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**RÉPUBLIQUE DE
CÔTE D'IVOIRE**

Sustaining High, Inclusive, and
Resilient Growth Post COVID-19

A World Bank Group Input to the 2030 Development Strategy

République de Côte d’Ivoire 2021–2030
Sustaining High, Inclusive, and
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Main Report

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TASK TEAM COMPOSITION

This report is the first country application of the new *World Bank Group Africa Regional Strategy*. Its structure also incorporates the framework of Africa's new agenda on Jobs and Economic Transformation.

The report was prepared under the guidance and supervision of Albert Zeufack, Chief Economist for the World Bank Group's Africa Region, and support of Coralie Gevers, Country Director for Côte d'Ivoire.

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ABBREVIATIONS

ACE	Africa Coast to Europe	DVSP	Programme Monitoring Department
AfCFTA	African Continental Free Trade Area	ECOWAS	Economic Community of West African States
AfDB	African Development Bank	EGMA	Early Grade Mathematics Assessment
AGEDI	Agency for Industrial Land management and Development	EGRA	Early Grade Reading Assessment
AGEF	Agence de Gestion Foncière	EIU	Economist Intelligence Unit
ANGIL	National Agency for Intergrated Coastal Zone Management (Agence Nationale de Gestion Intégrée)	EME	Electronic money institution
ANSUT	Agence Nationale du Service Universel des Télécommunications	ENS	École Normale Supérieure d'Abidjan
ARTCI	Telecommunications Regulatory Agency of Côte d'Ivoire	ESO	Entrepreneurship support organization
ATM	automated teller machine	EU	European Union
B2C	business-to-consumers	FAO	Food and Agriculture Organization
Bac	Baccalaureate	FCPF	Forest Carbon Partnership Facility
BCEAO	Banque Centrale des États de l'Afrique de l'Ouest	FDI	Foreign direct investment
BCPE	Bureau de Coordination des Programmes Emploi	GCSCC	Global Cyber Security Capacity Centre
BEPC	Le brevet d'études du premier cycle	GDP	Gross domestic product
BTS	Brevet de Technicien Supérieur (post-Baccalaureate technical degree)	GIM-UEMOA	Groupement Interbancaire Monétaire de l'Union Economique et Monétaire Ouest Africaine
CAFOP	Preservice training centers	GNI	Gross national income
CFAF	CFA franc	GPE	Global Partnership for Education
CGE	Computable general equilibrium	GSM	Global System for Mobile Communications
CI	Energies Société des Energies de Côte d'Ivoire	GSMA	Global System for Mobile communications Association
CI-AEM	Interministerial Committee for State Action at Sea (Comité Interministériel de l'Action de l'Etat en Mer)	GVC	Global Value Chains
CILEC	Interministerial Committee for the Fight against Coastal Erosion (Comité Interministériel de Lutte contre l'Erosion Côtière)	HCI/ICH	Human Capital Index
CIMA	Conférence Interafricaine des marches d'Assurance (Insurance Regulator)	HDI	Human Development Index
CIPRES	Conférence Interafricaine de la Prevoyance Sociale (Social Security)	ICT	Information and communications technology
CIVIX	Côte d'Ivoire Internet eXchange	IDI	ICT Development Index
COVID-19	Coronavirus disease of 2019	ILO	International Labour Organization
CP1	Preparatory Course 1st year	IMF	International Monetary Fund
CP2	Preparatory Course 2nd year	IPCC	Intergovernmental Panel on Climate Change
CPIA	Country Policy and Institutional Assessment	ISIC	International Standard Industrial Classification of All Economic Activities
CPS	Country Partnership Strategy	ITU	International Telecom Union
DFS	Digital financial services	KYC	Know Your Customer
DGE	Direction Générale de l'Emploi	LIPW	labor-intensive public works
DHS	Demographic and Health Survey	LLU	Dégroupage de la boucle locale
DSPS	Strategies, Planning, and Statistics Directorate	LPI	Logistics Performance Index
DTF	distance to frontier	MCI	Mobile Connectivity Index
		MENC	Ministère de l'Economie Numérique et de la Poste
		MFI	Microfinance institution
		MICS	Multiple Indicator Cluster Survey
		MNO	mobile network operator
		MSIP	Multisectoral Investment Plan
		MSME	Micro, Small and Medium Enterprise

