, this indicator of financial depth has hovered around 10 percent since 2005 in CEMAC, whereas it has shown sizable increases in the two comparators.

Another way to understand the link between financial depth and growth is to analyze the sectoral allocation of credit. To support economic diversification and structural transformation, it is important to assess whether the financial sector is supporting the sectors that have better potential in the economy. In general terms, CEMAC offers large potential to deepen its agribusiness by connecting production markets (the large rural areas) with consumer markets (including the more densely populated areas around larger cities). Likewise, it is generally accepted that countries seeking to move the value-added ladder would initially support more labor-intensive manufacturing industries and later move to higher-technological-based sectors. This would also help strengthen the trade basis within the region by generating goods for the internal market, thereby making CEMAC more resilient to external shock. In CEMAC, the agriculture and manifacturing sectors, however, receive a very small share of total credit compared with, for instance, construction, in which the incidence of nonperforming loans is also very high.

Financial Inclusion

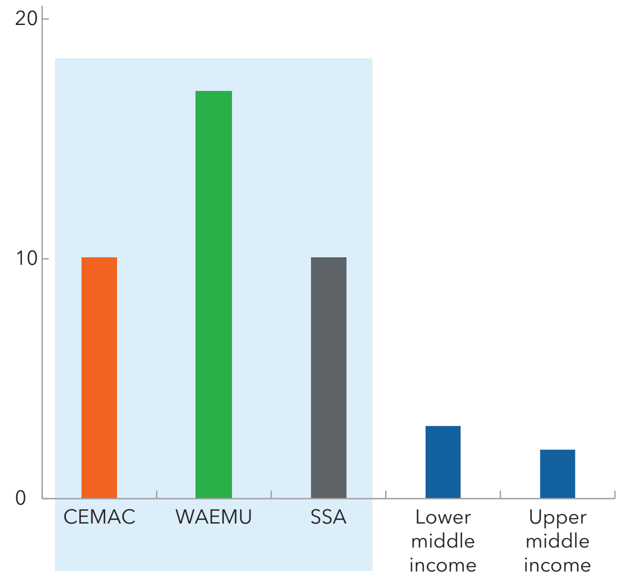
Indicators of financial inclusion suggest that CEMAC has a long way to go. Access to finance is generally lower in sub-Saharan Africa compared with lower middle-income and upper middle-income countries around the world. Within the sub-Saharan African group, CEMAC ranks below WAEMU and the rest of the continent. This has implications both in terms of investment opportunities for very small businesses in the informal sector and for the

Figure 15. Distance to Banks as Main Reason for Lack of Financial Inclusion
(Percent)



Source: World Bank, Financial Inclusion Index Database.
Note: Percent of respondent having an account with banks, other financial institutions, or mobile banking.

Figure 16. People Using Mobile Banking as the Main Channel
(Percent)



Source: World Bank, Financial Inclusion Index Database.
Note: Percent of respondent having an account with banks, other financial institutions, or mobile banking.

ability to smooth consumption across cycles. Microfinance is an important avenue for access to finance in some countries (such as Cameroon) and is currently undergoing important transformations in terms of capitalization and financial reporting requirements by COBAC to strengthen their operations.[25]

A key "structural" bottleneck to financial inclusion is accessibility to banks. While access to alternative means of banking, relying on online applications and platforms, are driving a large part of increased financial inclusion in Africa, access to traditional banks remains a key avenue for most people to hold and operate a bank account. In a large part of the African continent, especially in rural areas, the low population density and remoteness to main metropolitan areas make it difficult and, sometimes, cost-ineffective for banks to operate. It is not a surprise, therefore, that lack of accessibility is, still today, a main reason why a larger share of the population does not have a bank account in Africa, compared with other lower- and upper-middle-income countries. At the same time, this problem seems to be more acute in CEMAC than in other areas of SSA, including WAEMU.

To cope with physical accessibility, people may rely on mobile banking. A complementary view to lack of access to physical banking locations is the extent to which people are forced to use mobile banking as the main (in fact, in most cases, the sole) avenue for banking. Given the evidence highlighted above that physical banks are simply too far away to be an option in large rural areas in sub-Saharan Africa, one could expect that, for a large share of the population in this continent, mobile banking is the main tool for accessing key financial services. Data confirms this. At the same time, within the sub-Saharan Africa group, CEMAC scores well below WAEMU and marginally below the rest of the continent. This suggests that there is also a gap in penetration of mobile banking, which could leave a larger number of people out of financial

[25] Based on end of 2017 data, the microfinance sector is composed of 825 microfinance institutions operating across the six member countries of the CEMAC region serving almost 1.8 million members/clients (equivalent to about 7 percent of the adult population; World Bank 2017).

services in CEMAC compared with its peers. This, again, hints to structural factors like the extension of wireless networks, the openness of the networks to different online banking suppliers in competition, and the regulatory framework around online banking and related payment systems.

The combination of lack of access to finance and distances to banking locations can impact the ability to borrow in case of the unforeseen—a key dimension of financial inclusion. In principle, people rely on their acquaintances when facing an unforeseen circumstance that requires borrowing resources to cope with a transition period. Having access to formal finance, however, adds an important layer of a safety net that can make a difference in such events. It is to be expected that the wealthiest share of the population, all else being equal, benefits from such access more than those at the bottom. The data confirm this. A higher share of people indicate that they can borrow in case of unforeseen events among the wealthiest compared with the poorest. However, the ability to cope with unforeseen events with borrowing through the cycle is much lower in CEMAC compared with the rest of the continent—another indication that other structural elements are impeding access to finance.

ii. Recommendations

Measures to stabilize the financial system and promote financial inclusion include the following (short-term emergency response and continuation with the critical structural reforms):

- Take the following actions in the short term (0–24 months):
  - Support interoperability efforts at the level of BEAC by providing resources to speed up digital development in the subregion. The Electronic Banking Interbank Group of Central Africa (GIMAC) is currently working on interoperability, which would likely enhance digital financial services and financial inclusion and drive down the cost of transfers within CEMAC. In this same vein, BEAC needs to work with governments to keep remittance service providers operable through various easing measures, such as (1) reducing or eliminating some taxes on remittance transfers within the region to minimize transaction costs for households, (2) including international remittances in the scope of current electronic money regulations so that electronic money providers such as telecoms can participate within a well-defined regulatory framework, (3) eliminating any restrictions on inward and outward international remittance flows by adopting a graduated approach for outflow limits (except for money-laundering purposes), and (4) providing incentives to remittance providers working under the current COVID-19 context, in which the number of transactions is decreasing, to keep these businesses open.
  - Operationalize digitalization of government payments and receipts, including salaries to public servants, which are currently still conducted in cash.
  - Enforce the regulation that sets the minimum services to be offered free of charge by banks and MFIs, and entered into force at the beginning of 2021 (R 2020/04).
  - Reduce the sovereign-bank nexus, including by having the BEAC enforcing the new regulatory framework on government securities that requires primary dealers to sell 30 percent of securities they acquire at auction. Issuers could also express preferences as to the share of participation of institutional investors and individuals and conduct regional and national financial education/literacy campaigns.
  - Develop partial credit guarantee (PCG) schemes for viable firms when it's necessary and affordable. The objective of PCGs is to further encourage banks and microfinance institutions (MFIs) to grant credit to viable businesses in growth sectors. In postcrisis times,PCGs can help restart growth and employment more quickly and provide leverage on limited public resources.

  - Complete the required infrastructure for developing a collateralized lending and the housing market, including (1) completing the cadastre and finalizing all property titles and (2) completing and making operational the collateral registries.

- Continue, deepen, and accelerate structural reforms for financial deepening and inclusion over the medium term, as follows:

  - Strengthen the links between the money market, the capital market, and the real economy through the ongoing capital markets development project. Specifically, as excess liquidity in the region gradually diminishes, support government bond market development by guiding government treasuries in CEMAC on issuance strategies and benchmark issuances toward developing a credible yield curve as well as by creating the conditions for an active secondary government bond market, beyond secured lending. Also develop a local corporate bond market as a source of medium-term financing for banks and larger companies. Finally, promote public-private dialogue to facilitate market development and attract new private sector issuances.

  - Continue improving the business environment, including by (1) strengthening authorities' credibility through the reform of public governance, (2) strengthening financial stability oversight as well as transparency and disclosure requirements from banks, (3) strictly enforcing investor protection laws, (4) establishing commercial courts with specialized judges in commercial and credit matters, and (5) implementing secured transactions and collateral registry reforms.

  - Reduce the cost of cross-border financial services through interconnection of payment systems among the two regional economic zones.

C. Strengthening Agriculture

i. Assessment

Agriculture could be an important component of regional trade. Given the importance of the sector for poverty and economic inclusion—a large share of population still derives its livelihood from agriculture—deepening the internal market and facilitating exchanges between member states would reduce reliance on foreign exchange and enhance living conditions.

Unleashing the potential of sustainable agriculture in CEMAC remains a priority and has a direct link with more inclusive growth. Progress in this area needs to go in tandem with sustainable management of the forest asset in Cameroon, Gabon, and the Republic of Congo; review the role of SOEs (Cameroon), given the excellence of agroecological conditions in several countries; focus on attracting large private investors where conditions permit to build a stronger commercial agriculture as a pillar to agriculture sector development; and support the development of infrastructure and regulation to improve access to markets for small holders and ranchers.

ii. Recommendations

Better functioning trade corridors would have a tremendous impact in the region.[26] The most important corridor in CEMAC is the link between Douala-Ndjamena and Bangui. Bangui is also served by Pointe Noire. All major ports in the region suffer from high costs, substandard logistics, and other inefficiencies. Out of 160 economies analyzed in the Logistic Performance Index 2018, CEMAC economies are ranked between 95th (Cameroon) and 151st (the Central African Republic). Improving efficiencies and reducing costs at borders and post will be a key element to regional integration and increased regional trade.

[26] According to World Bank (2018), "Removing informal trade costs along CEMAC's main trading corridors is estimated to increase intra-regional trade by 25 percent and add an additional 1 percentage points to growth over the medium term."

Transparent and predictable trade policies for exports among CEMAC members would support the development of regional value chains in agriculture and food processing. Intraregional agricultural trade remains low—in 2015 over 95 percent of recorded agricultural exports went to third countries while over 75 percent of imports came from outside CEMAC—and trade within CEMAC is far from smooth. Cameroon maintains higher tariff rates compared with CEMAC CET (WTO 2013), and in agricultural trade the enforcement of tariffs and procedural requirements is uneven and at the discretion of the official on duty.[27] Additional informal payments are widespread. Goods imported from nonmember countries into one CEMAC country are taxed again if they are introduced later in another CEMAC country, with no compensatory system in place (Jaud, Kukenova, and Suwa-Eisenman 2020; World Bank 2020a).

Within CEMAC, nontariff measures are also prevalent and cover most agricultural products. Moreover, Cameroon—the largest producer and exporter of agricultural products in the region—uses extensive temporary import controls and bans in period of shortage on products as varied as sugar, beverages, frozen chicken, petroleum products, cement, and palm oil (World Bank 2016). Streamlining nontariff measures and ensuring transparency of regulations and certification procedures will help raise the competitiveness of CEMAC's exports and improve the overall welfare of the population, as these measures affect market prices.

Expanding regional agricultural value chains would help reduce poverty among the rural population, including in the vulnerable border regions of the CEMAC countries, through increased farm revenues and lower food prices. Cross-border trade typically has strong backward and forward links to local producers and distribution markets, creating job opportunities in production, transport, and logistics in border areas. Importantly, while most exporters of foodstuffs tend to be larger firms, regional agricultural value chains also involve smaller and partly informal producers who derive a significant share of their rural household income from these activities. Understanding the extent of unrecorded and informal trade in agricultural products and supporting its formalization is key to helping reduce the informal traders' vulnerability to payment of undue fees, harassment, bribery, and corruption and contributing to raising and stabilizing their income and purchasing power. This, in turn, has positive consequences beyond consumption and contributes to investment in productive assets (for example, animals, machinery, inputs) and children's education and human capital.

Doing so requires scaling up quality production. This will be particularly important in Cameroon, to improve access to quality seeds and fertilizers as well as agricultural extension services and to give farmers access to credit and the ability to join producers' organizations to exploit scale. The lack of access to credit for farmers is constraining mechanization, the use of higher-quality inputs, and productivity growth. The lack of reliable electricity[28] and adequate storage, especially in rural areas, further limits processing and value addition. Most crops and other fresh produce are exported raw with very little transformation (for example, drying, packaging). Raising production standards is also key to increasing value along the production chain but takes organization and commitment from the industry associations. This includes following guidelines and good practices of production—such as adopting adequate pesticide application schemes and proper drying processes, storage, and transport—to limit rejection of shipments due to the unregulated use of pesticides and other illegal chemicals.

Lowering barriers to entry into logistics services such as dedicated transport and storage is necessary for farmers and firms to reach markets. Poor road and railroad infrastructure raises the cost of transport, while transport and logistics services are not tailored to the upstream production, which results in excessive capacity, delays, and waste. Beyond roads and bridges, agri-food exporters need warehouses for drying,

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[27] World Bank 2018: http://documents.worldbank.org/curated/en/233071535650013216/pdf/127883-REPORT-CEMAC-Agriculture.pdf.

[28] See Afrobaromater Dispatch 514, www.AfroBarometer.com.

cold storage near production areas and at border crossings and ports, and dedicated trucks. Promoting regional integration in logistics services can also help raise competition and reduce prices while insuring smoother handling of shipments.

Streamlining the bureaucracy in trade facilitation is also key. Despite some progress, border procedures remain onerous and unnecessarily bureaucratic. The length and complexity of the procedures penalize CEMAC countries in international ratings by slowing down and discouraging formal transactions while encouraging parallel trade. Reducing congestion, streamlining, and simplifying export procedures through increased reliance on IT while improving transparency on steps, documents, and levies needed for each destination will help reduce delays and high trade costs.

D. Regional Integration

i. Assessment

CEMAC presents one of the least developed regional markets, with trade between member states scoring the lowest even compared with other economic unions or other forms of regional trade integration in Africa (see Figure 4). Such a low level of trade integration is particularly striking in a currency union and has several factors. While poor cross-border connectiveness and limited diversification are among them, insufficient progress in enhancing trade facilitation and implementing a single transit regime within the region contributes to this state of play. The African Continental Free Trade Agreement has been ratified already by five out of six CEMAC members, which opens a window of opportunity to consolidate further progress.

ii. Recommendations

Beyond the economywide issues of enhancing infrastructure (for example, energy, telecoms, transport) and logistics services, improving the business environment, and improving the skills and health of people, all of which are essential to improving the competitiveness of individual CEMAC countries, the following are key policy recommendations to help raise regional and global trade:

- Enhance trade facilitation through the full and effective operationalization of the single transit regime, notably through reforms to further reduce import and export permits and licenses, by relying more on electronic procedures in customs and other agencies involved in border clearance to reduce trade costs and time.
- Increase capacity for standards and conformity assessment and assist firms to upgrade production, especially in agriculture, to meet higher standards of both regional.
- Work on harmonizing and ensuring mutual recognition of standards and certification procedures across regional partners, including big markets such as Nigeria. For example, Nigeria does not recognize Cameroon's norms and certification. As a result, exporting formally manufacturing goods to Nigeria requires more documentation than does exporting to the European Union, and the exporter gets paid much later.
- Continue to simplify tariff policies and enhance transparency and predictability of trade policies, especially with neighbor countries.
- Utilize bilateral, regional, and WTO agreements to improve market access in neighboring countries and drive the move to higher standards compliance.

Pro-inclusive Growth Pillar 3. Unlocking Growth Potential through Protecting and Investing in People: Leveraging CEMAC's Full Human Capital Potential

A. A Multi-Dimensional Reform Agenda

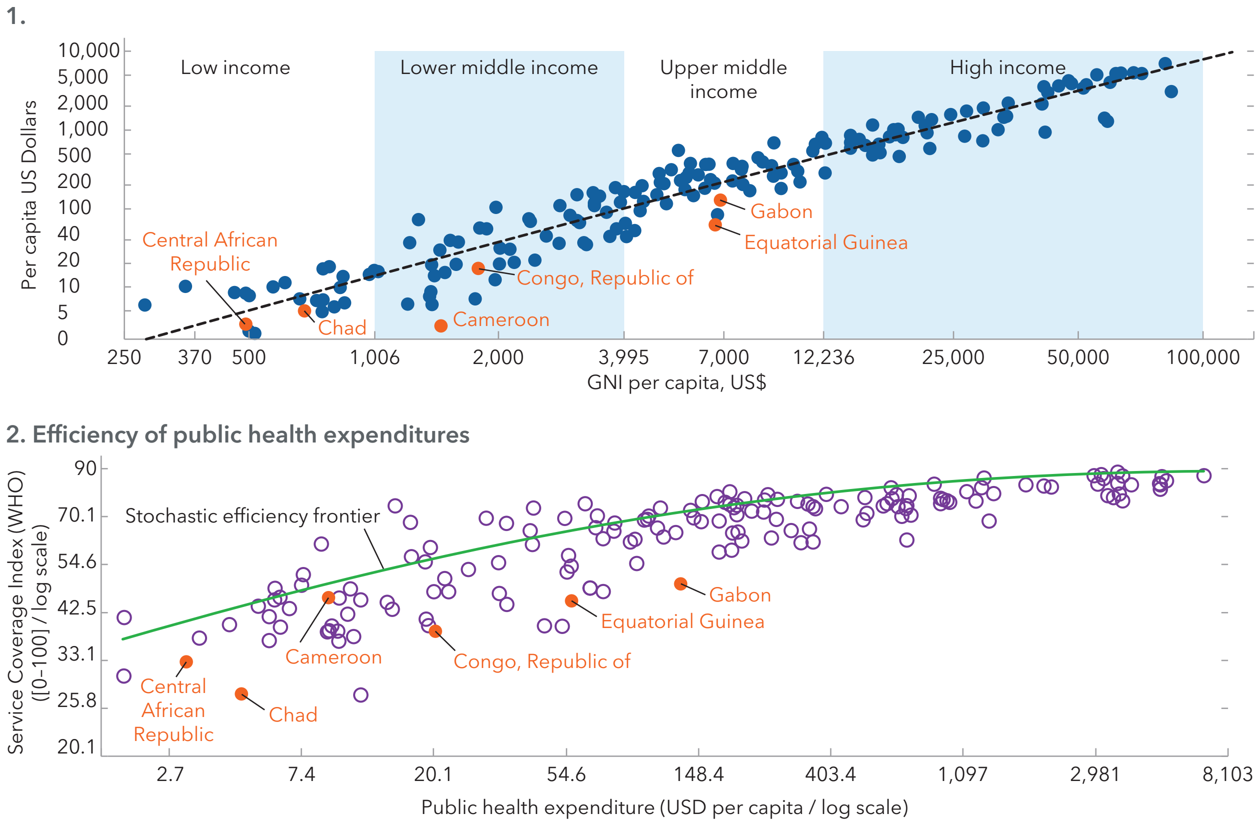
Households are at the center of unlocking human capital potential. Recent policy approaches to human capital (World Bank Human Capital Compass 2020) take as a starting point that households themselves invest in and produce human capital, and therefore, they represent the key driver for demand for relevant services while providers shape the supply for these services. Household decisions and the quality of service delivery are therefore two critical determinants of human capital outcomes. On the demand side, policy and legal measures can create the space for improving households' utilization of services. Examples include policies to tackle financial constraints such as the removal of user fees, or proper targeted cash transfers to help the chronically poor address nonfee expenses (for example, uniform, transportation) and opportunity costs involved. The supply side is where the policies, legal frameworks, financing arrangements, and overall government capacity manifest their effectiveness in service delivery. These can be assessed in different ways, such as competence of service providers (for example, teachers, school principals, health workers) and availability of protocols, inputs, and infrastructure. A central question is whether service providers have the key ingredients they need to work.