MTR	Mobile termination rate	SNGEC	National Strategy for Managing the Coastal Environment (Stratégie Nationale de Gestion de l'Environnement Côtier)
NBN	National Broadband Network	SOE	State owned enterprise
NDC	Nationally Determined Contribution	SPL	social protection and labor
NDP	National Development Plan	SSA	Sub-Saharan Africa
NRA	National Regional Authority	SSI	SeedStars Index
OECD	Organisation for Economic Co-operation and Development	SWEDD	Sahel Women Empowerment and Demographic Dividend Project
OHCHR	United Nations High Commissioner for Human Rights	SWOT	Strengths, weaknesses, opportunities, and threats
PAA	Abidjan Autonomous Port	TEU	Twenty-foot equivalent unit
PAGLI	Coastal Zone Management Plan (Plan d'Aménagement et de Gestion du Littoral)	TFP	Total factor productivity
PAMOFOR	World Bank Land Policy Improvement and Implementation Project	TSR	Technically Specified Rubber
PAMOSET	World Bank Transport Sector Modernization and Corridor Trade Facilitation Project	TVET	Technical and Vocational Education and Training
PASEC	Programme d'analyse des systèmes éducatifs de la CONFEMEN	UIS	UNESCO Institute for Statistics
PISA	Programme for International Student Assessment	UN	United Nations
PNGEC	National Program for Managing the Coastal Environment (Programme National de Gestion de l'Environnement Côtier)	UNDP	United Nations Development Programme
PPP	Public-private partnership	UNECA	United Nations Economic Commission for Africa
PTSD	posttraumatic stress disorder	UNESCO	United Nations Educational, Scientific and Cultural Organization
R&D	Research & development	UNICEF	United Nations Children's Fund
REDD+	Reducing Emissions from Deforestation and Forest Degradation	UNOCI	United Nations Operation in Côte d'Ivoire
SAM	Social accounting matrix	USAID	United States Agency for International Development
SARA	Availability and Operational Capacity of Health	USSD	Unstructured supplementary service data
SAT-3/WASC	South Atlantic 3/West Africa Submarine Cable	VAT	Value added tax
SDLOA	Master Plan for West Africa's Coastal Zone (Schéma Directeur du Littoral Ouest Africain)	VET	vocational education and training
SIR	Société Ivoirienne de Raffinage (Refinery)	WACA ResIP	West Africa Coastal Areas Resilience Investment Project
SME	Small and medium enterprise	WACS	West Africa Cable System
		WAEMU	West African Economic and Monetary Union
		WASH	water, sanitation, and hygiene
		WHO	World Health Organization

At a
glance

This report, initiated at the request of His Excellency President Alassane Ouattara to Hafez M. H. Ghanem, the World Bank Group Regional Vice President for Eastern and Southern Africa, is the first country application of the new regional strategy, *Supporting Africa's Transformation*. Albert Zeufack, the Chief Economist of the World Bank Group Africa Region, led a team to synthesize knowledge and experience from Côte d'Ivoire and across the world. The report incorporates the perspective of the new International Development Association agenda, *Jobs and Economic Transformation*, and addresses three operational objectives for Côte d'Ivoire:

- ▶ Create sustainable and inclusive growth by maintaining macroeconomic stability, fighting corruption, advancing digital transformation, and maximizing private finance.
- ▶ Strengthen human capital by empowering women, reducing child mortality and stunting, and improving education, health, and social protection.
- ▶ Build resilience against fragility and climate change.

The National Development Plan 2016–20 consolidated promarket reforms and reaffirmed the ambition to reach upper-middle-income status. Côte d'Ivoire is embarking on a strategy to sustain strong gross domestic product (GDP) growth through 2030 while rapidly reducing poverty. Côte d'Ivoire's aspiration of becoming an emerging market economy with low levels of poverty requires a long period of strong and inclusive growth.

The report analyzes growth trajectories and identifies the investments needed to achieve and sustain desired levels of growth, along with the corresponding financing needs. It discusses the opportunities presented by the country's surplus labor, young population, and huge diversification potential.

Building on recent strong growth and poverty reduction and closing remaining gaps

The economy grew rapidly over 2012–17, at an average annual rate of 8.4 percent, resulting in a more than 30 percent increase in real per capita income. Growth was particularly strong during 2012–15, averaging 9.3 percent a year. Although growth remains robust, real GDP began to slow in 2015, averaging 7.3 percent annually during 2016–17 and 6.9 percent during 2018–19. Côte d'Ivoire's economic performance during 2012–19 was driven on the supply side by a recovery of government services, followed by private sector industry and services, and on the demand side by a resurgence of domestic consumption and investment and net exports and by total factor productivity (TFP) growth.

As a result, recent growth has been associated with reduced poverty. The response of poverty to growth (growth elasticity

of poverty) was estimated at -0.8 over 2015–18, up from -0.3 over 2008–15. However, this is still low compared with the Sub-Saharan Africa average of -1.9 . Between 2015 and 2018, the national poverty rate fell from 46 to 39 percent, lifting 327,000 people out of poverty, a net result of about 1 million fewer urban poor but almost 681,000 more rural poor.

Over 2015–19, inequality declined moderately. Progress was made toward shared prosperity over 2012–18, with higher consumption growth among households at the bottom of the income distribution than among those at the top. Consumption grew 5.6 percent a year over 2015–18 for the bottom 40 percent of households and fell by 2.5 percent a year for the top 60 percent. The poor had better access to basic infrastructure, and their asset ownership rose over 2015–18. But while median consumption grew 2.5 percent nationally, it dropped 0.2 percent among rural households at the bottom of the income distribution.

Electrical service improved, as investments in electricity benefited households across all income groups. In 2019, approximately 81 percent of Ivorian households had electricity, an increase of 20 percentage points from 2015. For households in the bottom 40 percent of the income distribution, access to electricity jumped 21 percentage points, up from 49.6 percent in 2015. Poor households also gained better access to primary and secondary schools and to markets and roads.

Access to clean water is almost universal, at above 90 percent in both urban and rural areas and across income groups. But disparities remain. A smaller percentage of rural than urban households have access to clean water, and the share of households without access to clean drinking water is higher among households in the bottom 40 percent.

Investments in health infrastructure have been pro-poor. Over 2015–18, the percentage of households within 5 kilometers of a health center increased considerably. Among the poorest households, access to health infrastructure rose 37 percentage points, up from 58 percent in 2015. But a gap of 10 percentage points remains in access to health infrastructure between the bottom 10 percent and the top 10 percent, suggesting further scope to improve equity.

Challenges to continuing growth

Structural transformation is still in its early stages. The productivity of skilled, unskilled, and self-employed workers is low. A high percentage of the workforce is self-employed in agriculture—which generates about a fifth of GDP—and in nonagricultural industries. Labor market outcomes have not improved for poor households, reflecting decreasing job opportunities and low inclusion of the most vulnerable households. There are fewer jobs for the working-age population, and poor households have the lowest labor force

participation rates. Nonagricultural self-employment is rising, particularly among women, and most wage jobs are informal.

Côte d'Ivoire's outward orientation has not kept pace with its economic objectives. The ratio of exports of goods and services to GDP is lower than in countries at a comparable development level. Exports consist mostly of agricultural products, with cocoa and its byproducts dominating. Tax revenue mobilization lags the finance needed for the development projects that are the foundation of an emerging market economy.

Income inequality remains high, especially in urban areas, and disparities persist between rural and urban areas in access to public services. While the consumption share of the richest 20 percent of the population dropped from 51 percent in 2015 to 43 percent in 2018, the share of the bottom 40 percent was 18 percent, just 3.5 percent higher than in 2015. And income inequality is higher in urban areas. In 2018, the top 20 percent of households in Abidjan accounted for 68 percent of consumption, while the poorest 10 percent accounted for just 1 percent. In secondary cities, the shares were 43 percent for the richest households and 6 percent for the poorest. Despite the strong growth, fewer employment opportunities are available for the working-age population.

COVID-19 shock

Despite solid achievements in growth and poverty reduction, continuing growth faces a host of challenges. The COVID-19 pandemic is expected to adversely affect growth in 2020, as Ivorian exports fall due to sharp slowdowns among the country's main trading partners. And the virus containment and mitigation measures in Côte d'Ivoire also slow economic activity.

COVID-19 and the ensuing global economic recession will have a significant impact on Côte d'Ivoire, a country that is a net oil importer and exports mainly agricultural commodities. Côte d'Ivoire closed its land, aviation, and maritime borders, banned events and gatherings of more than 50 people, shut down restaurants and recreational places, suspended offices and schools, and imposed social distancing rules. As a consequence, domestic economic activity has slowed dramatically and illustrative simulations suggest that the level of GDP could fall by 3.3 percent in 2020, relative to a no-COVID-19 base level, if the spread of the virus is quickly contained. In a scenario of longer-lasting virus spread and persistent economic disruption, the level of GDP could fall by 4.8 percent in 2020, relative to a no-COVID-19 baseline.