The critical dimensions of financing, governance, and overall management affect service delivery. Key questions on financing include volume of spending and the overall budgeting process and its reliability, predictability, and execution. Allocative decisions within sectors' budget also affect outcomes. For example, cost-effective interventions tend to happen at primary levels of care, hence the importance of securing and monitoring the share of government health expenditure spent on primary health care and of nutrition-sensitive expenditures in and outside the health sector, since those will affect levels of chronic malnutrition. Still, the link between social sector spending and human capital outcomes can remain weak if planning and management fail. As the HCI Compass and many worldwide reports on human development have demonstrated, "government capacity to manage, adopt a meritocratic system and inculcate accountability is critical to convert resources allocated to social sectors into human capital outcomes." Part of this governance and management agenda includes evidence-based decision making and the collection of core data.

In this context, a reform agenda for protecting and strengthening human capital in CEMAC countries must consider both sectoral policies and cross-cutting approaches. In core social sectors, health and education policies can help create, support, and enhance systems that deliver learning and quality health. Social protection is also receiving increased attention. Relaxing demand-side constraints to accessing social services, social protection programs support poor families to invest in human capital throughout the lifecycle to have a productive and fulfilling lifetime.[29] Improvements in the provision of health and education services will not translate into better human development outcomes unless families are able to use those services. Finally, efforts to improve human capital formation should be accompanied by efforts to create more and better jobs to increase the rate of return on human capital. This latter part of the agenda is not fully tackled in this section. Some key elements are present, such as suggestions to make skills more relevant to private sector needs. On the demand side (job creation), other sections of this paper (investment climate) present the status of issues and specific suggestions. However, potential reforms for successful jobs strategies in CEMAC would warrant a full and separate treatment.

[29] https://blogs.worldbank.org/nasikiliza/crisis-response-building-resilience-madagascars-great-south
https://www.worldbank.org/en/news/immersive-story/2019/07/29/build-employ-and-protect-using-social-protection-to-invest-in-people-in-a-changing-world
https://blogs.worldbank.org/dev4peace/social-protection-protecting-poor-and-vulnerable-during-crises

Figure 17. Domestic Public Health Expenditure and Income per Capita



Sources: World Development Indicators (2020); World Health Organisation, and WHO Global Health Expenditure Database. Latest available datapoint (2017).
Note: In panel 1, both *x* and *y* axes are expressed in logarithmic scale. Data are for 2018. In panel 2, Sub-Saharan African countries represented by orange dots. The SFA model assumes a truncated normal distribution for the inefficiency term (Stevenson, 1980)

B. Core Sectoral Challenges

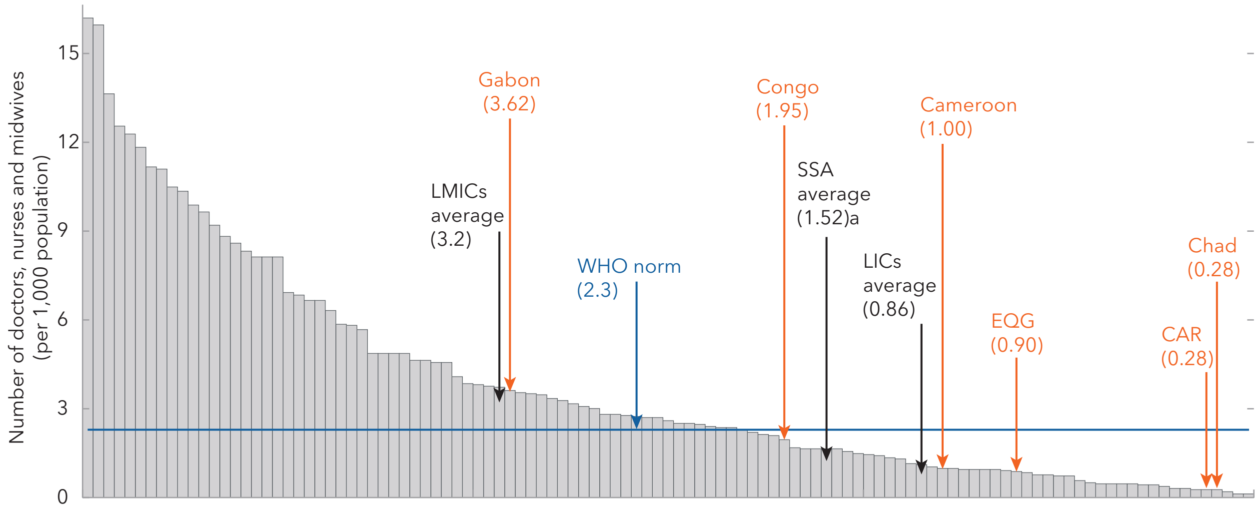
Health–Health Policies

i. Assessment

Domestic public health expenditure in CEMAC countries is lower than expected given income levels and not efficiently geared toward universal essential services. Domestic public health expenditure in CEMAC averages about $36 per capita and ranges from $3.2 in Cameroon to $128 in Gabon (2018 data), and all the countries expand fewer public resources to health than do countries with compatible income levels. Further, available resources are disproportionately allocated to curative care—hospitals in particular—and their distribution is skewed toward the larger cities and urban areas. Overall, CEMAC countries achieve a lower performance in terms of service coverage compared with countries spending similar amounts on public health. Interestingly, while Cameroon spends the least on domestic public health, its performance in terms of service coverage is the closest to the efficiency frontier.

The availability of critical inputs, notably human resources for health, is insufficient. Health services simply cannot be delivered in the absence of an appropriately skilled and productive workforce. While the WHO norm for health worker density (number of doctors, nurses, and midwives per 1,000) is set at 2.3, most CEMAC countries do not achieve this minimum level. Notably, the Central African Republic and Chad have fewer than 0.3 health workers per 1,000 population.

Figure 18. Doctors, Nurses, and Midwives Density

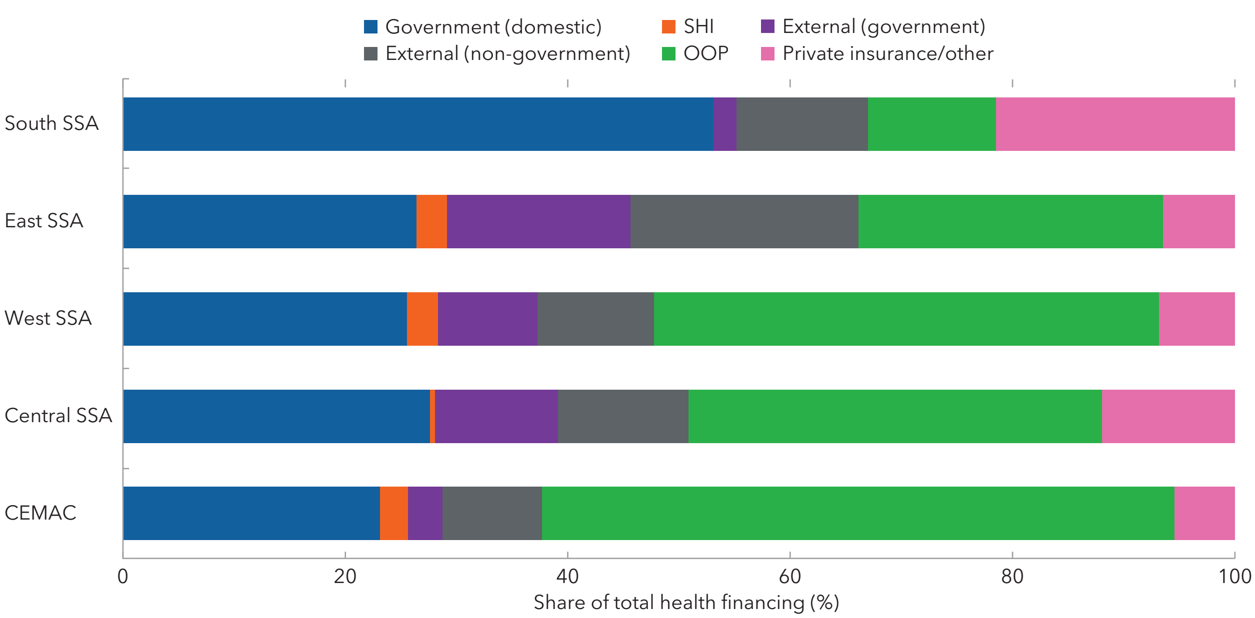


Sources: World Development Indicators; WHO Global Health Observatory. High income countries are excluded.

High out-of-pocket spending also undermines the achievement of universal health coverage. Having to pay for health services at the point of care deters access and pushes households into poverty. Out-of-pocket financing is also typically regressive and inefficient. Health financing in CEMAC countries is overly dependent on out-of-pocket expenditure, which accounts for over 55 percent of total health expenditures, considerably higher than in other parts of Africa.

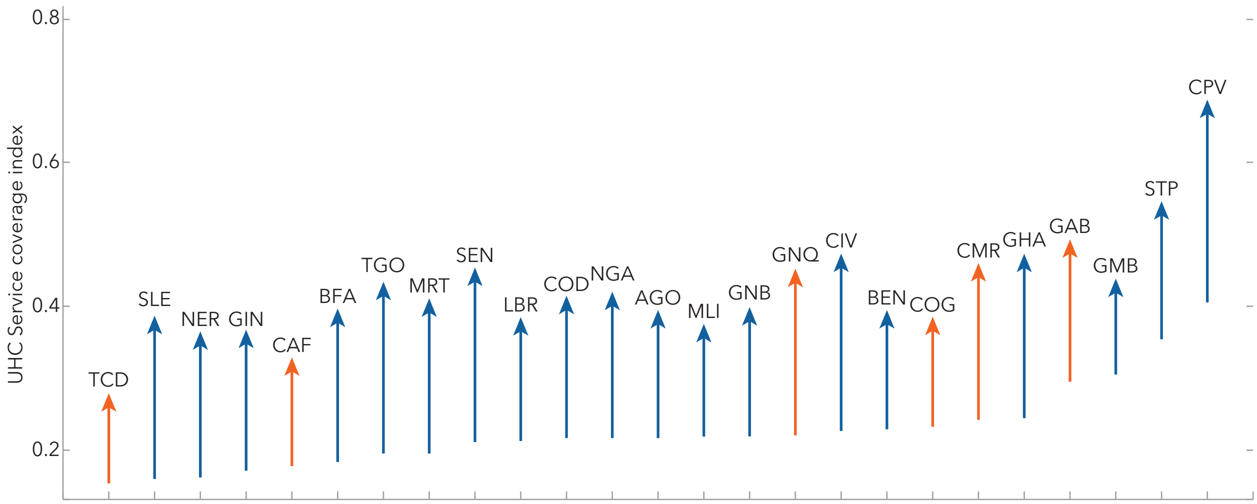
As a result, the coverage of essential health services for CEMAC countries remains low despite the improvements recorded between 2000 and 2017. Progress toward coverage of essential health services (SDG target 3.8.1) can be measured using the UHC Service Coverage Index (SCI), a coverage index based on 14 tracer indicators that span essential health service domains from reproductive and child health to noncommunicable diseases, infectious disease control, and service capacity (WHO 2019). While globally

Figure 19. Health Financing Composition in Africa



Source: Global Health Expenditure Database (WHO 2022).

Figure 20. Changes in UHC Service Coverage in West and Central Africa, 2000–17



Source: WHO (2019)
Note: CEMAC countries in orange.

the SCI increased from 0.45 to 0.66 between 2000 and 2017, it increased from 0.22 to 0.40 for CEMAC countries on average. Overall, most of the increase in the SCI between 2000 and 2017 was accounted for by improvements in infectious disease control, followed by reproductive, maternal, neonatal, and child health. Equatorial Guinea was the only country that managed to significantly improve its service capacity (for example, hospital bed density, health worker density, IHR core capacity index) over the same period.

Health system preparedness for public health emergencies is still in its infancy. Health systems preparedness to deal with potential disease outbreaks can be summarized by the IHR score, which captures key dimensions of countries' response capacity. Sub-Saharan Africa is the region scoring the lowest on average across all the dimensions of the IHR score, with an average score of 44 percent compared with 68 percent for non-sub-Saharan African countries. Cameroon, with a score of 42, is the closest to the sub-Saharan African average, far ahead of the Republic of Congo (33), Gabon (27), Equatorial Guinea (22), and the Central African Republic (17).

ii. Recommendations

Protecting lives in the context of the pandemic has been, and will continue to be, a priority in the next 24 months. However, governments must not lose sight of their commitment to universal health coverage, meaning access for all to essential quality health services without financial hardship.

Countries efforts to control the pandemic need to be sustained. In spring 2020, all CEMAC countries rapidly developed and adopted measures to inform their populations about strategies required to prevent and contain the spread of COVID-19, enhance surveillance and detection, and improve clinical management. Eligible CEMAC countries availed themselves of the resources mobilized by the international community through the World Bank emergency health support facility. However, the emergence of new COVID variants highlights the necessity to sustain the capacity to respond to possible new surges.

Deploying COVID-19 vaccination in CEMAC countries is essential to protecting lives and opening the way to a full recovery from the wide-ranging crisis. All CEMAC countries participate in the COVID-19 Vaccines Global Access Initiative (COVAX), which aims to guarantee fair and equitable access to vaccines around the world. So far, COVAX is committed to financing vaccines for a little less than 20 percent of the population in the Central African Republic, Chad, and the Republic of Congo, which still have to bear the cost of deployment, as well as that of any additional immunization. The Republic of Congo and Gabon have already approached the World Bank to support the immunization of their populations, but all countries will need to secure and deploy considerable domestic and international resources to reach the AU target of 60 percent of people immunized within the next two to three years to achieve some measure of herd immunity. The most immediate challenges are (1) to secure access for high-priority groups, such as frontline health workers, in a highly competitive environment; (2) to ensure that deployment strategies are robust, which requires inter alia training health workers, maintaining appropriate cold chains, and keeping populations informed; and (3) to distribute vaccines transparently to adequately prioritized target groups, which is especially challenging in the absence of comprehensive population identification systems.

Finally, the pandemic has once again highlighted the importance of prioritizing preparedness against public health threats. Learning and sharing lessons from the COVID-19 pandemic to improve preparedness for and response to future pandemics will be critical. Countries must more actively pursue "One Health," an approach to designing and implementing programs, policies, legislation, and research in which multiple sectors communicate and work together to achieve better public health outcomes. This preparation is essential to respond to the increasing risks from zoonoses and antimicrobial resistance.

The commitment to expanding domestic resources for health, however, predates the pandemic and must be sustained. The 2019 African Leadership Meeting declaration[30] recognized the need to increase domestic resources for health and reorient health systems in Africa. Efforts to ensure health receives sufficient priority in government budgets will have to continue after the crisis, which may lead to higher funding requirements to address the pent-up demand that has accumulated during the response phase because some health interventions had to be deferred. The increasing burden of noncommunicable diseases will also contribute to increasing demand in the medium term. To increase resources, it may be an opportune time to ramp up taxes on goods and services that have harmful health effects, such as on tobacco, alcohol, sugar-sweetened beverages, and carbon emissions.

Strengthening community and primary care services is a cornerstone to expanding coverage in CEMAC countries. Today, technological innovations in diagnostics and treatments allow community and primary care workers to provide nearly all of the essential interventions required to substantially reduce preventable deaths for women and children. Countries that have invested in establishing a solid community health platform have achieved substantial drops in mortality. The creation of a network of competent community providers is currently envisaged in the Central African Republic to expand access to lifesaving services, including in regions that are extremely difficult to reach. Chad also plans to provide community health workers with additional training and equipment, including mobile phones and tablets with task management software, to enhance the delivery of services at the community level. Overall, more resources need to be directed to frontline facilities, which in turn must be held accountable for delivering services. These objectives have been pursued through performance-based financing in Cameroon, Chad, the Republic of Congo, and the Central African Republic, with some promising results as well as challenges that need to be overcome to develop sustainable purchasing strategies.

Finally, improvements in health services should be complemented by multisectoral action to address determinants of health. Environmental and social factors influence individual and community health. Expanding access to clean water and sanitation is paramount if further progress in health status is to be achieved. Addressing these health challenges requires the collaboration of different sectors to increase knowledge, establish strong partnerships, and drive innovation in addressing cross-cutting issues. Promoting the empowerment and opportunities for women and girls is paramount to overcoming many challenges in health and supporting the demographic transition in CEMAC countries.

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[30] See https://aidswatchafrica.net/alm-declaration/.

C. Improving Learning Outcomes and Skills for Growth

i. Assessment

A number of demand and supply factors contribute to low access to education and learning outcomes. On the demand side, the main factors include poverty, lack of transportation and infrastructure, and, for girls, early pregnancies and child marriages as well as social and cultural norms in some countries. Also, schools in fragile or conflict-affected settings are sometimes targets of attacks. The supply factors include poor teacher management and quality; poor learning environments, including weak inputs, outdated technologies, and weak system management, governance, and accountability; and inefficient and inequitable financing of the education sector.

The low quality of basic education presents a challenge to growing a new generation of highly skilled workers. Furthermore, skills-development and higher education systems in the region fail to produce graduates with diverse skills relevant for labor markets. These challenges stem from a number of factors, including (1) limited access to skills-development programs and higher education in all CEMAC countries; (2) poor quality and limited relevance of skills-development and higher education programs in institutions to supply market-relevant skills, including digital skills, in priority areas; (3) very limited partnerships with the private sector and industry to design and deliver skills-development and higher education programs; (4) weak management and governance, including poor sector coordination, planning, monitoring, and evaluation; and (5) inadequate resources and limited internal inefficiency.

ii. Recommendations

Priority actions and reform areas include the following:

- Protect education funding, which is especially critical in the context of the COVID-19 pandemic and the limited fiscal space, and improve efficiency and transparency of resource allocation and the flow of funds within the education sector.
- Ensure safe return to the full-time education process and provide remedial programs for the period lost.
- Focus on teachers/civil service reforms throughout the education cycle.
- Strengthen governance, management, planning, and accountability of the sector.
- Address geospatial and socioeconomic equity issues in access to quality education.
- Strengthen school infrastructure and the education system in general, with a focus on resilience and preparedness for future shocks.
- Scale up the use of technology and remote learning.
- Enhance digital skills development across the whole system.
- Strengthen post–basic education for economic diversification, particularly by improving market relevance of skills-development programs.
- Ensure employer involvement in design and delivery of skills-development and higher education programs

D. Social Protection

i. Assessment

In recent years, African countries have launched social safety net programs as part of the agenda to tackle poverty and resilience.[31] In CEMAC, some countries, like Chad, Cameroon, the Republic of Congo, and the Central African Republic, have invested in core building blocks such as targeting systems, social registries,[32] and payment mechanisms. In Republic of Congo, for example, the government launched a societal safety net program named Lisungi (meaning "help" in Lingala) in 2014.[33] The program has two main pillars: (1) a cash-transfer program to help poor households smooth consumption and make human capital investments in health and education, and (2) a national safety net platform to strengthen social protection delivery systems. As of 2019, the project started implementing a productive inclusion component, which provides grants to poor households to pursue income-generating activities.