The government introduced a CFA franc 500 billion (US\$823 million) economic response package in late March, about 1.9 percent of 2019 GDP. The package included CFA franc 150 billion for large firms, CFA franc 100 billion for small and medium enterprises, CFA franc 100 billion for the informal

sector, and CFA franc 170 billion for a solidarity fund for vulnerable population groups. Specific allocations were also planned for agriculture, some state-owned enterprises, public agencies to expand remote work arrangements, and imports of essential products. Supported by external financing, Côte d'Ivoire could mount a stronger response to save lives and protect livelihoods. This approach will require both relief and stimulus measures to keep the economy functioning. Policies should aim at strengthening health systems, extending income and in-kind support to formal and informal workers, and providing liquidity support to viable businesses, while maintaining the provision of public services.

In strengthening public health systems, the focus should be on improving the human and technical capabilities to respond to the COVID-19 crisis. A main priority is protecting health workers, equipping them with the necessary protective gear to avoid infection with the virus. Health authorities need to scale up testing of patients suspected to be infected and, as much as possible, implement surveillance testing including in rural areas. Social protection programs need to support workers, especially those in the informal sector. Cash transfers are commonly used in developing countries, including in Sub-Saharan Africa. Other measures implemented in the region include online payments, in-kind transfers (food and household items), social grants to the disabled and elderly, wage subsidies to prevent massive layoffs, and fee waivers for basic services including electricity tariffs and mobile money transactions.

Minimizing disruptions in critical food supply chains to avert a food crisis in the country will be vital. Government action to reduce international and domestic trade barriers and to ensure that food industry workers can work is critical. Funding for agriculture and agribusiness must be protected. Digital technology solutions and apps can help the food industry anticipate logistics problems, smooth temporary shortages, and prevent disruptions in supply chains. Early warning systems for food shortages and the associated emergency food provisioning systems will have to be adjusted to increase attention to vulnerable rural and urban areas.

Overall, the COVID-19 crisis is expected to be a temporary shock for Côte d'Ivoire's economy. The longer-term impact will depend on the scale of the outbreak, the duration of confinement measures, and the adequacy of the authorities' support for a fast recovery. Available data suggest that confinement measures in Abidjan have led to significantly lower traffic in public spaces, including in public transport facilities and retail areas. This will negatively affect private consumption and growth, but if the restrictions are relatively short-lived, consumption could bounce back. Government responses to stimulate recovery and to compensate for income losses for the more vulnerable segment of the population will be essential to restore growth and prevent social dislocation. Even as it intensifies its COVID-19 containment and economic

recovery efforts, the government should not lose sight of the nation's longer-term economic and social development agenda.

Resuming dynamic growth and social development

Achieving Côte d'Ivoire's aspiration of becoming an emerging market economy requires a comprehensive reform program to boost investment and productivity to generate rapid and sustained growth. A range of domestic and external factors will determine whether investment continues to rise. Côte d'Ivoire's Doing Business ranking, which has improved in recent years, and its competitiveness ranking, which edged up in 2019, will affect domestic investment. Inflows of foreign direct investment will hinge on the state of the global economy and the attractiveness of opportunities in Côte d'Ivoire relative to those in neighboring countries. Critically, Côte d'Ivoire would need to ensure that the new investment is productive. Measures are needed not only to stem the current decline in TFP, but also to accelerate its rate of growth. In the context of the rapid spread of the COVID-19 virus, however, the immediate priority must be to protect lives and livelihoods.

Against this background, continued productivity increases throughout the economy will help Côte d'Ivoire return to a postpandemic, high-growth path. Factor accumulation—adding more workers and capital to the economy—has been an important driver of growth in the past. But reaching upper-middle-income level requires greater improvements in the efficiency with which these factors are used. TFP, a measure of economic efficiency and calculated as the ratio of aggregate output to aggregate inputs, was the main driver of GDP growth during 2012–14. The contribution of phenomenal TFP growth to GDP growth during these three years indicates that economic efficiency rose due to reforms to improve the investment climate and increasing infrastructure investment.

Raising productivity requires higher levels of investment. Economic analysis suggests that investment will have to increase at an annual rate of 12 percent in real terms through 2030 to take the investment ratio to more than 26 percent of GDP. Achieving this target will require a significant increase in both private and public investment and a greater mobilization of financial resources including foreign savings and foreign direct investments. Policy reforms that improve the investment climate and the business environment, especially in sectors where the country has a comparative advantage (cashew, cotton, horticulture, rubber, and palm oil), will encourage private investment and its financing by domestic and foreign investors. Structural reforms to improve public investment management are also needed.