Despite progress, most CEMAC countries do not have a coordinated social protection system anchored in national policy, but rather isolated and ad hoc interventions that are not adequately resourced to protect the poor and vulnerable or to effectively build human capital. Programs largely remain limited in scale and scope, covering a relatively small share of the overall poor and vulnerable population. Not all governments in the region have the capacity to run large-scale social protection programs, which still depend on donors for funding and implementation. There are positive trends, however. While continuing to lag behind the sub-Saharan African average, Cameroon has substantially expanded the coverage of its program *Projet Filets Sociaux* in recent years. Since its launch in 2013, the program has provided cash transfers and public works employment to about 90,000 households and is expected to continue scaling up to 366,000 households (approximately 1,830,000 individuals) by the end of 2022. Crucially, the expansion is partly driven by increased government commitments and the recognition of social assistance as an effective policy response to economic shocks such as the ongoing COVID-19 pandemic.

Existing social protection and labor support systems fail to respond to the needs of informal workers. Informal workers represent a "missing middle" in social protection[34] because they are not poor enough to be eligible for social assistance and not wealthy enough to participate in social insurance programs mandated for the formal sector. The COVID-19 pandemic has highlighted this issue, with informal sector workers in urban areas hit hardest by lockdowns and the slowdown in economic activity due to the pandemic. The lack of social protection coverage for this group calls for an acceleration of efforts to put in place new instruments that can help them weather shocks. A failure to cover this "missing middle" harms not only the welfare of these households but also countries' overall human capital accumulation.

Social protection expenditures are limited and concentrated in energy subsidies and civil servant pensions. In some CEMAC countries, more than half of social protection spending is on energy subsidies. Moving away from universal energy subsidies, which are largely regressive (as wealthy households tend to spend more on subsidized goods than do poor households) and skewed toward the urban population, would free fiscal space to increase investments in poverty-targeted social assistance and human development. In addition, a disproportionate share of social protection spending is allocated to pensions (for example, 38 percent in Gabon, 44 percent in Cameroon) although coverage of the working-age population remains low (for example, 10 percent in Cameroon). Reforming the civil service pension system would improve equity and further improve the fiscal balance.

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[31] Beegle, Kathleen, Aline Coudouel, and Emma Monsalve. 2018. "Realizing the Full Potential of Social Safety Nets in Africa." World Bank, Washington, DC.

[32] Social registries are information systems that support outreach, intake, registration, and determination of potential eligibility for one or more social programs. They have both a social policy role, as inclusion systems, and an operational role, as information systems. For more information, see Leite and others (2017).

[33] The program is IDA financed.

[34] https://blogs.worldbank.org/africacan/social-insurance-informal-sector-can-be-lifeline-millions-africa.

An emphasis on building effective social protection systems can make a substantial difference in the CEMAC region. The COVID-19 pandemic as well as other covariate shocks can cause major setbacks in efforts to reduce poverty and inequality and to improve human capital. In the absence of a strong social protection system, such shocks impact not only current welfare but also future welfare through reductions of parental investments on the education, health, and nutrition of children. Crises and pandemics have also been shown to increase early marriage rates.[35] Such covariate shocks highlight the urgency of developing an effective social protection system that is countercyclical. The prioritization of resources in building and expanding the coverage of an effective social protection system can also do the following: (1) provide income support and information to build human capital and prevent deterioration or loss of human capital in the face of shocks and crises, whether related to climate, conflict, or the economy; (2) facilitate access to services critical to protecting and developing human capital, especially for children's health, nutrition, and education; (3) promote equality of opportunity by targeting the early years and vulnerable groups, such as youth and women; (4) support the development of foundational and higher-level skills, thereby increasing labor market returns to human capital investments; and (5) build delivery platforms for multisectoral approaches and to reach the poor and vulnerable, such as integrated social registries, foundational ID systems, and digital payment systems.

ii. Recommendations

Reform priorities should include the following:

- Continue expanding coverage prioritizing the poorest and most vulnerable.[36]
- Diversify social protection instruments and expand coverage vertically by supporting nonpoor informal sector workers currently excluded by the social protection system despite their acute vulnerability to shocks.[37]
- Expand the fiscal space for social protection and redirect funding to poverty-targeted social assistance and away from regressive spending (for example, energy subsidies, public pensions).
- Continue leveraging social safety nets to incentivize investments in human capital, including health and education, and reduce the intergenerational transmission of poverty.
- Build inclusive and shock-responsive delivery systems to facilitate identification, registration, and provision of services, including social registries and foundational ID systems, and accelerate the adoption of innovations such as digital payments.[38]
- Strengthen the strategic and institutional framework for designing, implementing, and managing social protection programs, including developing or updating national social protection strategies, consolidating social protection interventions, and improving coordination across implementing agencies to enhance efficiency and adequacy.

E. Tackling Cross-Cutting Challenges

Given the challenges highlighted in Section C, CEMAC countries will be able to accelerate progress in human capital by investing in two interrelated high-return priority interventions.

[35] Ezra, M. 2001. "Demographic responses to environmental stress in the drought- and famine-prone areas of northern Ethiopia." International Journal of Population Geography 7: 259-279. https://doi.org/10.1002/ijpg.226

[36] https://www.usp2030.org/gimi/USP2030.action.

[37] https://blogs.worldbank.org/africacan/supporting-africas-urban-informal-sector-coordinated-policies-social-protection-core.

[38] https://blogs.worldbank.org/climatechange/building-back-better-after-covid-19-how-social-protection-can-help-countries-prepare.

First, CEMAC countries need to protect and step up their investment in early years (0–5). A first order of priority is to reduce and prevent stunting (chronic malnutrition). This will require coordinating at the local level and enlisting many sectors including health, agriculture, education, social protection, and water and sanitation (Skoufias and others 2019). More broadly, investments in early human development are a powerful equalizer because investments in early childhood yield significant long-term benefits that narrow the gap between high- and low-income families. Investing in disadvantaged young children also promotes productivity in the economy and in society at large. Investing in early years is also more cost effective compared with paying later to try to remediate what could have been prevented. CEMAC countries have adopted policies and strategies for investing in children's early years, which represent the foundation of human capital. Progress is noticeable in preschool education, for example. However, effective implementation of early childhood strategies is still pending. Social policies remain fragmented, focusing on only one problem at a time, and high-level leadership is needed to coordinate action and delivery.

Second, CEMAC countries need to pursue comprehensive policies and innovative strategies to empower adolescent girls and delay early childbearing, which will be critical to harness the demographic dividend. Proven interventions in Africa and South Asia are summarized in four key set of actions—the four Es: (1) educate girls, keeping them in school longer and fostering a quality learning environment for both girls and boys; (2) enhance access to reproductive services, with the goal of delaying childbearing until adulthood and promoting healthy spacing; (3) employ young women and expand their access to economic opportunity through skills training in higher-income jobs, improved financial literacy, and access to capital- and income-generating opportunities; and (4) empower girls and women through an enabling environment by repealing discriminatory laws or restrictive provisions, improving legislation and the application of existing laws to protect the education and health rights of women, and addressing social norms around gender with boys, men, parents, religious leaders, and traditional leaders at the community level. Following the path of Sahelian countries, many CEMAC countries have set out to follow these strategies, which tend to be coordinated by ministries of economic development, planning, finance or population, given the multisectoral challenges involved.

Ensure Adequate and Sustainable Financing for Human Capital

Generating adequate and sustainable financing for human capital will be critical if CEMAC countries decide to fully leverage their potential for growth. Challenges exist on both the spending and resource mobilization sides.

As CEMAC countries start transitioning beyond the COVID-19 crisis, governments will need to not only protect but also increase the volume of spending in critical social sectors. Lessons from past crises call for protecting spending in social sectors. Disrupting programs for which resources are allocated can harm human capital and even cost lives, as during the 2014–16 Ebola epidemic, when more people may have died from disruptions to day-to-day health and reproductive care services (World Bank 2020b). At the same time, there is a case for significant increase in levels. For example, education spending is low in CEMAC countries compared with the rest of sub-Saharan Africa and respective income groups and varies from 1.1 percent of GDP in the Central African Republic to 3.6 percent in the Republic of Congo (HCI 2020).

Existing public expenditure reviews also call for improvements in efficiency, equity, and effectiveness of public spending to generate value for money.[39] Allocative inefficiency applies to all domains. The health sector is a case in point where an excessive focus on tertiary hospitals comes at the expense of more cost-effective primary care. Given persisting disparities in service coverage and human capital outcomes, equity considerations also matter. Finally, even if spending allocation increases, removing governance

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[39] See, for example, World Bank 2018 and World Bank 2019 for Cameroon and Gabon Public Expenditure Reviews, respectively. Allocative efficiency refers to the division of budgetary resources between policy areas. Equity refers to the distribution of resources between households in different regional, demographic, and socioeconomic groups. Effectiveness is the marginal impact of spending on specific policy objectives.

Box 4. CEMAC Countries: The Path Toward Girls' Empowerment and Demographic Dividend

The demographic dividend figures as a critical tool to achieve a peaceful and prosperous Africa in key strategies including, among others, the 2030 Agenda for Sustainable Development, the African Union's "Agenda 2063" and its first strategy for gender equality and women's empowerment, and national development strategies such as Cameroon's "Vision 2035." Moreover, heads of state are setting ambitious targets to ban child marriage, reduce girls' dropout rates from secondary school, and improve social and financial inclusion of young women.

A total of nine countries, including two CEMAC countries, Chad and Cameroon, are now part of the Sahel Women Empowerment and Demographic Dividend project (SWEDD), a significant regional initiative supported by the African Union and the Economic Community of West African States and developed in response to a call for action by the presidents of Niger, Burkina Faso, Chad, Côte d'Ivoire, Mali, and Mauritania in 2014. Benin, Cameroon, and Guinea joined the initiative in 2019 and 2020, respectively, to implement interventions along the "four E" strategies, targeting in particular the rural poor. Other CEMAC countries have decided to develop investments that promise similar approaches through national projects, such as the Central African Republic and the Republic of Congo.

Chad has been piloting girls' and women's empowerment strategies that have been well received by recipient communities and is now working to scale up interventions in a growing number of regions. As Chad's minister of economy and development planning recently stated, "The government does not seek to make a more symbolic gesture toward girls and women, but to leverage them as central actors to Chad's growth and development." As part of SWEDD-Chad's pilot phase, the government has delivered key results:

- The government has supported more than 10,000 girls to stay in school, achieving a 98 percent retention rate among those who benefited from the interventions.
- More than 18,000 girls have attended community-based safe spaces, where they are taught life skills, essential sexual reproductive health knowledge, literacy, and numeracy.
- About 9,000 girls have benefited from training in nontraditional professions that have brought them higher-income earning opportunities (for example, installation of solar panels).
- More than 1,500 male and female religious leaders have engaged in community dialogues in favor of girls' secondary education, delaying childbearing to adulthood, birth spacing, and family planning and against gender-based violence in rural communities.
- Legislation has come into effect, including a ban on child marriage, an initiative that will be supported through the translation of the law into local languages and by community dialogue, supported by both legal practitioners and religious leaders.
- A demographic dividend observatory is bringing research and programmatic evidence on girls and women's social and economic participation to policymakers quickly and effectively, to inform policy, development strategies, and budget allocations.

The Chad second phase, launched in November 2020, will increase its reach to several hundred thousand beneficiaries. In Cameroon, an investment of $75 million will be implemented in three regions: far north, north, and Adamawa, where about 700,000 girls younger than 19 years of age are at risk of early marriage, pregnancy, or dropping out of school. Comprehensive strategies are being prepared, building on the experience of neighboring countries, including Chad, with which Cameroon intends to collaborate to reach transitory and cross-border communities.

and management bottlenecks will still be necessary to attain results. For example, many CEMAC countries have set out to improve learning outcomes by confronting the structural challenges of teacher recruitment, management, and quality, which present a serious bottleneck to education service delivery.

In a context of limited fiscal space, spending can also achieve more impact through prioritization, innovation, and coordination of all relevant sectors. Priorities include spending on early years when losses are irreversible, securing essential services and nutrition/food security, as well as expanding social protection programs. Innovation includes leveraging technologies including digital payments and adaptive cash transfers to reach more households (Colombia, Pakistan). It can also involve partnerships for faster and cost-effective delivery. For example, the Central African Republic managed to work with small entrepreneurs to produce 1 million masks in a few months while generating temporary jobs. Similarly, ministries of planning and finance can pave the way toward fostering colocation of investments by different ministries. Senegal managed to improve nutrition results by elevating coordination at the highest levels while fostering coordination at local levels, cutting across health, social protection, and agriculture.

Generate More Evidence-Based, Adaptive Policymaking

Data collection, monitoring, and use for policymaking plays a particularly important role for human capital in CEMAC countries. The education sector offers a good illustration of this challenge. While national assessment systems have recently been established in some CEMAC countries, further work is needed to strengthen their ability to provide timely feedback and to use the data to guide teaching and other decision making in the education sector. Some CEMAC countries still do not participate in any international assessments, which impedes any efforts to benchmark performance against established international standards. This also impedes the calculation of the Human Capital Index for some CEMAC countries (EQG).

As the COVID-19 global pandemic evolves and governments continue to adapt their policy responses, having ongoing access to accurate and timely data will remain critical. Tools such as rapid-response phone surveys can allow CEMAC decision makers and their partners to better understand changing needs among beneficiary populations and the efficacy of programs already being implemented, as well as, for example, attitudes toward potential vaccination campaigns. Such innovative tools for data collection will also enable governments and partners to constantly improve targeting and ensure that assistance is reaching the households that need it most.

4. The Way Forward: Securing a Credible, Inclusive, Transparent Reform Process

A. Assessment

Recent consultations with CEMAC institutions found a broad recognition of the reforms that need to be instituted, and many of those have been incorporated in the PREF launched in 2017. Nonetheless, implementation has been slow and stagnant, as evidenced by the continued regional shortcomings in overall public sector governance and equality, economic diversification, and trade integration. Therefore, it is imperative to focus not only on the *what* of reforms but also on the *how*—that is, how reforms are developed, disseminated, implemented, and monitored. This would likely require a broad-based and inclusive public consultation process, awareness of the costs of not carrying out these reforms, adequate capacity and sustained commitment to implementing reforms, robust monitoring and reporting of reform progress, and an ability to adjust and modify the planned reforms as circumstance warrant.

B. Recommendations

An important reason why much-needed reformed failed to launch in the past may relate to how they were initially conceived. The priorities were established by governments, with little consultation with all the stakeholders (for example, chambers of commerce, professional associations, trade unions, financial institutions). Therefore, CEMAC institutions and national authorities should put in place broad-based mechanisms for public-private dialogue to solicit inputs, consult on proposals, and then use the ideas generated to disseminate the reforms. The importance of a more participative approach is especially critical when considering business environment and financial sector reforms. These public-private dialogues should be institutionalized with clear mandates and regular exchanges.

The costs or benefits forgone by keeping the status quo may also not have been appropriately explicated. Reforms face opposition and imply costs. The benefits of these reforms may, however, often go unnoticed while these benefits are still may take time to materialize. More awareness of these forgone potential benefits could broaden the support for reforms and improve their likelihood of being enacted. For instance, a decade ago, transport costs along the northern corridor (from Mombasa, Kenya, to Uganda/Rwanda/Burundi/eastern DRC) basically the same as in the CEMAC region. However, transport prices along that corridor decreased by 30 percent following the integration of trucking services that increased competition and the greater facilitation of border clearance processes that reduced border-crossing delays (Kunaka, Raballand, and Fitzmaurice 2016). Regarding trade in agricultural products more specifically, factoring in intermediation costs and pervasive petty harassments, evidence would suggest that food prices for consumers in Libreville, Gabon, for instance, are four to six times higher compared with prices in Cameroon. Reducing these costs would significantly improve purchasing power and living standards, especially among the poorest and the most vulnerable (Arias and others 2018).

A better understanding of who benefits from the status quo is needed. The forgone benefits of keeping the status quo imply a cost to the many but favor a few. An understanding of reform losers as well as winners will increase the likelihood that reforms are adopted and negative impacts are mitigated. People with vested interests will resist reforms when they feel that their incomes or privileges could be curtailed. Rather than ignoring this reality, policymakers should proactively engage with groups that stand to lose from reforms and identify means to safeguard legitimate demands while also ensuring that corrupt or unsustainable practices do not endure. Promoting competition and transparency around pricing and services while dealing with monopolies/oligarchies would be an important element in such an endeavor.

A more effective and credible framework to monitor progress in reforms is also needed. Participation of other stakeholders in institutional reform fora such as the PREF COPIL could be explored. Engagement with media and civil society as well as the private sector to build coalitions for change is also crucial to maintain momentum for reform. Building capacity for these stakeholders to monitor and disseminate information on progress in reforms would also be important. Further, not only should reforms receive inputs from different stakeholders, but they should also be well disseminated and communicated so that they are understood by the general public.

The agenda for reforms in CEMAC remains vast and ambitious. Prioritization and sequencing will be crucial to ensure that expectations are realistic and that progress continues to be made. This paper has attempted to outline the reforms that are most urgently needed for the region, although these must ultimately be set by the CEMAC region itself—by its institutions, its governments, and its public at large.

Annex 1. CEMAC: A Comprehensive Growth Diagnostic Exercise[1]

This note dives into the sources of real GDP growth in CEMAC over the past few decades. We first analyze CEMAC's real GDP growth, decomposed into oil and non-oil sectors, and find that the region is overly dependent on oil and extractives. Because of this, the region is highly vulnerable to external shocks. We then conduct a growth accounting exercise and benchmark the region's growth composition performance against WAEMU and its lower-income group–level peers. We find that CEMAC is well below the growth frontier with respect to most comparators. Next, we empirically inspect the potential impact of governance and business climate reforms as drivers of inclusive growth in the subregion and find these to be CEMAC's greatest missed opportunities. The failure to fully leverage the region's human capital potential is CEMAC's second greatest missed opportunity for growth. Finally, robustness tests and political economy diagnostics reveal that growth dividends are maximized when governance reforms precondition business climate reforms. These results, based on the most recent development indicators and empirical techniques, are consistent with existing literature.

A. Introduction

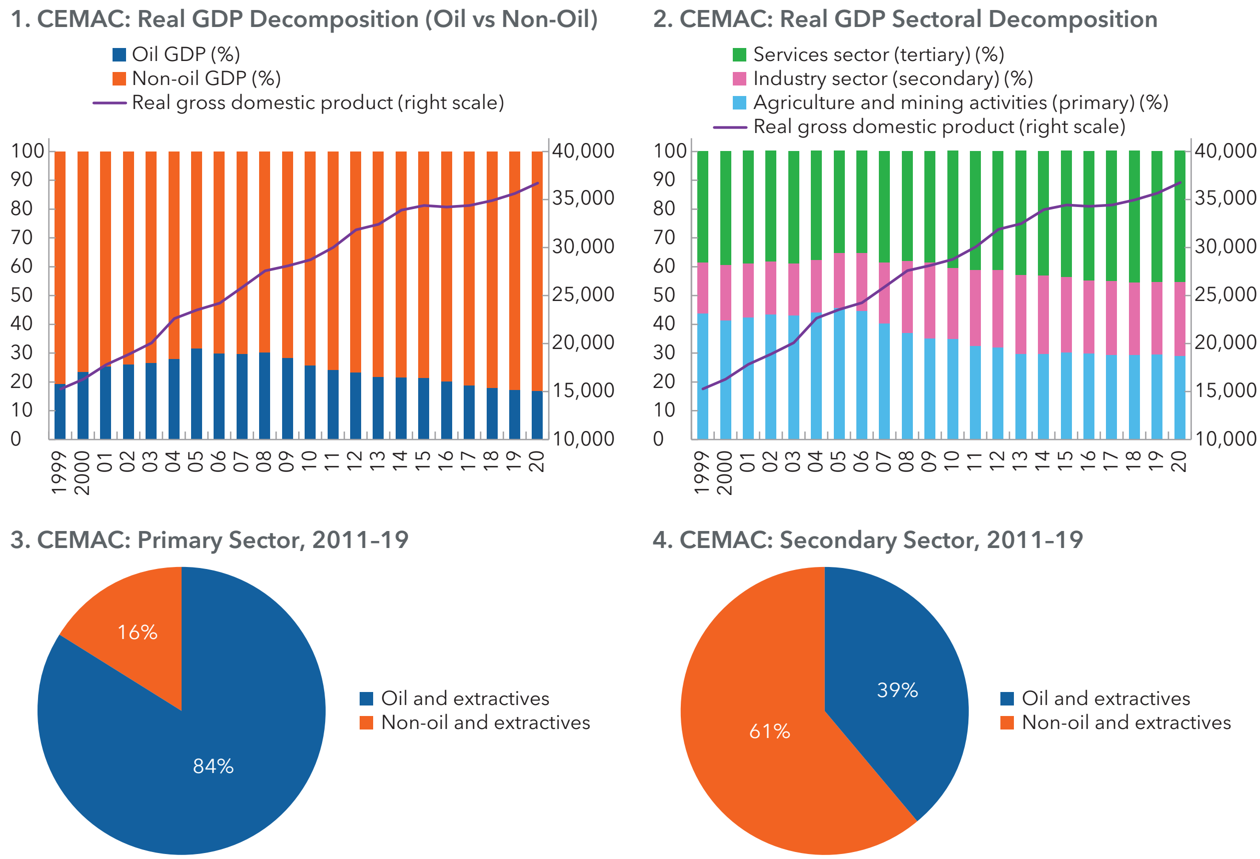
The CEMAC monetary union is composed of six member countries, including four low- and two middle-income and resource-rich countries in Central Africa, where the oil and extractive sectors hold a central role in the economy. The share of oil in overall GDP peaked at 30 percent in 2008 and was at 22 percent before the 2015 oil crisis. Over 2011–19, the oil and extractives industry accounted for 84 and 39 percent of the primary and industrial sector output, leaving the region largely exposed to commodities prices volatility. Cameroon is the largest and most diversified oil economy of the region, accounting for 47 percent of CEMAC's GDP in 2019. The same year, the share of the oil sector in national GDP was close to 30 percent in the Republic of Congo and Equatorial Guinea and around 18 percent in Chad and Gabon. Annex Figure 1.1 shows GDP decomposition by sectors at the CEMAC level.

The large terms-of-trade shock following the collapse in oil prices in 2014–15 put the CEMAC region on the verge of a balance of payments crisis. CEMAC member countries undertook a coordinated adjustment policy response in 2017, aided by the first wave of IMF-supported programs and the engagement of close regional consultation with the IMF. The sizable fiscal adjustments were able to revert the depletion of reserve assets at the BEAC. However, the root cause of such vulnerability to external shocks calls for diversifying the sources of growth away from the oil sector. This is the focus of the new generation of IMF-supported programs under consideration by CEMAC national authorities. The region cannot rely solely on donor support and bilateral loans to get onto the path to sustained growth. In an environment with scarce financial resources, enhancing the efficiency of both public investment and governance is a critical step to the successful implementation of a better spending strategy in the region.

These imperatives are only heightened by the current pandemic and the severe recession it has brought. The COVID-19 pandemic has affected both advanced economies and emerging markets, causing a collapse in global demand that has depressed commodity prices across the board. For CEMAC, this is a tremendous challenge. On the one hand, it makes the urgency of diversifying away from commodity exporting even more important. On the other hand, the reforms needed to achieve this structural transformation

[1] Prepared by Loic Lanci.

Annex Figure 1.1. GDP Decomposition: Oil, Non-Oil, and Sectoral[1]



Source: IMF staff estimates.
[1]Based on data availability for Gabon, Chad, and Equatorial Guinea, the breakdown of the tertiary sector is 32 percent on public administration, 24 percent on trade and commerce, 16 percent on transport and ICT, 5 percent on financial services, and 23 percent on others.

and economic diversification agenda will have to rely on a smaller resource envelope. This raises the bar for budgetary-neutral measures to enhance governance, reduce corruption, and improve the business environment.

Key to setting in motion a process to diversify the economy of the region is completing a thorough accounting of the sources of growth in CEMAC, to be used as a basis to benchmark future developments as a result of focused policies. This annex dives into the sources of real GDP growth in CEMAC and quantitatively identifies a set of policy actions in support of the new generation of IMF-supported programs. Sections 2 and 3 outline the methodology and data followed for this growth accounting exercise. Section 4 presents the results. In Section 5, we conduct an empirical exercise that seeks to quantify the impact of forward-looking policy reforms on real GDP per capita levels. Section 6 presents our robustness tests. Section 7 provides complementary growth diagnostics. Section 8 offers conclusions.

B. Methodology

Our growth accounting relies on an augmented Cobb-Douglas production function of the form:

$$Y(t) = A(t) \cdot F[K_g(t), K_p(t), L(t)], \qquad (1)$$

where $Y(t)$ represents real GDP at time t , $K_g(t)$ is the stock of public capital, $K_p(t)$ is the stock of private capital and $L(t)$ is the labor force. This latter is decomposed into the product of the working-age population (*WP*) and human capital (*H*), such that $L(t) = WP(t) * H(t)$ represents total labor force capacity. $A(t)$ represents TFP, which measures the impact of "residual" factors such as technological progress, institutional quality, and business climate on the production process. $F(\cdot)$ is a production function with constant returns to scale.

Differentiating with respect to time and dividing by $Y(t)$, equation (1) can be written as

$$\widehat{Y} = \widehat{A} + \alpha_g \widehat{K_g} + \alpha_p \widehat{K_p} + \beta \widehat{L}, \quad (2)$$

where α_g corresponds to the share of public capital stock in total output, α_p corresponds to the share of private capital stock in total output, and β is the share of the labor force in total output.

Output growth ($\widehat{Y}$) is disaggregated into a weighted sum of the growth rate of public capital stock ($\widehat{K_g}$), private capital stock ($\widehat{K_p}$), and the labor force ($\widehat{L}$). We model the growth rate of TFP ($\widehat{A}$) as a residual–reflecting the usage efficiency of production inputs.

Relying on the neoclassical literature accounting for capital, labor, and technology as sources of growth, we assume that the share of total capital and labor in total income, α and β, are respectively equal to 0.33 and 0.67 (Mankiw, Romer, and Weil 1992). We follow this approach by defining $\alpha = (\alpha_g + \alpha_p) = 0.33$. For each period, we then compute the weight of public capital as $\alpha_g = 0.33 \cdot K_g/(K_g + K_p)$ and the share of private capital as $\alpha_p = 0.33 \cdot (1 - \alpha_g)$.

We use this growth accounting framework to identify the sources of CEMAC's real GDP growth between 2000 and 2019. This enables us to benchmark CEMAC's performances against WAEMU and its income group–level peers.

C. Data

We estimate public and private capital stock following the perpetual inventory method (IMF 2015):

$$K_t = K_{t-1} \cdot (1 - \delta_t) + (1 - \delta_t/2) \cdot I_{t-1}, \quad (3)$$

where K_{t+1} is the stock of (private and public) capital at the beginning of period t + 1; δ_t is a time-varying depreciation rate; and I_t is (public and private) gross fixed capital formation in period t, where we assume that a new investment becomes operational in the middle of the period.

Following Garrido (2013), we model initial capital stock in 1990 as

$$K_0 = \frac{1 - \delta\backslash 2}{\delta_0 + g} \cdot I_0, \quad (4)$$

where g corresponds to the growth rate of real GDP per capita over the period 1990 to 2019.

We obtain the rates of (public and private) capital depreciation by inferring δ_t from equation (3) applied to the IMF's *FAD Investment and Capital Stock Database* covering the period 1980 to 2017, as in equation (5). Appendix 1 summarizes the sources of our data set.

$$\delta_t = -\frac{2}{3} \cdot \left[\frac{K_{t+1} - K_t - I_t}{\frac{2}{3} \cdot K_t + \frac{1}{3} \cdot I_t}\right] \quad (5)$$

D. Results

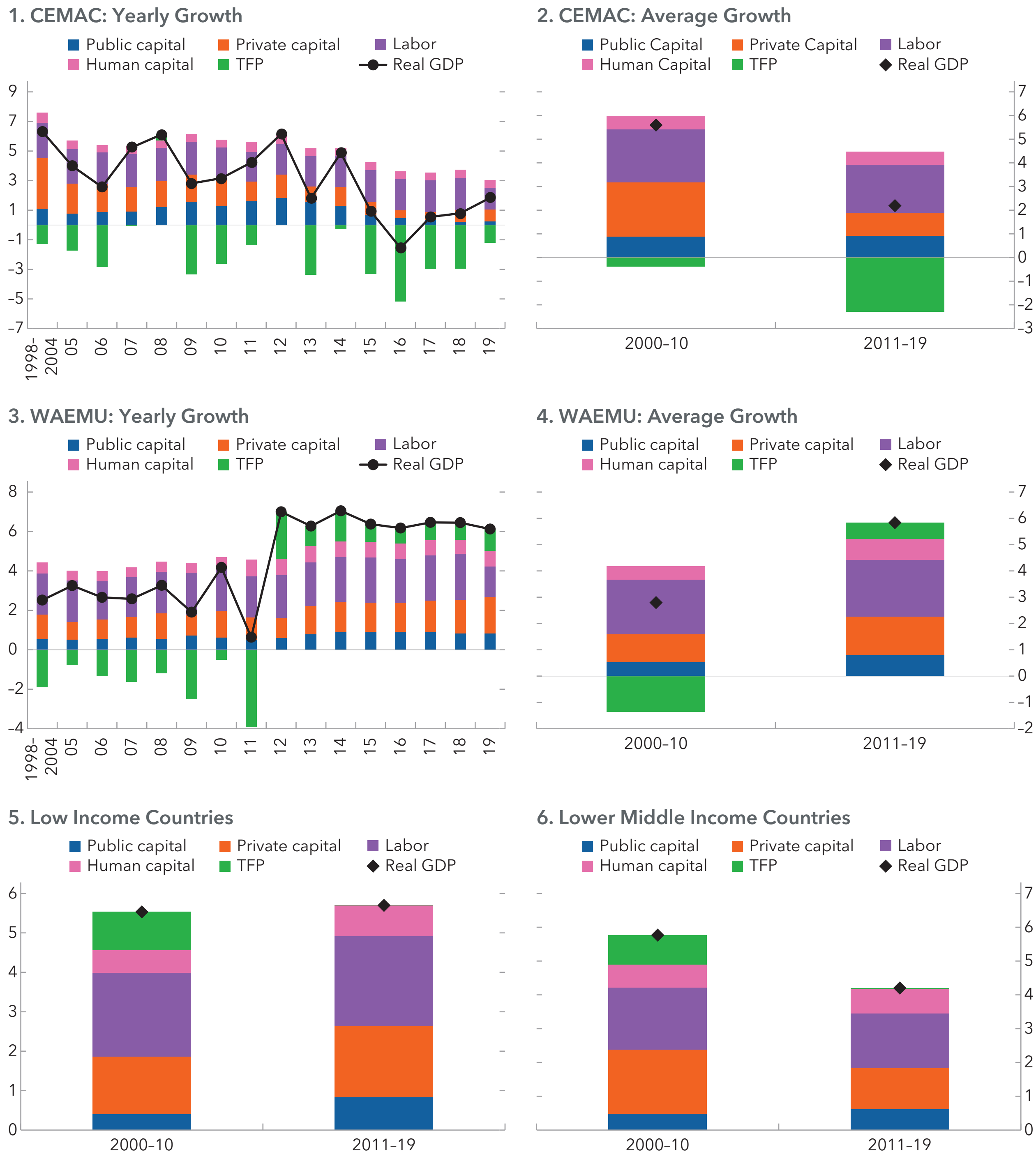
Our growth decomposition exercise shows a decline in the contribution of public and private capital stock to real GDP growth over the past decade. The analysis finds that public capital stock contribution to growth peaked at 1.84 percent in 2012. It then plummeted to an average of 0.4 percent over 2015–19, after oil prices collapsed in 2014–15, and public investment was severely curtailed under the adjustment effort. The estimation also highlights a collapse of private capital accumulation. Between 2000–10 and 2011–19, the share of private capital accumulation in real GDP growth fell from 2.26 to 0.97 percent. It had averaged 1.5 percent over 2008–14, when the Brent was above $90 per barrel. Annex Figure 1.2 plots the results.

The contribution of human capital to growth remains very low in CEMAC. Over the past two decades, the contribution of human capital to real GDP growth stayed constant and close to 0.5 percent. Human capital share briefly peaked around 0.65 percent in 2011–12 at the peak of the oil-price cycle but reverted to 0.5 percent thereafter. This suggests that the public capital spent during the years of the oil price boom failed to lay the foundation for higher human capital accumulation, which is paramount to productive growth creation and diversification away from natural resources. In comparison, WAEMU's human capital share jumped from 0.5 percent to a sustained average of 0.8 percent since 2011, along a synchronized increase in the public capital stock contribution to real GDP growth. Human capital accumulation has also been growing in other income group comparators. The share of the labor force remains constant and slightly above 2 percent over the two decades.

Correlation analysis suggests that business climate, institutional quality, health level, and digital connectivity are captured under the TFP and dragging down real GDP growth. TFP, a classic growth accounting residual, typically measures the impact of productivity-enhancing or -worsening factors on the production process. To filter out these effects, we measure TFP correlations with indicators of business climate, governance, health, and digital connectivity over five-year periods between 2000 and 2019 (Appendix 2). The results suggest positive correlations ranging between 24 percent and 50 percent for business climate and governance indicators over 2010–19. Health level, proxied by the prevalence of undernourishment and under-5 mortality, correlates with TFP measures in ranges of negative 11 to 23 percent over the past decade, whereas digital connectivity, measured through mobile penetration, correlates in ranges of positive 18 percent to 24 percent, as low- and middle-income countries progressively expand their domestic network coverages. In parallel, the negative drag of TFP on real GDP growth was –2.29 percent over 2011–19. This suggests that growth in the subregion sat on the shoulder of oil prices and investment, while the foundations of private sector growth and human capital accumulation were undermined, leaving the region more vulnerable to external shocks. These results call for urgent reforms in these areas as part of the new generation of IMF-supported program in the CEMAC region.

Using the TFP to compare CEMAC with regional peers confirms that factor productivity was higher and growing in WAEMU. TFP contribution to growth averaged 1.2 percent over 2012–19, a key driver of WAEMU's current growth spell. This reflects parallel improvements in business climate and governance reforms. Since 2010, WAEMU registered more than double the number of business climate reforms taking place in CEMAC (Appendix 3), a precondition to unleash private sector growth and create new markets. Although close to 0.1 percent in low- and lower-middle income groups over the past decade, TFP in this group still outperforms CEMAC. The contribution of public capital stock to real GDP growth improved 0.27 percent for WAEMU and 0.43 percent in low-income countries on average between the 2000s and 2010s. Overall, CEMAC has been largely outperformed by WAEMU and its income group–level peers. This calls for a quantification of CEMAC's upcoming policy choices and their potential impact on real output in the next section.

Annex Figure 1.2. Overall Growth Decomposition[1]



Source: IMF staff computations.

[1]Because of data limitations for Equatorial Guinea and Chad, human capital aggregates for CEMAC are computed with data from Cameroon, Gabon, the Republic of Congo, and the Central African Republic. All other estimates account for all six CEMAC countries.

E. Empirical Exercise

Building on our growth decomposition, this empirical exercise seeks to quantify growth determinants by estimating a standard growth equation in a cross-country setting:

$$Y_{it} = X_{it}'\beta + \epsilon_{it} \tag{6}$$

$$\left(\frac{Y}{L}\right)_{it} = \alpha + \beta_1 K_{g_{it}} + \beta_2 K_{p_{it}} + \beta_3 Gov_{it} + \beta_4 BC_{it} + \beta_5 Educ_{it} + \gamma X_{it} + \epsilon_{it} \tag{6'}$$

where K_{gt} and K_{pt} correspond to the stock of public and private capital at time t, respectively. $Educ_t$ is the secondary school enrollment rate and a proxy for human capital stock at time t. Gov_t and BC_t are policy variables measuring the quality of governance and the business climate, respectively. X_t is a vector of control variables.

Through this exercise we estimate the impact of factors accumulation on real GDP per capita and attempt to filter out the effect of TFP, largely a residual in the earlier analysis, by introducing explicit policy variables in the equation. We also control for macroeconomic stability factors.

We first estimate our model with fixed effects. It passes the Hausman and Mundlack test for fixed effects, such that $\epsilon_{it} = \upsilon_i + \nu_{it}$. To mitigate the impact of business and commodity cycles effects on the estimation, we compute three-year averages in our sample, which balances the panel data set. After transformation, we test the endogeneity of the public capital, private capital, and education variables, which may suffer from reverse causality. The Hausman test's null of exogeneity cannot be rejected for these variables, both jointly and separately. Our rationale is that public and private capital stocks' variables are computed using their own lags, whereas our proxy for education represents a three-year average and the benefits of one's level of education materialize only with a lag.

Our model relies on policy variables commonly used in the economic development literature. To single out the impact of institutional quality and the business environment on real GDP per capita, we introduce variables capturing governance and business climate in the regression. These latter are survey-based variables made available by the World Bank Group and published with a lag and therefore not subject to endogeneity concerns.[2] Also reflecting main literature in this area, we introduce human capital proxied by available measures of secondary school enrollment rate (Bouis, Duval, and Martin 2011; IMF 2013). Because important data gaps exist, we interpolate the series to offset missing observations with available data. All our series are transformed in logarithm and the coefficients are interpreted as elasticities.

Our estimates confirm that factors accumulation and policy variables supporting governance and the business environment contribute positively and significantly to real GDP per capita growth. We find positive and significant correlations between the dependent variable real GDP per capita and factor accumulation regressors on public and private capital stock. We also filter out a positive and significant impact of the governance and business climate policy variables. Our model estimates that a 10 percent increase in governance and business climate variables leads to an increase in real GDP per capita between 6 and 7 percent, all else equal. These results are robust to the introduction of macroeconomic stability variables in the model. Annex Table 1.1 presents our regressions.