Stronger outward orientation and a more robust export performance can boost investment. Export growth will have to trend higher, averaging 10 percent annually, with the ratio of exports to GDP rising to 28 percent by 2030. Better integration into global value chains in regional and world markets encourages export growth. This will enable Côte d'Ivoire's firms to better exploit economies of scale, which is critical considering the small size of the domestic economy. As exports expand, domestic industries that supply intermediate inputs to the export sector will benefit from an increased demand for their products. Export growth will create additional demand for labor and various types of services. Higher import capacity facilitates access to high-technology goods.

Labor productivity will also have to rise from its current low level, both economywide and within sectors. Real output per worker in Côte d'Ivoire (as elsewhere in Sub-Saharan Africa) remains low, about 8.4 percent of the real output per worker in the United States in 2012–17. In comparison, real output per worker in East Asia's high-growth economies was about 28 percent of the U.S. benchmark over the same period. More government spending on education and health will be needed to increase the pool of skilled labor and spur its productivity. A broad-based rise in tax revenues will be necessary to finance higher levels of current expenditures, with an increasing share of budgetary resources devoted to education and health.

The three I's and three T's for accelerating shared growth

The structure of the report adopts the framework of the *Africa Regional Strategy* for accelerating poverty reduction, centering on three accelerators or platforms for rapid and shared growth—investment, integration, and inclusion:

Investment in human and physical capital (chapters 2–4).

Improving human capital requires better schooling, job training, lifelong learning, early nutrition, good hygiene, and prenatal, reproductive, and child health services. Physical capital improvements require digital connectivity infrastructure, transport and logistics, and water and sanitation services. Priorities will realize synergies between physical and human capital. Better water and sanitation prevent diseases. Digital infrastructure raises productivity. And improved transportation linkages increase workers' returns to schooling.

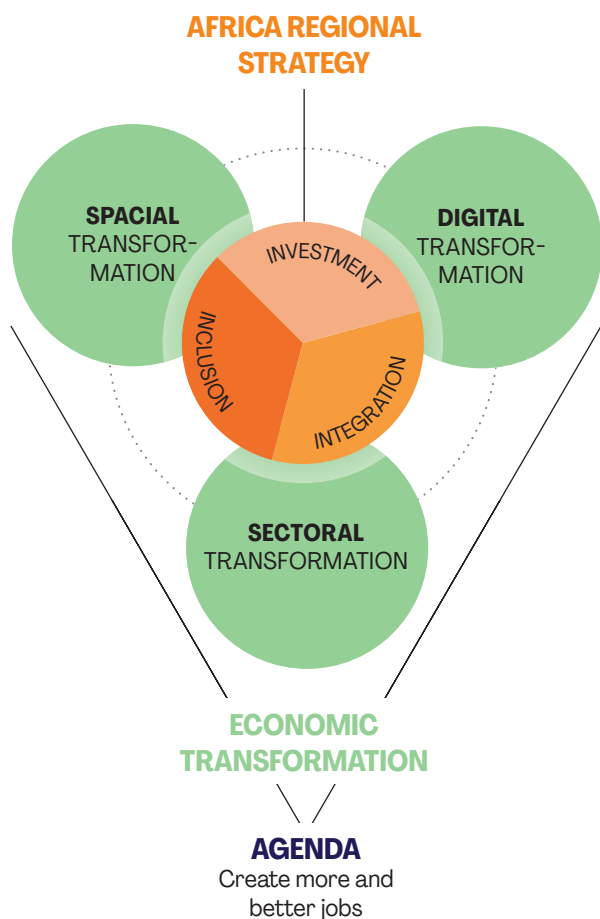
Integration externally (into global value chains) and internally (urban-rural, coastal-inland) (chapters 5 and 6). Integration will contribute to the transformation of the economy through productivity-enhancing structural change and job creation. Priorities in international integration include trade facilitation, logistics reform, institutional harmonization and regulatory reform, acceleration of African regional

value chains and competition, and participation in global supply networks. Priorities in domestic integration include promoting rural development, raising agricultural productivity, creating markets, relocating surplus labor, and improving urban amenities.

Inclusion of people trapped in poverty, households susceptible to conflict situations, and communities vulnerable to climate change (chapters 7–9). Priorities will empower and enable marginalized groups to participate in and benefit from the country’s growth processes. Social and economic inclusion will be advanced by improved public services and targeted interventions. Coastal erosion and loss of habitat are pressing concerns, and inclusive growth for disadvantaged people and communities is gaining prominence in policy discussions.

These three smart I’s are also the pillars for Africa’s new agenda on Jobs and Economic Transformation for promoting three core and complementary transformations (the three T’s)—digital, sectoral, and spatial—to create more and better jobs in Côte d’Ivoire and to advance the country onto a high and inclusive growth trajectory toward upper-middle income status (figure 1).

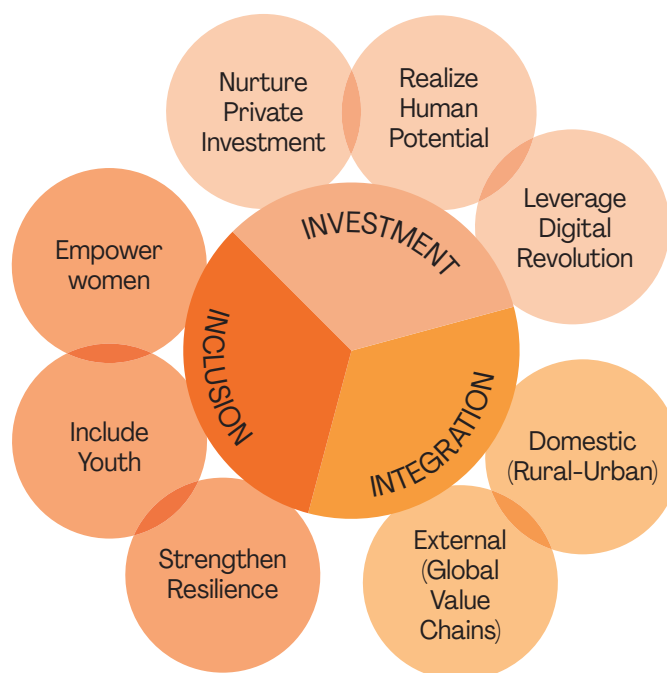
Figure 1. Economic inclusion and transformation: The 3 I’s and the 3 T’s



Digital transformation is about innovation, driven largely by adopting digital and nondigital job-creating technologies and generating new technologies. Effective practices are emerging in forerunner countries for transforming governments, services, communities, cities, and businesses. The most effective approaches include applying a holistic view of information and communications technologies (ICT) and complementary investments and mobilizing demand for good governance and better services. Promoting an inclusive information society emphasizes digital literacy, social intermediaries, and grassroots innovation. Policy measures for business transformation include affordable access to the internet and digital technologies, mobile finance, digitally enabled government-to-business transactions, and platforms to facilitate trade and e-commerce. Mastering the digital transformation process demands policies and regulations for a digital economy, managerial and technical skills, competitive communication infrastructure and ICT industries, and competent institutions to lead the transformation process.

Sectoral transformation is about the industrial reallocation of resources from less to more efficient businesses; job-creating activities across farms and firms, including through product diversification and specialization linked to trade; and participation in global supply chains, to become a locomotive for global learning and production expansion for more and better jobs. Modern market economies are constantly undergoing structural change, as some sectors shrink and others grow. Some of these changes are brief, reflecting terms of trade, temporary shifts of technology, or external idiosyncratic shocks. Others appear longer lasting. As countries develop, the most important long-run trend has been a marked shift of employment and production away from agriculture toward manufacturing and services. The shares of manufacturing in GDP then decline while shares in services rise as countries grow through middle-income into high-income economies. Coinciding with these sectoral transformations are large movements of workers across sectors, bringing about corresponding changes in productivity, wages, and living standards.

Spatial transformation is about the geographic reallocation of resources from less to more efficient job-creating locations, including through regional (inland–coastal) connectivity and improved rural–urban integration. This transformation promotes smart city–driven learning and spillovers of prosperity to peripheral and rural areas. Spatial transformation can be thought of as the mirror image of sectoral transformation. As an economy industrializes, and production shifts from agriculture to manufacturing and services, people move from rural areas to towns and cities, attracted by jobs in manufacturing and services and by opportunities

Figure 2. Time-phased policy priorities for 2021–25 and 2026–30

for entrepreneurship. Likewise, surplus labor inland moves to coastal regions, where connectivity with global markets is strongest. But even as urban areas boom and coastal regions flourish, a large majority of people still subsist in rural areas or lagging regions. Thus, for successful spatial transformation, policy makers need to focus on both urbanization and rural development, particularly on raising agricultural productivity.

The three pathways of digital, sectoral, and spatial transformations, centering on investment, integration, and inclusion, will enable not only job-intensive dynamism, but also higher value production that creates more and better jobs. That analytical structure guides and disciplines the discussion here of the nearer-term policy priorities (2021–25) and longer-term actions (2026–30) needed for Côte d’Ivoire to sustain high, broadly shared, and resilient growth (figure 2).