F. Robustness Tests

Growth regression models conventionally face three types of problem: variable selection, cross-sectional dependence, and parameter heterogeneity (Feng and others 2019). Variable selection arises when numerous variables can explain a country's growth performance, and these candidates vary across

[2] We proxy business climate with the World Bank's Starting a Business indicator, the only break-free measure reliable for our analysis.

Annex Table 1.1. Empirical Exercise: Real GDP per Capita

	(1) Real GDP per capita	(2) Real GDP per capita
Public Capital	0.136*** (0.023)	0.137*** (0.024)
Private Capital	0.196*** (0.024)	0.193*** (0.025)
Governance	0.584*** (0.054)	0.565*** (0.057)
Business Climate	0.060* (0.031)	0.056* (0.033)
Education	0.041 (0.033)	0.039 (0.034)
Openness		0.031 (0.028)
Inflation		–0.004 (0.006)
N	779	731
Groups	154	151
R-squared, within	0.582	0.581
Country fixed effects	Yes	Yes
Hausman test	Yes	Yes
Mundlack test	Yes	Yes

Standard errors in parentheses
IMF Staff estimates (3 years averages, coefficients represent elasticities).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

economies. This makes the pool of potential explanatory variables relatively large in comparison with the number of countries. The restricted availability of high-frequency and quality data compounds the issue in CEMAC. We address this first problem by conducting our empirical exercise under the framework of a growth accounting model, which standardizes the sources of growth around neoclassical factors of production. The residual, or TFP, explicitly encompasses omitted variables influencing growth performances. In the empirical exercise, we include two policy variables of interest (institutional quality—or governance—and the business climate) that have been shown to influence growth potential in economies across the spectrum of income levels. We further account for omitted variables bias by including fixed effects capturing country-specific factors affecting growth—such as geography, climate, access to main trading routes, exposure to commodity prices, degree of financial inclusion, and colonial ties.

Cross-sectional dependence happens when common global shocks lead to unobserved time-varying heterogeneity. For instance, a financial crisis or the oil price shock observed at the beginning of the COVID-19 pandemic may affect many countries though trade and macro-financial links. This effect is particularly prominent in cross-country growth regression and can produce biased estimators. We account for this issue by taking three-year averages to mitigate the impact of common shocks on our estimates. Another approach recently explored in the literature and subject to future research would be to introduce a vector of unobservable common factors that captures country-specific responses to common shocks (Feng and others 2019).

Parameter heterogeneity occurs in growth studies that aim to model economic relationships in a similar fashion across all observations. It arises subsequently when the distribution of estimated coefficients across partitioned data sets varies significantly from the pooled data set. This may weaken the confidence that policymakers place on empirical results (Hineline 2008). To account for parameter heterogeneity, researchers have developed semiparametric estimation models that allow coefficients to vary across observations according to specified initial conditions (Feng and others 2019; Durlauf, Kourtellos, and Minkin 2001). We revisit the linear assumption of our earlier growth model (equation 6) by allowing our set of control variables to vary according to a country's initial state of development. We perform the new estimation in the context of a standard varying coefficient model, which has the advantage of allowing coefficients to vary smoothly over a conditioning variable Z. The model takes the form of equation (7), which we estimate through a two-step procedure that was demonstrated to be less sensitive to the choice of initial bandwidth (Fan and Zhang 1999):

$$Y_{it} = \Sigma_{j=1}^{p} \beta_j(Z) X_{jit} + \epsilon_{it}, \tag{7}$$

where $j = 1, \ldots, p$ corresponds to the number of covariate variables ($Z, X_1, \ldots, X_p$) and the response variable Y with $E[\epsilon] = 0$ and $\mathrm{Var}[\epsilon] = \sigma^2(Z)$. We set $X_1 = 1$ to allow for a varying intercept in the model. Through the dependence of coefficients on the conditioning variable Z, the modeling bias is reduced and the "curse of dimensionality" avoided. Appendix 4 details the mathematic intuition behind our semiparametric estimation model.

We choose the initial level of real GDP per capita as a conditional variable. This choice is consistent with the existing growth literature and guided by the optimal level of development variable selected by Feng and others (2019). Because our research focuses on the growth dynamics of an oil-producing region, we also examine the results of our semiparametric estimations by splitting our initial sample between oil and non-oil economies. In the latter, our dependent variable and conditional variable are respectively non-oil GDP per capita and its initial value. This parameter choice reflects the intended focus of the new generation of IMF-supported programs in CEMAC to stimulate and sustain higher non-oil sector growth. The definition and list of major oil economies is presented in Appendix 5.

Results in Annex Table 1.2 confirm the robustness of our earlier results. The policy variable on governance contributes significantly and in the same range to real GDP per capita. Furthermore, our business climate variable shows a significant impact when major oil economies are excluded from the sample. When plotting our policy coefficients on the conditional variable in Figure 3, we find first a positive and decreasing growth dividend arising from the governance variable. Interestingly, the convex-shaped pattern of our business climate coefficient signals that, at the aggregate level, governance dividends are higher in the early stage of development. This effect is magnified in major oil economies characterized by lower business climate dividends. Therefore, we find that governance reforms are not only a precondition to the establishment of a well-functioning and flourishing business climate but will also lay out the foundations to spur and sustain growth momentum in the non-oil economy. The subsequent combination of governance and business climate reforms will therefore be essential to maximize growth dividends in the CEMAC region.

G. Governance Reforms as Biding Constraint to Growth

As the first generation of IMF-supported programs has come to completion and CEMAC countries are embarking upon a second wave of IMF financing in the aftermath of the COVID-19 pandemic, it will be essential to target reforms aimed at removing the most pressing constraints to growth while maximizing

Annex Table 1.2. Semiparametric Estimations per Type of Economies

	Real GDP per capita	Real Non-Oil GDP per capita	
	(1)	(2)	(3)
Public Capital	0.137 (0.163)	0.162*** (0.029)	0.113*** (0.041)
Private Capital	0.176 (0.113)	0.232*** (0.032)	0.188*** (0.048)
Governance	0.825*** (0.266)	0.592*** (0.066)	0.614*** (0.070)
Business climate	0.092 (0.134)	0.101** (0.042)	0.063 (0.046)
Education	0.182* (0.096)	0.043 (0.040)	0.034 (0.046)
N	773	687	339
Groups	154	134	69
Major oil economies	...	No	Yes
Country fixed effects	Yes	Yes	Yes

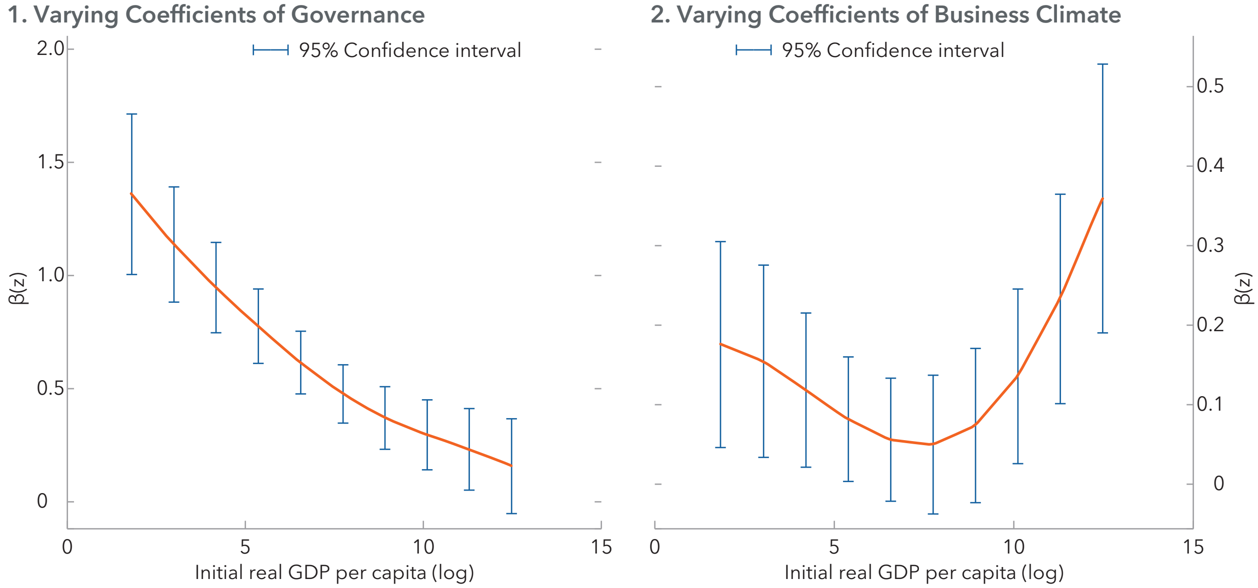
Standard errors in parentheses
IMF Staff estimates (3 years average, coefficient represent elasticities).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

dividends. Although there were tangible fiscal achievements during the first phase of the regional strategy, progress on structural adjustments was limited and reform fatigue has been taking root. The reformers' scarcer political capital urgently calls for a well-sequenced and -prioritized reform agenda.

Annex Figure 1.3. Varying Coefficients of Policy Variables

1. Varying Coefficients of Governance

2. Varying Coefficients of Business Climate



Sources: ???

We rely on the growth diagnostic approach developed in Hausmann, Rodrik, and Velasco (2004) to finalize our study and provide a comprehensive growth diagnostic package drawing on political economic considerations. Arguing for a one-size-fits-all attitude toward reform is unlikely to deliver identical growth dividends across the board. Hausmann, Rodrik, and Velasco (2004) go beyond development strategy divergences between Washington Consensus partisans and alternative state-led strategies by proposing a flexible growth diagnostic framework in the form of a decision tree that narrows down the most binding constraint to growth (see Appendix 6). We adopt a similar approach calibrated to an oil-exporting region with limited access to international capital markets and argue that structural governance reforms are the optimal development strategy in the years to come.

In the last section, we found quantitative evidence that preconditioning governance reforms to business climate improvements could yield higher growth dividends. The impediments to growth are numerous in a region plagued by a natural resource curse and political economy actors tempted to privatize rents while socializing welfare losses arising from suboptimal institutional practices and commodity price cycle downturns. Following Hausmann, Rodrik, and Velasco's (2004) methodology, we assess that non-oil sector growth has remained stagnant in CEMAC because of both inadequate access to finance and a low-return environment with limited private appropriability mechanisms. On the one hand, CEMAC has a restricted and costly access to international capital market, with only two countries (Cameroon, Gabon) that have issued Eurobonds in the past five years with rates fluctuating between 5 percent and 13 percent. This implies that foreign investors are not only unwilling to invest in CEMAC but also price access to capital with high premiums accounting for a fragile debt-carrying capacity, suboptimal regional reserves, political economy developments, and risks such as the misallocation of financial resources toward low productivity spending or rent appropriation. On the other hand, poor returns to factors accumulation lead to lackluster growth performances when inadequate financial resources and educational efforts are observed along low private returns to capital and schooling. Specific to CEMAC is its low level of credit to the private sector (12.9 percent of GDP in 2019) impacted by limited business development opportunities; a domestic banking sector hampered by the high level of nonperforming loans due to government arrears immobilizing scarce available capital; and the growing exposure of banks to sovereigns, which risks crowding out credits to the private economy. Although educational data are not broadly available, formal job opportunities requiring high-skills individuals are limited and returns to schooling restricted despite a growing young population.

Low-return environments are often the consequence of appropriability distortions that keep private returns low despite high social return potential. Hausmann, Rodrik, and Velasco (2004) identified four distortion categories relevant to CEMAC. First, macroeconomic imbalances warn against implicit taxation mechanisms through sudden adjustments. Surprise inflation or depreciation, macro-financial risks, sovereign risks, and recurrent fiscal deficits all jeopardize private returns to investment in CEMAC. Second, complex taxation regimes, costly international trade procedures, and ill-protected property rights and contract enforcement mechanisms are all inherent business climate risks to CEMAC investors, confronted to corruption and judicial manipulations. Third, innovation and a "self-discovery" climate are lacking due to a regional economy entrenched in low-productivity activities and natural resource extraction dependence. This problem is compounded by the fact that reaching productivity in tradable products further up the value chain confronts with already established patents and international competitors. Fourth, uncertainties about commitment to the rules of the game create undue risks and prevent players from entering the domestic market in a level playing field. This is especially relevant in the context of governments' commitments to adopt the highest governance standards.

Our analysis shows that governance shortcomings are a major obstacle to unlocking distortions with a bottom-up impact potential on the initial sources of stagnant non-oil sector growth in CEMAC—namely, the high costs of finance and low returns. Governance reforms complemented by improved business climate rules appear, therefore, to be the optimal strategy to yield the largest development impact. CEMAC states should be encouraged to diagnose key governance vulnerabilities and governance-related reform priorities by conducting regular governance diagnostics reports prepared with the assistance of IMF and World Bank staff. Such recent exercises in the context of the Republic of Congo's 2020 Article IV report and Equatorial Guinea's 2019 program review (IMF 2019, 2020) highlighted key achievements and areas where progress is still urgently needed. These include actions such as (1) completing the transposition of CEMAC directives on PFM that will reinforce budgeting frameworks and internal controls; (2) strengthening PFM practices through the adoption of expenditure monitoring and tracking systems to improve the efficiency and transparency of budget execution, the design and implementation of medium-term implementation strategies for PFM reforms, and the full operationalization of TSAs; (3) strengthening the anticorruption framework through the adoption of anticorruption laws, procedures, and financial asset disclosure practices in line with international obligations under the UN Convention against Corruption; (4) achieving greater transparency in oil revenue management through the conduct of regular audits and adoption of plans to address audits' shortcomings, the publication of oil reconciliation reports for state-owned companies, and compliance with information sharing standards under the EITI; and (5) conducting fiscal safeguards reviews to assess the functioning of treasury frameworks and ensure spending compliance and revenue channeling through TSAs.

Enhanced governance practices in such targeted areas not only send stronger governance signals to foreign investors but also have the potential to unlock the domestic financial system through arrear clearance while limiting financial leakages, thereby addressing the initial vulnerabilities uncovered through Hausmann, Rodrik, and Velasco's (2004) governance diagnostic framework. In parallel, revising inefficient and blurry business climate rules will provide new incentives to rally private sector investors and develop new economic sectors delinked from primary resources and that can leverage the region's long-term education potential.

H. Conclusion

The analysis confirms that the sources of value creation in CEMAC remain overly concentrated and dependent on oil production. Our growth accounting exercise reveals that the oil cycle has been driving public and private capital stock contributions to growth. Up to 50 percent of the private sector's share is vulnerable to oil sector dynamics. The empirical analysis further shows that governance and business climate reforms are CEMAC's greatest missed opportunities for growth. A 10 percent improvement in governance and business climate scores could potentially translate into a 6 percent to 7 percent cumulated increase in real GDP per capita. Our results finally suggest that the public capital spent during the years of the oil price windfall failed to lay the foundations for higher human capital accumulation. Fully leveraging the region's human capital potential is therefore critical to productive growth creation and successful economic diversification.

Failures to address widespread reliance on the commodity sector will only perpetuate CEMAC's main weaknesses. The dependence on commodity-generated revenues has trapped the region into a low-competitiveness zone characterized by poor governance, corruption, misallocation of public spending, and an impaired business climate. Leaders missed the opportunity to leverage the oil price momentum to lay the foundation of a more inclusive and sustained growth path. CEMAC has now reached a juncture point. It is essential to think strategically and generate the conditions incentivizing the burgeoning of a vibrant non-oil private sector that will provide game-changing opportunities to the new generation.

Diversifying the economy away from natural resources dependence is central to placing CEMAC on a sustained growth path. At a time when the financial resources envelope is drastically reduced, refocusing spending priorities toward generating the synergies to propel non-oil sector growth momentum is critical. At the center of the strategy are deep-reaching structural governance reforms, investment in individuals, and the suppression of corruption that is impairing the business environment and equal access to opportunities to all. Only through this dual transparency and human capital shock will CEMAC lay the groundwork to incentivize formal private sector dynamisms, boost the non-oil economy, and provide development prospects to its young population.

Governance reforms followed by business climate improvements yield the largest growth dividends at the early stages of development. Prioritizing CEMAC's development strategy along well-targeted reform plans will be critical to fully leverage the political reform capital that remains in a region that has been under IMF-supported programs since 2016 and is showing symptoms of reform fatigue. Governance reforms commitment in areas such as public financial management, anticorruption frameworks, and oil sector transparency, combined with business climate reforms touching on taxation regimes, property rights, trade procedures, and judicial systems, appear to be the optimal strategy to maximize growth dividend and lay the foundations to diversify the economy into higher-value-added sectors.

Annex 2. The Impact of Governance on Public Investment Efficiency and Growth: A DIGNAR Approach[1]

This note seeks to assess the contribution of enhancing public investment efficiency and governance in sustaining higher and more inclusive growth. It is intended as input for the policy design of CEMAC's second generation of programs. The first generation focused mostly on frontloading fiscal adjustment and securing external financing to avert a balance-of-payments crisis. This analysis shows that even moderate but sustained improvements in governance within the current budget envelop can have a stronger output-enhancing channel compared with a simple scaling up in public investment. These results are particularly relevant in a financially constrained environment with lower oil prices and additional health and security spending requirements.

A. Background

The sudden outbreak of the COVID-19 pandemic, together with the collapse in oil prices, has created a shock like no other for the CEMAC region. This dual shock threatens to undo the progress achieved in the implementation of the regional strategy and emphasizes the need to limit the region's dependency on oil revenue. Governance reforms are now a necessity; the external position of the region will not be sustainable without reforms to support a more diversified and inclusive growth. As governments assume a broader, more significant role in response to the crisis, it becomes ever more important to increase efficiency and effectiveness at the risk of worsening current challenges. Policies to enhance the business climate, improve governance, and fight corruption, while gradually reducing the footprint of the state, should be implemented more forcefully to unleash private sector development. Cross-country experiences also show that governance reforms take time; hence they should be started as early as possible. This should remain the ambition of the next phase of the regional strategy. This note provides estimates of the large potential windfall to be gained through substantial and cost-efficient governance reforms.

B. Introduction

In theory, natural resource revenues may help foster development and growth by increasing fiscal space that can be used to finance public investments in infrastructure and human capital. Increases in public capital may raise the productivity of labor and private capital and stimulate further accumulation of these productive factors that will enable stronger growth. However, public investment alone is not enough, and the interaction with other sources of growth is also important. For example, the conversion of public investment into higher physical capital stock as well as human capital to boost growth is at least influenced by good institutions and governance. The starting stock of public and private capital also matters; the latter is relatively low in the CEMAC region, which suggests that its marginal productivity could be important. This empirical analysis aims at comparing the possible impact on growth of scaling up public investment versus improving governance in CEMAC countries and highlighting the critical importance of their interrelationship to improve quality of investment over quantity.

[1] Prepared by Eric Lautier.

Past examples of public investment scaling up in the CEMAC region have delivered mixed results. In 2006, CEMAC governments embarked on a scale-up of public capital spending. Public capital expenditure increased from a stable 5 percent of GDP in 2000–05 to 12% in 2014, mostly financed by oil revenue. Yet increased public spending did not deliver higher non-oil sector growth, and perceived infrastructure quality in the region is still lagging behind sub-Saharan peers.