CHAPTER 1

Sustain
inclusive
growth

1.1 Introduction

Sustaining rapid economic growth in Côte d'Ivoire to give its population a high standard of living is the country's central development objective. To pursue it, the 2016–20 National Development Plan set out an ambitious course to achieve emerging market status and substantially reduce poverty by 2020. Structural transformation creating a solid industrial base would drive growth, supported by strong macroeconomic fundamentals. Rising real incomes and expanded public services would accelerate poverty reduction.

Progress has been substantial but uneven. Real gross domestic product (GDP) grew robustly but gradually slowed amid declining productivity. GDP growth averaged 7.1 percent during 2016–18 and was an estimated 6.9 percent in 2019. Socioeconomic indicators improved, with poor households gaining increased access to markets, infrastructure, and basic services. But poverty levels remained high, especially in rural areas. The experience of countries achieving emerging market status suggests that strong growth needs to be sustained for an extended period, and its benefits need to be widely shared across the population. One key to sustained growth is boosting productivity, which is constrained in Côte d'Ivoire, as in many African economies, by financial friction, missing or inadequate infrastructure connectivity, and resource misallocation or distorted production input allocation in economic activities.¹

Before the coronavirus disease of 2019 (COVID–19) pandemic, growth was projected to reach 6.7 percent in 2020. But with the onset of COVID–19, Côte d'Ivoire's short-term outlook will likely deteriorate substantially. The outbreak has brought economic disruption and has caused considerable suffering for vulnerable groups. Containment measures introduced by the government to slow the spread of the virus have included curfews, social distancing, school closures, border closures, and restrictions on labor mobility and travel. Although these measures are needed, they impose shocks on the economy. And the sharp slowdown in economic activity among Côte d'Ivoire's trading partners, the plunge in oil and other commodity prices, and the difficulty of access to international market financing will compound the damaging economic effects. COVID–19 could have a short-term impact on the economy, with output rebounding quickly to its precrisis level.

But a slower recovery could seriously affect the country's medium- and long-term growth prospects.

Other acute challenges besides COVID–19 also confront Côte d'Ivoire's long-run growth potential. Nearly half the country's population lives in rural areas. Agriculture generates a fifth of GDP, and the economy depends on cocoa products for more than 40 percent of its merchandise exports. Its low Human Capital Index suggests that substantial human capital development is needed. The productivity of skilled, unskilled, and self-employed workers is low. Since a high percentage of the workforce is self-employed in agricultural and in nonagricultural industries in urban areas, and since informality tends to correlate with low productivity in African countries, the large informal sector must be harnessed and formally mobilized for further growth.² And GDP growth was projected before the pandemic to rise at a slower though still high rate of about 6.5 percent a year by 2023 or 2024.³

The central questions for the government as it reevaluates its development strategy are what would it take to continue higher growth in the next decade, and what factors could disrupt it? This chapter illustrates possible trajectories and their implications for poverty reduction. In an aspirational high-growth scenario, Côte d'Ivoire maintains a sustainable high-growth path as in 2012–17, with higher productivity growth, expanded trade, and increased foreign financing. But attaining this hope will depend on how fast the economy recovers from the COVID–19 slowdown.

The chapter begins by briefly describing the Ivorian economy today—recounting the country's remarkable growth since 2012, reviewing the drivers of that economic expansion, and discussing its challenges. It then presents an analysis of the short-run impact of the COVID–19 pandemic on the Ivorian economy. This is followed by an analysis of the long-run performance of the economy. It offers a reference path for the economy without the COVID–19 crisis, outlining the growth and poverty implications of the trends and policies at the end of 2019 if they had continued. In the next part of the chapter, different growth scenarios are compared, based on the reference path. The chapter then analyzes COVID–19's short-run impact and its long-term implications for Côte d'Ivoire's growth. Recommendations conclude the chapter.

1.2 Côte d'Ivoire's economy today

1.2.1 High but slowing economic growth

Côte d'Ivoire is a lower-middle-income country in West Africa, with a gross national income per capita of \$1,600.

With a GDP of \$57.7 billion in 2018, it has the largest economy in the West African Economic and Monetary Union (WAEMU).⁴ Its population is 25 million.