Raising the quality of investment has proved to be a challenge in many countries in the African continent and in CEMAC in particular. PIMA in CEMAC countries highlights important shortcomings that affect the quality and efficiency of public investments in the region.[2] According to the PIMA metric, critical weaknesses exist already at the planning phase of the public investment management process, affecting both the institutional framework and its effectiveness. These weaknesses at the earliest stage of the PIM cycle have a direct negative impact on the efficient allocation of resources at the execution phases. For instance, single tender process is the common procurement rule, and the absence of central control of projects implementation leads to payments without verification of physical execution. These shortcomings are recognized as a key impediment of the effectiveness and efficiency of the investment function with public resources.

Progress in the improvement of governance has also been disappointing over the past 10 years. Despite several initiatives and calls from multilateral partners to improve governance in the CEMAC region, the World Bank's Worldwide Governance Indicators showed no progress in CEMAC, except for government effectiveness, over the past 10 years (Annex Figure 2.1). The CEMAC position (in terms of average percentiles) is also significantly lower compared with the sub-Saharan African benchmark across all indicators, including control of corruption and rule of law. These difficulties constrain private investment growth and overall efficiency of investment; this ultimately limits economic diversification and leaves the region severely exposed to the types of trade shocks it is experiencing today.

C. The Model Setup

To help quantify macroeconomic effects of public investment scale-ups, we follow the debt, investment, and growth in natural rich countries (DIGNAR) models developed by Melina and others (2018). The DIGNAR is a model of a small open economy with two types of households (credit constrained and not credit constrained), three production sectors, and separate prices for exports and imports. The model assumes perfectly competitive markets with flexible prices. The three production sectors are (1) the oil sector, (2) the sector producing non-oil internationally traded goods, and (3) the non-traded goods sector. The oil sector is modeled as a natural resource endowment that is exported yearly, the proceeds of which are shared between the government, households (through transfers and reduced taxes), and extracting firms. The other two sectors are modeled as a Cobb-Douglas production function involving public capital, private capital, and labor. The model is augmented to simulate the impact of governance reforms on output, private investment, private consumption, and debt, along the lines of the analysis presented in the new IMF framework for enhanced engagement on governance (IMF 2018a).

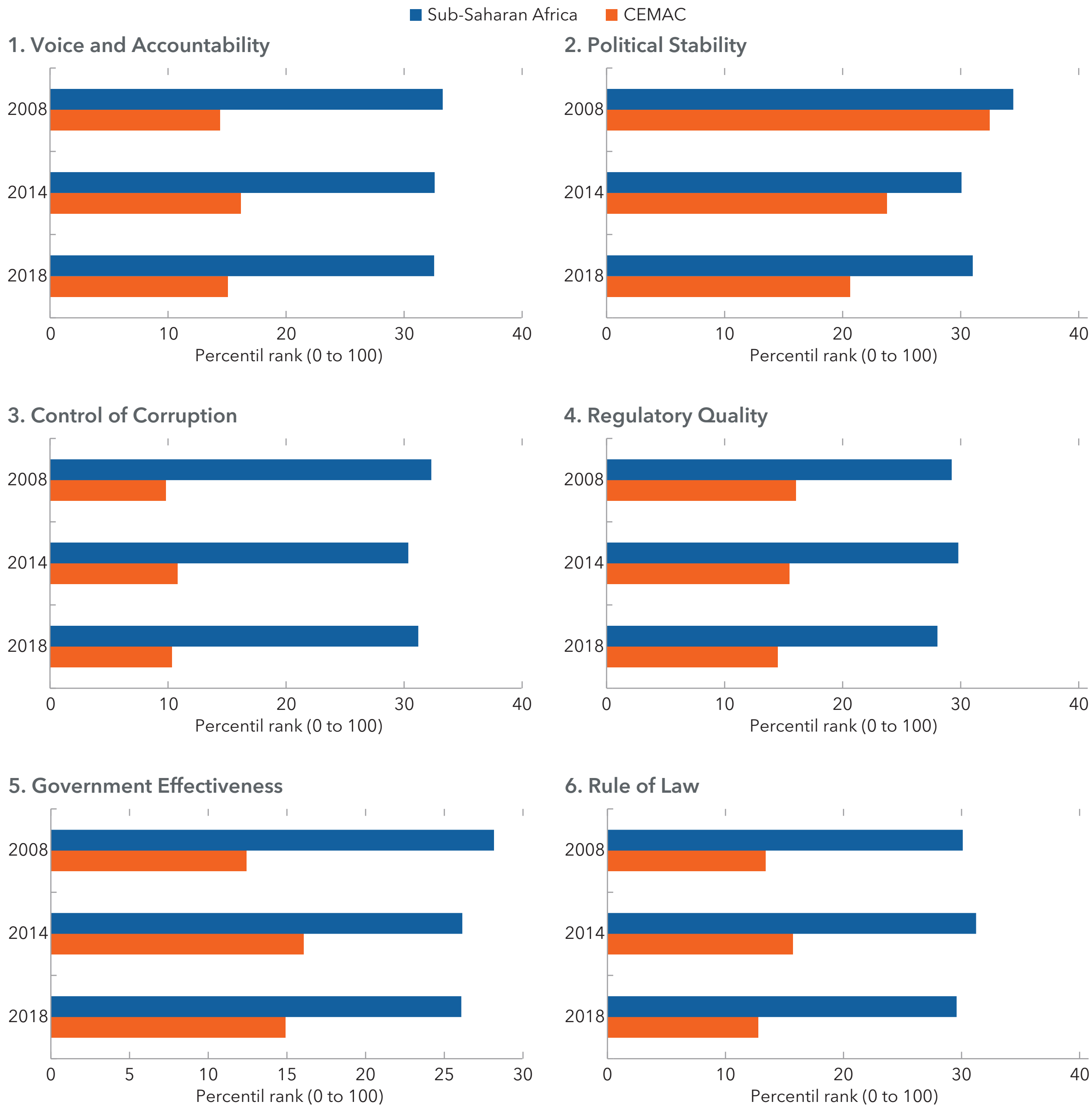
We simulate the impact onto growth resulting from an improvement in governance by CEMAC countries over a 10-year period, following three scenarios:

a. A scale-up in public investment spending of 20 percent (relative to the baseline) of the current public investment to GDP ratio over 10 years with no change in governance

b. A gradual improvement in governance over 10 years with no increase in public investment spending. The improvements occur through different channels:

[2] PEFA reports [website]; CEMAC 2018 SIP [website].

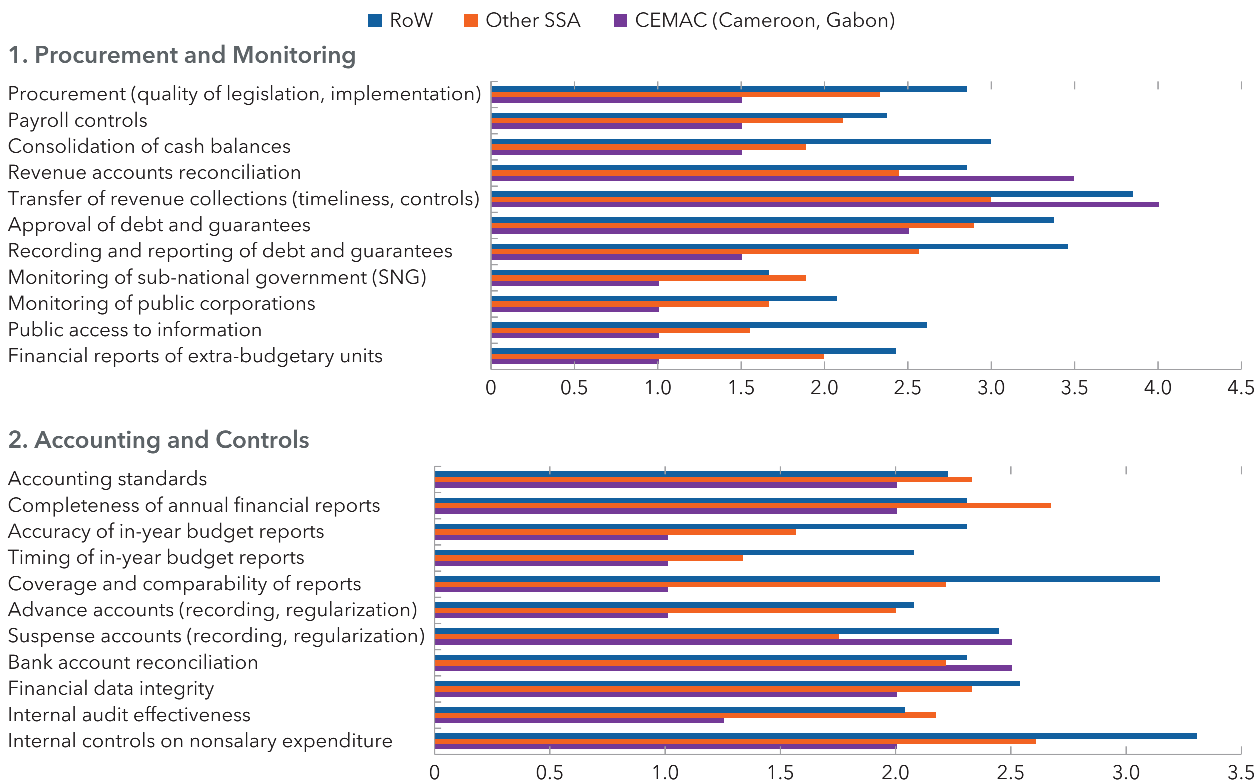
Annex Figure 2.1. CEMAC: 2008–18 Evolution of Worldwide Governance Indicators



Source: Kaufmann and others (2010).
Note: The Worldwide Governance Indicators are a research data set summarizing the views on the quality of governance provided by a large number of enterprise, citizen, and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, nongovernmental organizations, international organizations, and private sector firms. The Worldwide Governance Indicators do not reflect the official views of the Natural Resource Governance Institute, the Brookings Institution, the World Bank, its executive directors, or the countries they represent.

(i) A gradual reduction in bribery of public officials and other distortions (captured here by an implicit tax similar to a bribe rate), which would boost private sector investment and gradually reduce the marginal cost of capital and labor by 5 percent

Annex Figure 2.2. Available 2016 PEFA Scores for CEMAC Countries and Selected Regions



Sources: PEFA secretariat; and IMF staff.
Note: PEFA elements are ranked between 1 (criteria severely not met) to 4 (criteria fully met). Based on the PEFA classification applied since (June 2014).

(ii) A gradual improvement in public investment selection and monitoring processes, which would raise elasticity of output to public capital from 15 to 20 percent and enhance conversion of public investment spending into actual capital stock from 42 to 58 percent (as per the sub-Saharan African median)

(iii) A gradual increase in revenue collection equivalent to widening the tax base and limiting tax evasion of 10 percent for taxes on both consumption and labor

c. A combination of the first two scenarios; that is, a gradual improvement in governance over 10 years, as detailed above, and an increase in public investment spending of 20 percent (relative to the baseline)

D. Summary Results

A comprehensive governance reform package delivers much higher growth for all countries covered in this analysis compared with a "simple" scaling up of public spending with no improvement in governance (Figures 1, 2, and 3). Overall, even though country results (Table 1) vary in magnitude, similar outcomes are observed across countries. An increase in public investment without improvement in governance would result in a small increase in private investment to GDP in all countries due to crowding out of private demand in the long term (investment and consumption). Similarly, growth in non-oil output in Gabon and Cameroon would be only modest, thereby perpetuating their dependency in commodities, at the crux of the region's vulnerability to external shock.

Annex Table 2.1. Country-Specific Results by Scenarios

Increase of 20 Percent in Public Investment with No Change in Governance

Evolution from Initial State over 10 Years	Republic of Congo	Gabon	Cameroon
Private Investment	0.7%	0.2%	0.2%
Non-Oil Output	–1.9%	0.1%	0.4%
Non-Oil Revenue (as % of Total Revenue)	40.4%	18.9%	9.4%
Total Debt	21%	10%	7%
Improvements in Current Account Balance (as % GDP)	8.8%	2.2%	2.1%

Comprehensive Governance Reform Package with No Change in Public Investment

Evolution from Initial State over 10 Years	Republic of Congo	Gabon	Cameroon
Private Investment	12.4%	13.0%	14.6%
Non-Oil Output	6.8%	4.3%	6.1%
Non-OIl Revenue (as % of Total Revenue)	37.2%	20.2%	9.2%
Total Debt	13.3%	–3.4%	–2.9%
Improvements in Current Account Balance (as % GDP)	11.4%	3.9%	3.5%

Comprehensive Governance Reform Package with an Increase of 20% in Public Investment:

Evolution from Initial State over 10 Years	Republic of Congo	Gabon	Cameroon
Private Investment	12.8%	13.6%	15.2%
Non-Oil Output	7.6%	5.2%	6.7%
Non-Oil Revenue (as % of Total Revenue)	47.4%	32.4%	16.4%
Total Debt	15.9%	0.3%	–1.4%
Improvements in Current Account Balance (as % GDP)	12.3%	5.5%	4.9%

In fact, the Republic of Congo, would experience a decline in non-oil output, reflecting its weaker macro-fundamental and the pervasive impact of low governance on its non-oil sector. Given that the country hovers on the side of severe debt distress, external commercial borrowing at market terms may not be available as a channel to finance a scale-up of public investment. Thus, the fiscal gap can be closed only by increasing tax and reducing government expenditure in other areas, including perhaps priority social spending, with negative spillover on non-oil output. Because concessional debt is exogenous and is set as constant over the period covered by the model, the remaining fiscal gap has to be closed through domestic debt to accommodate the increase in public investment; this ultimately results in an explosive debt scenario. Under these assumptions, the only viable path for any country in such a situation is to boost growth through governance reforms that will increase value for money of public investment, have a higher growth dividend, and positively affects its debt dynamics.

Consistent with the literature in this area, the biggest windfall on non-oil output is realized when governance improves through well-targeted (and largely budgetary-neutral) reforms that reduce distortions in the private sector. This can be explained by the wider reach of governance reforms to all private economic agents, effectively unleashing a crowding-in dynamic and reducing the generalized cost of production.

Importantly, the nature of the comprehensive reform package simulated here also includes a reduction in the degree of waste of capital expenditure, measured as the actual stock of capital added per dollar spent. This positive dynamic translates into a higher stock of public capital for given outlays which, together with higher standards in terms of project selection, has positive spillovers on non-oil sector growth. Improvement in governance of public funds with a more effective tax administration and a widening of the tax base lead to higher tax revenue and improved fiscal balances. Eventually, this windfall may allow tax rates to increase only moderately in contrast with the baseline without change in governance when tax rates increase sharply to restore fiscal balances. In turn, this may boost private consumption, investment, employment, and non-oil output.

Due to the large and positive impact on non-oil sector growth, the model confirms that better governance is essential to guarantee debt sustainability while scaling up public investment. Assuming a recovery of oil prices, a gradual governance reform package in Cameroon and Gabon can be compatible with a stable (and sustainable) level of total debt even under the assumption of a scaling up in public investment. However, given the Republic of Congo's macroeconomic fundamentals and current debt ratio, only a very ambitious governance reform package can be compatible with maintaining debt sustainability in the long term. In fact, the scale of governance reforms would need to double to reduce distortion to private firms by 10 percent and support a gradual widening of the tax base by 20 percent over 10 years (Figure 2). In the model, oil revenue would also have to remain stable with production around 100 million barrels a year from 2025. This scenario would put non-oil sector growth in the Republic of Congo on a sustainable upward trajectory while less ambitious reforms would ultimately result in a downward growth path.

It must be stressed, as indicated in the background section of this note, that the current environment creates a deep uncertainty regarding these simulations, which were based on 2019 oil price projections. The results hold, if one can assume that the current crisis will recede starting already in 2021. At the same time, should the oil prices and economic activity return to the precrisis level more slowly, the message about the importance of governance reforms would be unchanged. Governance reform is the only way to increase value for money and impact for a given resource envelope to support growth in the non-oil sector.

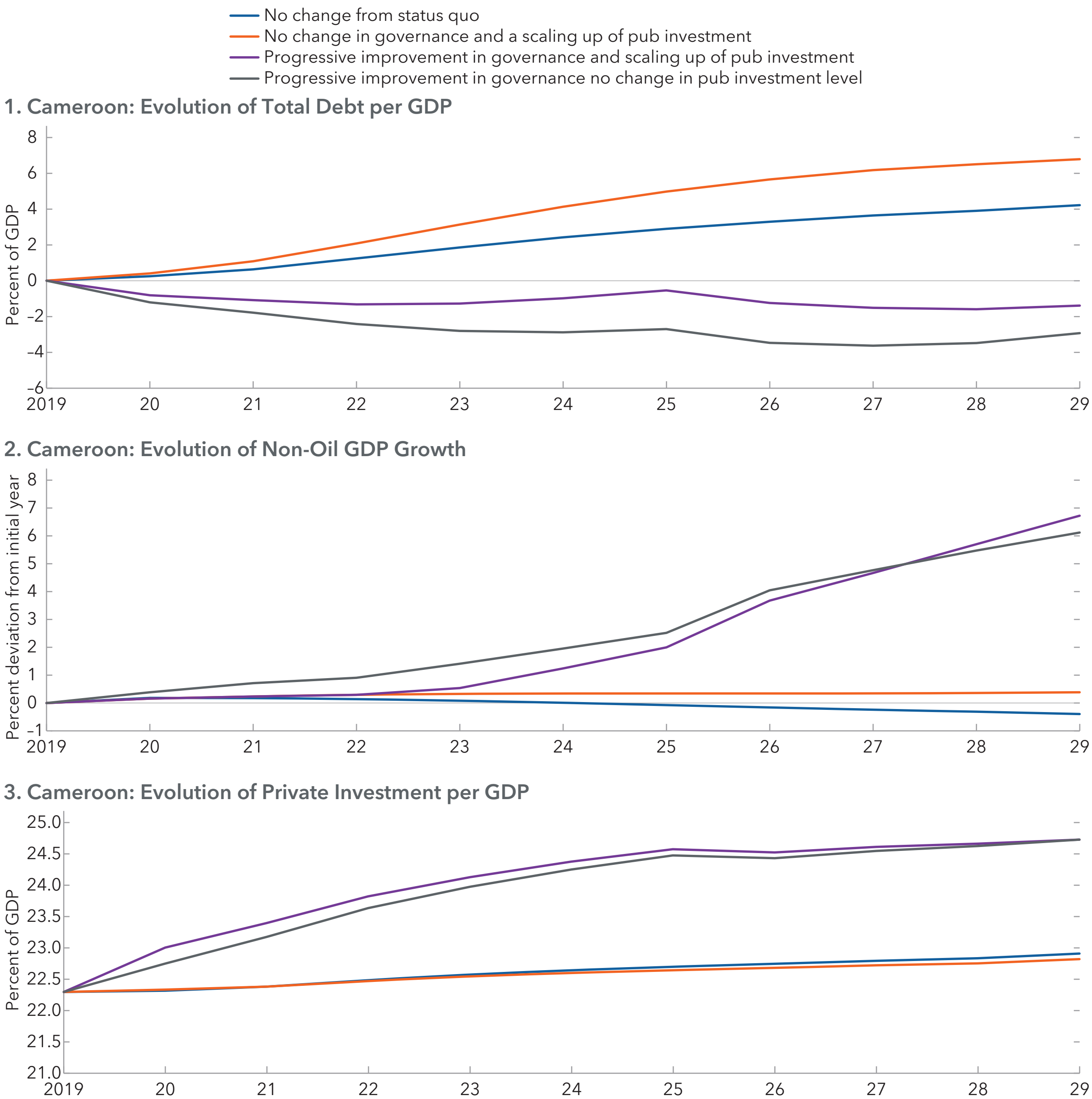
E. Policy Recommendations

In a context of decreasing oil production and lower oil revenue for CEMAC countries, unleashing the growth constraints to the private sector is essential. This should first start with a comprehensive governance reform package that could deliver significant windfall across all sectors in the economy, crowd in the private sector, and maximize value from new public investment projects. The CEMAC Commission should ensure effective implementation of the business climate observatory, leverage available survey indicators, and draft action plans to achieve measurable progress on business climate indicators in the CEMAC region.

Improvements in public investment management practices in CEMAC countries could significantly reduce their efficiency gap. This can be achieved by first strengthening the legal framework of PIM that would help establish, if enforced, well-anchored and durable procedures and responsibilities for all stakeholders. Concurrently, PIM processes need to be improved. This includes strengthening planning functions and capacities through a centralized body to support and coordinate transparent selection of projects through clear criteria and publication of winning bids and details on a firm's ownership.

Complete the transposition of CEMAC PFM regional directives and strengthen PFM processes. Better public investment management practices are dependent on strong public financial management processes to secure funds for effective project implementation and guarantee infrastructure maintenance while preventing accumulation of arrears. Better PIM in turn also contributes to better public financial management processes; better project planning, for instance, strengthens budgetary programming credibility and helps secure funds for project execution.

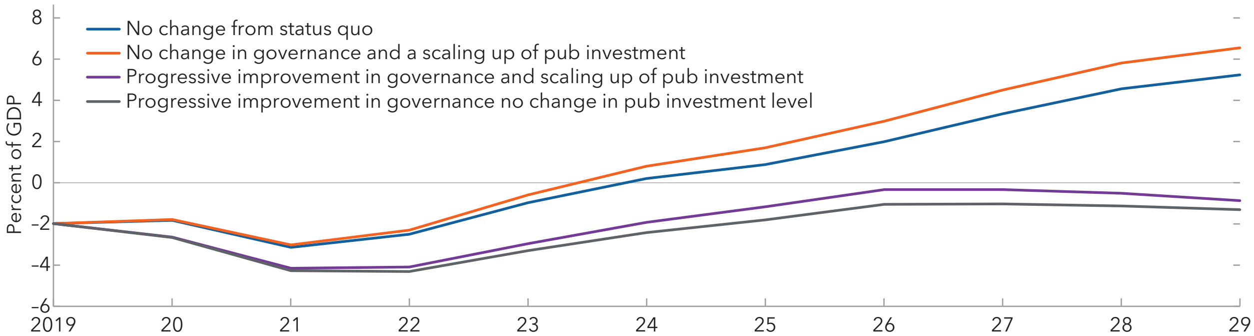
Annex Figure 2.3. DIGNAR Results Breakdown by Countries



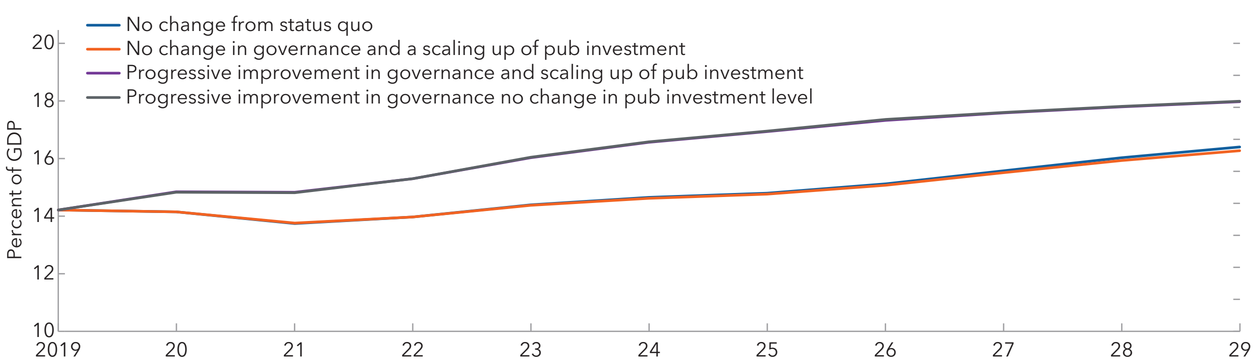
Source: IMF staff estimates.

Annex Figure 2.3. DIGNAR Results Breakdown by Countries (continued)

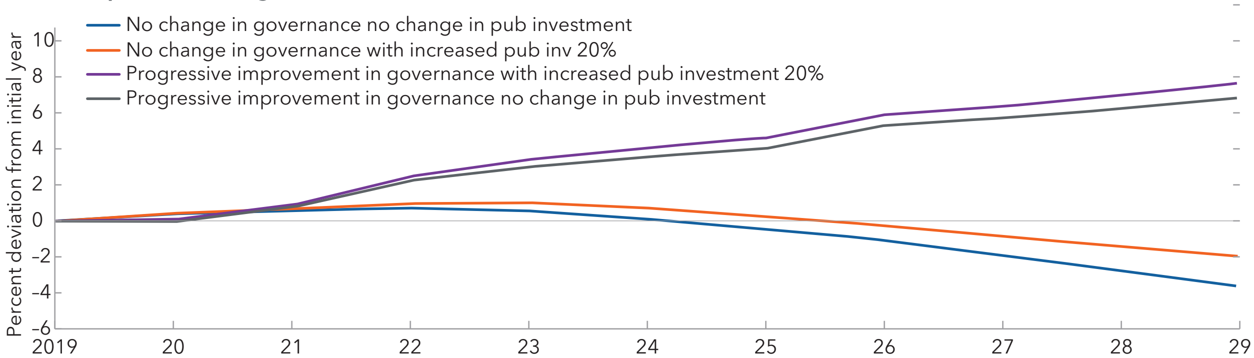
4 . The Republic of Congo: Evolution of Total Debt per GDP



5. The Republic of Congo: Evolution of Private Investment per GDP



6. The Republic of Congo: Evolution of Non-Oil GDP Growth

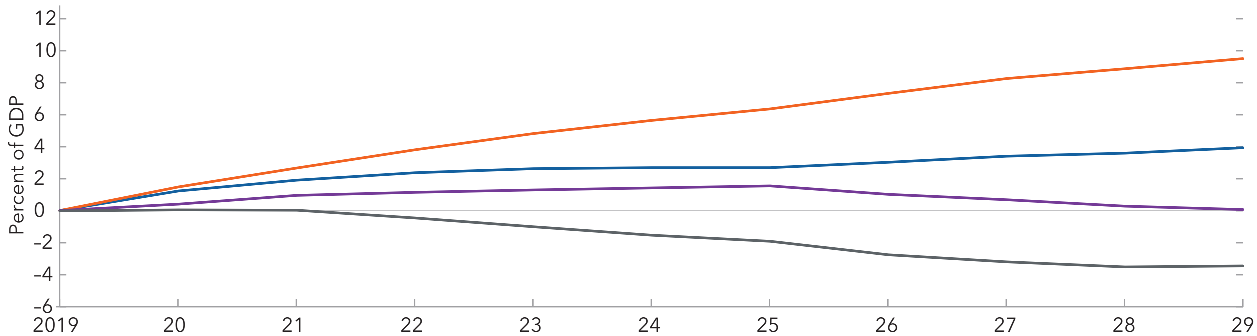


Source: IMF staff estimates.

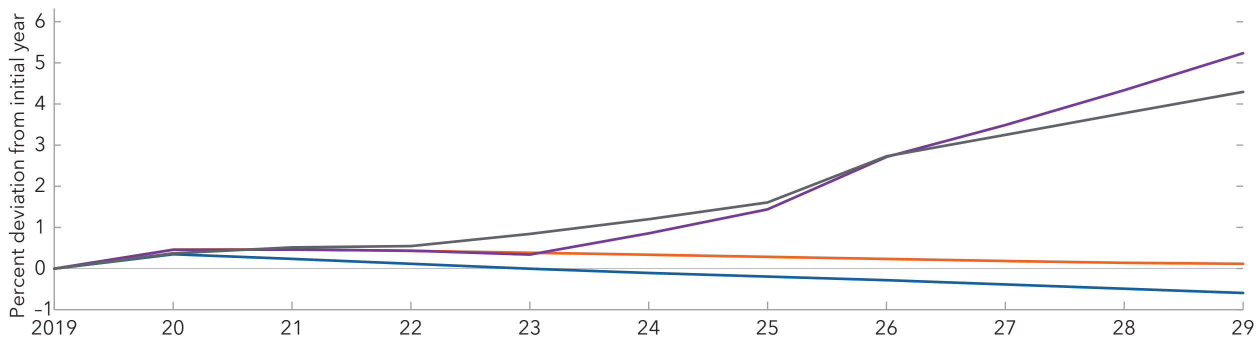
Annex Figure 2.3. DIGNAR Results Breakdown by Countries (continued)

No change from status quo
No change in governance and a scaling up of pub investment
Progressive improvement in governance and scaling up of pub investment
Progressive improvement in governance no change in pub investment level

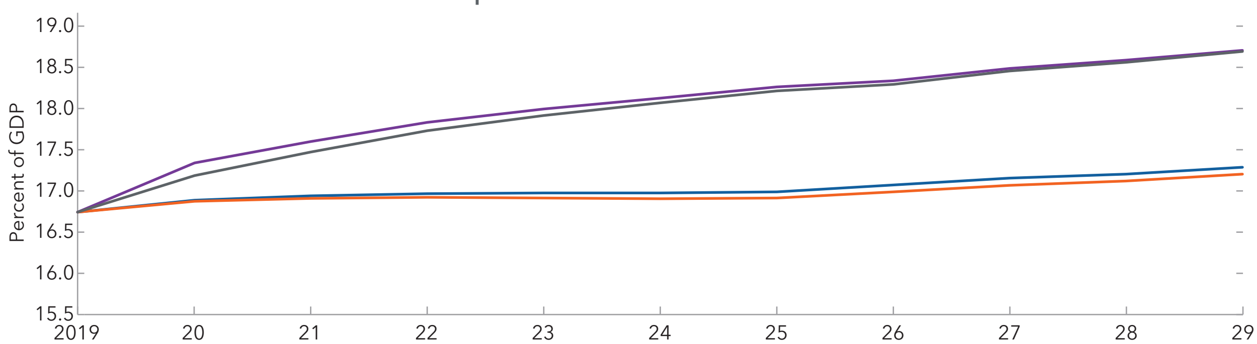
7. Gabon: Evolution of Total Debt per GDP



8. Gabon: Evolution of Non-Oil GDP Growth



9. Gabon: Evolution of Private Investment per GDP



Source: IMF staff estimates.

Appendix 1. DIGNAR Model and Calibration

The rationale supporting the key investment-growth link modeled in DIGNAR is that public investment increases the stock of productive capital, which affects the production functions of both traded and nontraded goods. Gross public capital is expanded by yearly capital expenditure, but that gross stock needs to be discounted by an efficiency factor that accounts for leakages of resources away from the delivery of the actual investment plan. This (in)efficiency factor in fact factors the challenges that LIC governments face on investment inefficiency and absorptive capacity constraints, which are well documented in the literature. Lower public investment efficiency translates into a lower actual stock of public capital being accumulated and, thus, lower output. In this analysis, we enhance the DIGNAR model by including two additional parameters to capture the potential impact of improved governance on (1) output and private investment and (2) revenue. We allow for a share of economic output to be wasted, not ending up in actual capital stock "on the ground," because of governance issues due to time lost with administrative inefficiency and bribes. This detracts from the marginal productivity of public resources on capital and results in a lower equilibrium for employment, investment, and output.

On the fiscal side, in each period the government's total receipts consist of (1) taxes, including consumption taxes, labor income taxes, and resource revenues; (2) foreign aid; (3) bond sales; (4) principal and interest earnings from the resource fund; and (5) user fees on infrastructure services. Households can be savers or nonsavers. Savers can invest in government bonds and borrow at significant rates in an international financial market. The government's total outlays consist of (1) government current spending, (2) public investment, (3) transfers to households, and (4) debt service payments. Increases in public investment and the associated fiscal adjustment needed to create space required by its financing can generate private sector crowding-in or crowding-out effects. While in the long term there is always crowding in, if the projects are good, during the transition, crowding out may dominate, especially if there is not enough foreign financing. Depending the current external debt borrowing capacity, domestic and external commercial debt accumulates endogenously while the path of external concessional debt is taken exogenously in this model, assuming that the latter is decided by international donors irrespective of public investment plans. Public debt accumulation then triggers fiscal adjustments that can distort consumption and labor income tax rates, the government consumption path, or the level and timing of transfers to households.

The DIGNAR model is modified to capture the impact of weak governance on three aspects, along the lines of the analysis presented in the new IMF framework for enhanced engagement on governance (IMF 2018a).

A. Governance Channels

First, a share of economic output is lost because of weak governance. Such loss could represent, for example, the time and resources lost by entrepreneurs to bribe government officials to obtain required authorizations. As a result, firms are discouraged from investing and hiring. For simplicity, this loss is assumed to be proportional to the level of production, and it is assumed to be transferred as a lump-sum cost onto optimizing households. Let the firm's production function be

$$Yt = f(Kt, Lt, KtG),$$

where Yt is output, Kt is the stock of private capital, Lt is labor, KtG is the stock of public capital, and $f(\cdot)$ is an increasing and concave function of the private factors for production and of public capital. The firm's profit, Πt, is given by

$$\Pi t = (1 - \kappa t)Yt - wtLt - RtkKt,$$

where $\kappa t \in (0,1)$ is the percentage of output wasted owing to weak governance, wt is the real wage, and Rtk is the gross return to private capital. Standard profit maximization implies that, as cost factors, the real wage and the return to private capital are equalized to the marginal products of labor and capital, respectively.

Waste caused by weak governance creates a wedge $(1 - \kappa t) < 1$ between the real wage and the marginal product of labor and between the gross return to private capital and the marginal product of capital. For given wt and Rtk, an increase in κt requires an increase in equilibrium, and hence the demands for labor and capital decline, given diminishing marginal returns. This will translate into lower employment, lower investment, and thus lower output.

Second, weak governance reduces the efficiency of public investment (the fraction of government capital expenditures that translates into productive public capital). The law of motion of public capital will thus be

$$KtG + 1 = (1 - \delta G)KtG + \epsilon tItG,$$

where δG is the depreciation rate, ϵt (0,1) is public investment efficiency, and ItG is public investment expenditure. The stock of public capital available at the beginning of period $t + 1$ equals the stock of capital that has not depreciated up to the end of period t, plus effective public investment $\epsilon tItG$ (weak governance causes a fraction $1 - \epsilon t$ of public investment spending to go wasted). Lower public investment efficiency translates into a lower stock of public capital being accumulated and, via equation (1), lower output.

Third, inefficiencies lead to loss of tax revenues. A fraction of taxes due fails to reach the government budget. Lower revenue then leads to higher debt; to keep debt at a given level, tax rates would need to increase, which then results in lower private demand and output:

$$B_{t+1} = R_t B_t + I_t^G - (1 - \vartheta_t)\tau_t^C C_t,$$

where Rt is the real gross rate of interest on government bonds, Bt; τ is the consumption tax rate, Ct is private consumption, and $\vartheta t \in (0,1)$ is the share of revenue lost owing to weak governance. For a given level of tax revenue, a higher ϑt would result in higher debt; alternatively, to keep debt at a given level, a higher ϑt would necessitate a higher tax rate (to keep the "effective" rate unchanged), thus curbing private demand and output.

B. Outputs

Non-Oil Output

We define non-oil output as the residual of aggregate output and oil output. Aggregate output is following a Cobb-Douglas function with three sectors: nontradable, tradable, and oil.

Non-Oil Revenue

Non-oil revenue is composed of tax revenues from consumption, labor income, international grants, and a user fee on current infrastructure.

Total Debt

Total debt per GDP is the sum of concessional debt, which is exogenous; domestic debt as described above; and commercial debt.

Private Investments

Private investment by firms in the nontraded good and traded good sectors evolve respectively according to

$$k_{T,t} = (1 - \delta_T)k_{T,t-1} + \left[1 - \frac{\kappa_T}{2}\left(\frac{i_{T,t}}{i_{T,t-1}} - 1\right)^2\right] i_{T,t}.$$

$$k_{N,t} = (1 - \delta_N)k_{N,t-1} + \left[1 - \frac{\kappa_N}{2}\left(\frac{i_{N,t}}{i_{N,t-1}} - 1\right)^2\right] i_{N,t}.$$

where k_N and k_T are the investment adjustment cost parameters (both set at 0.25), δ_N and δ_T are capital depreciation rates and i_N and i_T represent investment expenditures.

Current Account Balance

We define the current account deficit as the total consumption by households, private investments (in tradables and nontradables), government consumption of tradables, portfolio adjustment costs (which is zero because it depends on private foreign debt), and interest paid on foreign debt (minus foreign aid).

$$ca_t^d = C_t + i_{N,t} + i_{T,t} + p_t^G g_t + \Theta_t^{OPT} - y_t - s_t rm_t^* + (R_d - 1)s_t d_{t-1}$$
$$+ (R_{dc,t-1} - 1)\, s_t d_{c,t-1} + (R_{t-1}^* - 1)s_t b_{t-1}^* - (R^{RF} - 1)s_t f_{t-1}^*.$$

C. Calibration of the Parameters

Elasticity of output to capital is set in the lowest quartile of the distribution at 0.125, which is a conservative estimate normally used for LICs. In reality, the stock of actual public capital might be only up to one-half of the stock suggested by the traditional method for computing public capital stock as demonstrated by Gupta and others 2011. They find that, because of the underestimation of public investment leakage, previous studies have grossly underestimated the productivity of public capital. Moreover, they find that, for LICs, the productivity of public capital, controlling for the efficiency of investment processes, is significantly higher than the marginal cost of funds under normal financing conditions.

Efficiency of public investment is also set at the lowest quartile of the sub-Saharan African distribution, at 42 percent. This calibration was informed by available PEFA scores, where CEMAC countries score around the lowest. During implementation, weak procurement processes and internal controls may create widespread opportunities for suboptimal decision making and misuse of public funds. Public procurement is particularly susceptible to corruption if it endows excessive discretion to public officials when selecting private sector vendors or bidders, if processes are not transparent and the underlying legislative, regulatory, and institutional frameworks are weak. Projects are sometimes tendered in a competitive process, but the public does not have access to complete, reliable, and timely procurement information. However, no data are available on public tendering versus direct procurement. Other corruption risks include insufficient controls of the procurement process, the absence of mechanisms to impose sanctions when the regulations are breached, and weak capacity of civil servants responsible for conducting procurement transactions in line ministries. Only a limited number of procurement audits have been conducted in recent years, and these excluded high-value contracts. These weak PFM processes often mean that the selected projects are not the most productive or efficient and are carried out at excessive costs.

Household preferences: Following Berg and others (2012), we assume a low Frisch labor elasticity of 0.10, in line with estimates of rural Malawi (Goldberg 2011); we set the labor mobility parameter to unity (Horvarth 2000); and we set the elasticity of substitution between traded and nontraded goods equal to following Stockman and Tesar (1995). To capture the fact that the capital account has a low degree of openness—that is, the private sector has limited access to international capital markets—we set as in Buffie and others (2012), who imply that 40 percent of consumers are entirely not savers.

Tax rate calibration: We calibrated each country's baseline scenario using its respective nominal tax rates for labor consumption and capital. We derived royalties on oil production from the reported fiscal oil revenue (excluding income tax on oil companies) as a ratio of oil output value calculated from reported oil production and average cost-adjusted barrel price. We then derive the tax leakages to match observed non-oil revenue to GDP ratio.

We set the rest of the parameters equal to LIC average, as in Medina and others (2016).

We calibrate the baseline scenario for each CEMAC country using average ratios from its respective macro-frameworks and DSA calibrations for the past four years.

Fiscal rule calibration: We assume the resource fund to be 0 because baseline calibration fiscal instruments do not have a floor or a ceiling. We set the baseline calibration so that fiscal adjustments take place equally through changes in labor taxes, consumption taxes, government consumption, and transfers. $\lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = 0$. We set speed of fiscal adjustment to 0.2 and the responsiveness-to-debt-to-GDP ratio to 0.1.

The inverse of the intertemporal elasticity of consumption is set to 2.94. A higher intertemporal elasticity means that private consumption is more sensitive to real interest rate movements. Anticipating future resource output and higher productive public capital implies that current savings are expected to be more productive in the future; the real interest rate must rise to reduce current consumption. The magnitude of such a decline is bigger when σ is smaller (higher elasticity). Since private consumption is composed of both nontraded and traded goods, the decrease in nontraded good demand of private consumption reduces the demand pressure of nontraded goods relative to the case of $\sigma = 2.94$. Thus, the real exchange rate appreciates less, leading to better performance in traded output. Later, as public capital is gradually built up, the better performance in traded output results in a faster improvement in the TFP of the traded good sector (due to Dutch vigor) and higher nonresource output. Without more domestic production, the appreciation pressure is further reduced.

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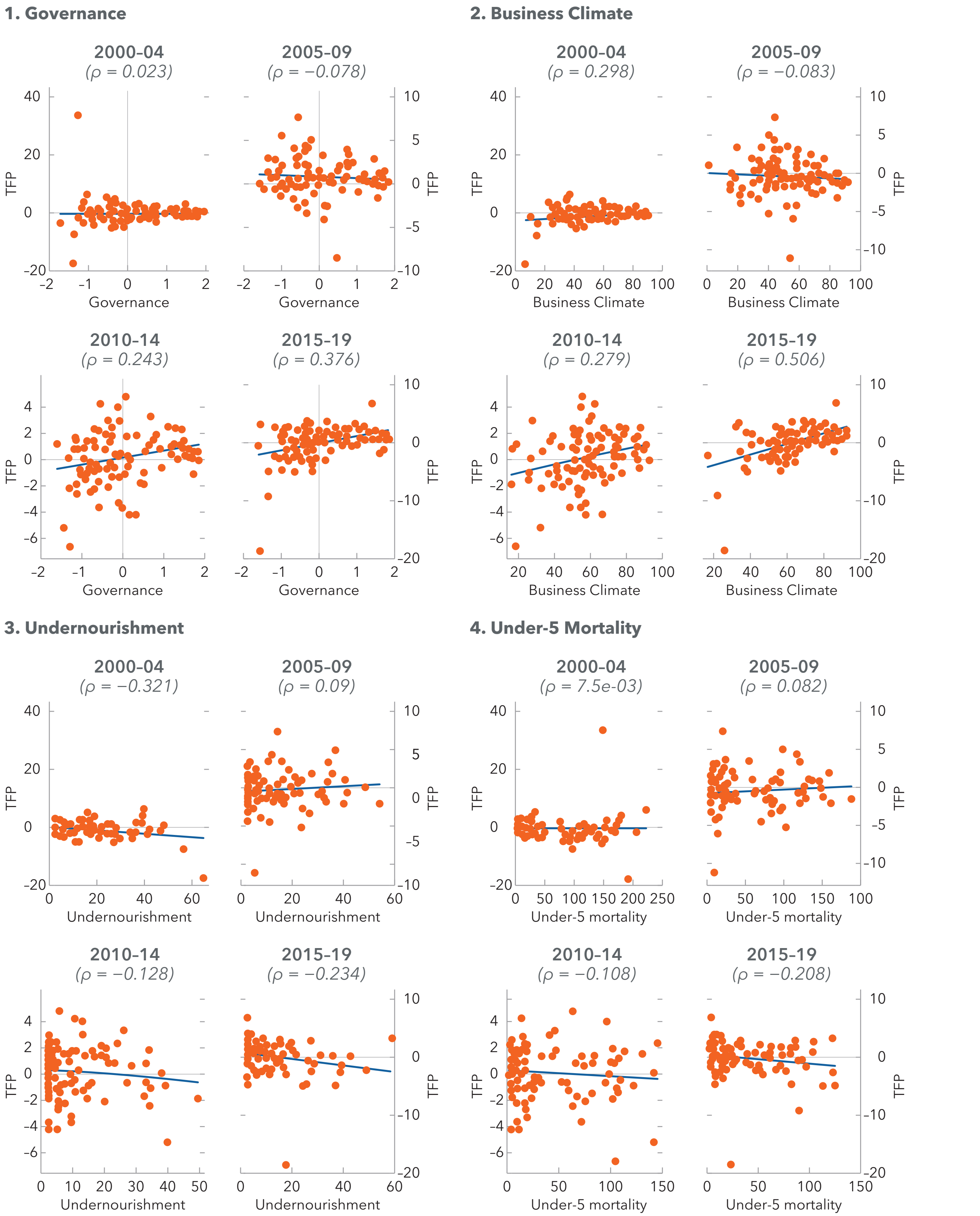
Appendx 1. Data Sources

Appendix Table 1.1. Data Sources

Variable	Definition	Source
Y	Real GDP	IMF, World Economic Outlook
WP	Working-age population (15–64 years)	World Bank Group, World Development Indicators
H	Human capital	Penn World Tables 9.1.
I_g	Real Public Gross Fixed Capital Formation	IMF, World Economic Outlook
I_p	Real Private Gross Fixed Capital Formation	IMF, World Economic Outlook
K_g	Public capital stock	IMF, FAD investment and Capital Stock Database
K_p	Private capital stock	IMF, FAD investment and Capital Stock Database
δ_g	Rate of public capital depreciation	IMF, FAD investment and Capital Stock Database
δ_p	Rate of private capital depreciation	IMF, FAD investment and Capital Stock Database
GOV	Normalized governance indicator	World Governance Indicators
BC	Business climate indicator	World Bank Group
Education	School enrollment, secondary (gross, interpolated for missing values)	World Bank Group, World Development Indicators
Openness	Trade openness computed as the ratio of imports and exports to GDP	IMF, World Economic Outlook
Inflation	Inflation rate (period average)	IMF, World Economic Outlook

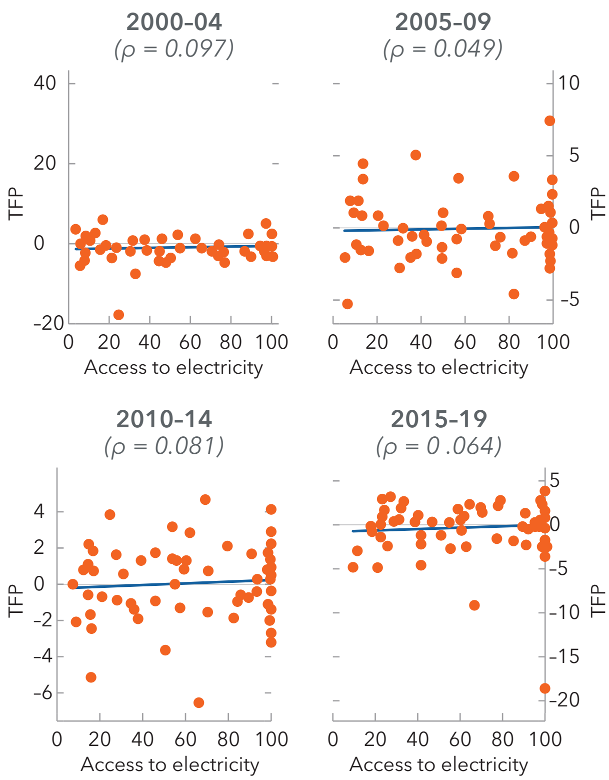
Appendix 2. TFP Correlations

Appendix Figure 2.1. TFP Correlations with Key Development Indicators



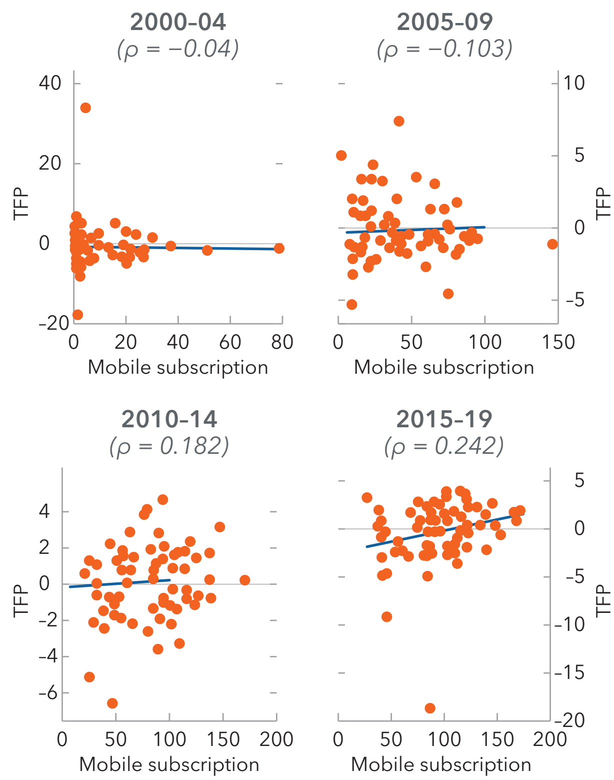
Appendix Figure 2.1. TFP Correlations with Key Development Indicators (continued)

5. Access to Electricity



High income countries omitted.
Source: ???.

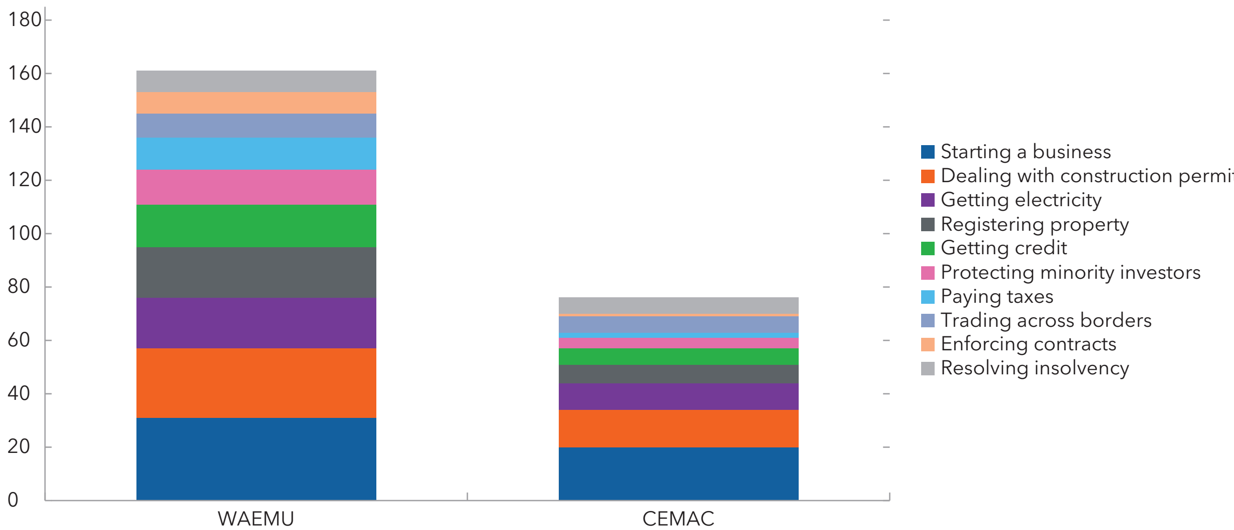
6. Mobile Cellular Subscription



High income countries omitted.

Appendix 3. Business Climate Reforms

Appendix Figure 3.1. Business Climate Reforms, 2010–19



Source: World Bank Group.

Appendix 4. Semiparametric Estimations–A Mathematical Approach

Following the model developed by Fan and Zhang (1999), our standard varying coefficient model takes the form of equation (8) below, which we estimate through a two-step procedure that was demonstrated to be less sensitive to the choice of initial bandwidth.

$$Y_{it} = \Sigma_{j=1}^{p} \beta_j(Z)\, X_{jit} + \epsilon_{it} \tag{8}$$

First, the coefficient function $\beta_j(z)$ can be estimated through a local linear function. That is, for each given point z_0 we can approximate the function locally for z in the neighborhood of z_0 such that

$$\beta_j(Z) = \beta_j + \theta_j\,(Z - z_0)$$

Replacing this expression in equation (8) leads to the following local least-squares minimization problem for a given kernel function K and bandwidth h, where $K_h\,(\cdot) = K\,(\cdot\,/\,h)\,/\,h$.

$$\text{argmin}_{\beta,\theta} \sum_{t=1}^{T} \left[\sum_{i=1}^{n} \left[Y_{it} - \sum_{j=1}^{p} \left(\beta_j + \theta_j (Z_i - z_0) \right) X_{ijt} \right] \right]^2 K_h (Z_i - z_0)$$

This gives us the first step estimates of $\widehat{\beta_{J,Z_0}}$ for $j = 1, \ldots p$. Because the functions $\beta_j\,(\,\cdot\,)$ do not necessarily all possess the same degree of smoothness, which may lead to suboptimal estimators, we substitute the preliminary estimates $\widehat{\beta_{J,Z_0}}$ for $j = 1, \ldots p - 1$ and use a local cubit fit to estimate $\widehat{\beta_{J,Z_0}}$ by minimizing the equation below.

$$\text{argmin} \sum_{t=1}^{T} \left[\sum_{i=1}^{n} \left[Y_{it} - \sum_{j=1}^{p-1} \widehat{\beta_{J,Z_0}}(Z_i) X_{ijt} - \left(\beta_p + \theta_p (Z_i - z_0) + \gamma_p (Z_i - z_0)^2 + \delta_p (Z_i - z_0)^3 \right) X_{ipt} \right] \right]^2 K_{h_2} (Z_i - z_0)$$

In this way, a two-step estimator of $\widehat{\beta_{J,Z_0}}$ is obtained, consistent with the methodology of Fan and Zhang (1999). We conduct our estimations through Stata relying on this methodology and the commands to estimate smooth varying coefficient models presented in Rios-Avila (2020).

Appendix 5. List and Definition of Major Oil Economies

Appendix Table 5.1. Major Oil Economies[1,2]

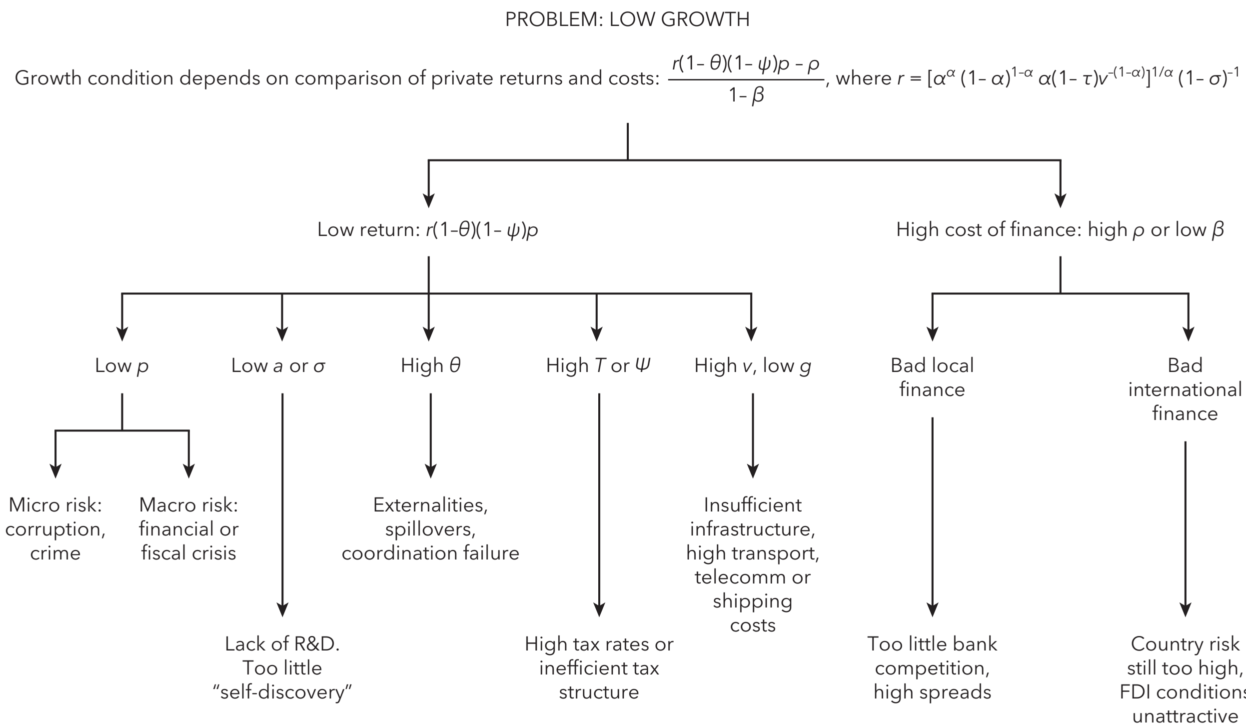
Country name	Country code
Algeria	DZA
Angola	AGO
Azerbaijan	AZE
Bahrain	BHR
Chad	TCD
Congo, Republic of	COG
Ecuador	ECU
Equatorial Guinea	GNQ
Iran	IRN
Kazakhstan	KAZ
Kuwait	KWT
Nigeria	NGA
Oman	OMN
Qatar	QAT
Russia	RUS
Saudi Arabia	SAU
United Arab Emirates	ARE
Venezuela	VEN
Yemen	YEM

[1] A country is classified as a major oil economy when 50 percent of net exports are linked to the oil sector. This is consistent with the IMF WEO definition of February 2020.

[2] Data for eight oil economies is missing: Brunei, Gabon, Iraq, Libya, South Sudan, Timor-Leste, Trinidad and Tobago, and Turkmenistan.

Appendix 6. Growth Diagnostic Framework (Rodrick and others 2005)

Appendix Figure 6.1. Rodrick and Others' (2004) Decision Tree



Source: Hausmann, R., D. Rodrik, and A. Velasco. 2004. *Growth Diagnostics*, Revised October 2004.

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