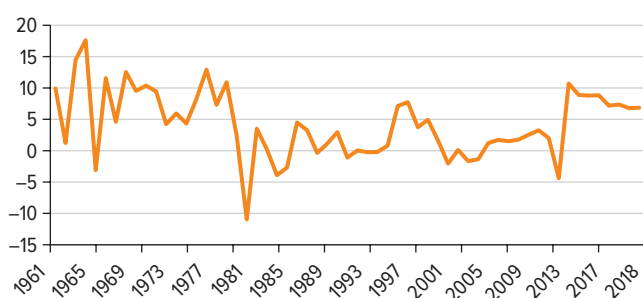
The 2010s saw an unprecedented expansion of the Ivorian economy. Over 2012–17, economic activity expanded by 8.4 percent annually, for a total increase in real per capita income of more than 30 percent (figure 1.1).⁵ Growth was particularly strong during 2012–15, averaging 9.3 percent a year. Up to the arrival of COVID-19, growth was robust, though slowing. After averaging 7.3 percent annually during 2016–17, real GDP growth slipped to an estimated 6.9 percent in 2018 and 2019.

The economic expansion since 2012 is the country’s longest spell of high growth over the past three decades. The sustained real per capita income growth of more than 4 percent a year shows that the expansion was not entirely driven by commodity prices but also by solid economic policies and enhancements in productivity, capital accumulation, and the investment climate.

The pursuit of growth-friendly fiscal policies, facilitated by productivity-enhancing reforms and extensive debt relief under the Heavily Indebted Poor Countries and Multilateral Debt Relief Initiatives, was instrumental in this strong performance. Reforms strengthened business regulations, as reflected in Côte d’Ivoire’s improved standing on the World Bank’s Doing Business indicators in 2019, when it ranked 110th of 190 countries in the world, 11th of Sub-Saharan African countries, and 18th of low- and middle-income countries (figure 1.2). Large public investments, which continued to close infrastructure gaps in energy, telecommunications, and road transport, stimulated private sector investment. A strong rebound in household consumption, supported by a surge in employment amid government construction spending, further boosted growth. Net exports also contributed to growth due to a sharp increase in agricultural exports, including cocoa—the country’s main export—especially in 2017 (figure 1.3).

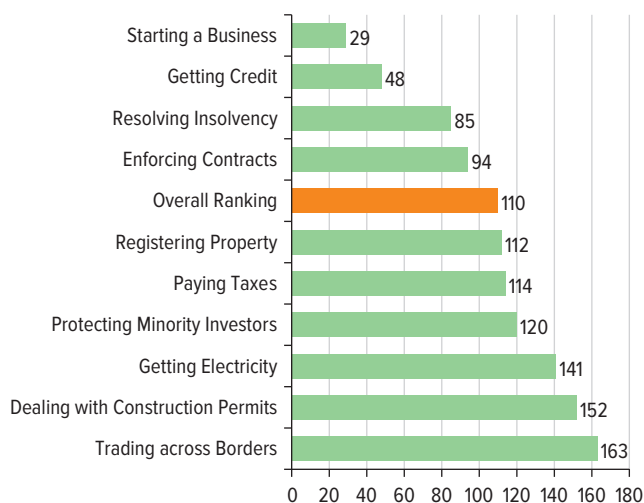
GDP growth benefited from robust contributions from all three major economic sectors (figure 1.4). Industrial value added, propelled by investments in energy, construction, and agribusiness, grew at an average annual rate of 8 percent. Services, driven by retail trade and transport, and agriculture, led by food and cash crops and livestock, both expanded at an annual average rate of 6 percent.

Figure 1.1. Real GDP growth, 1961–2018 (%)



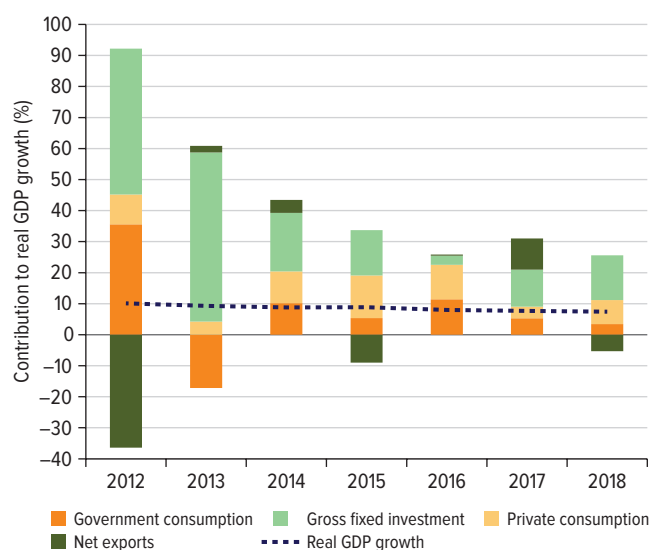
Source: World Bank staff estimates.

Figure 1.2. Côte d’Ivoire’s Doing Business ranking, 2019



Source: World Bank.

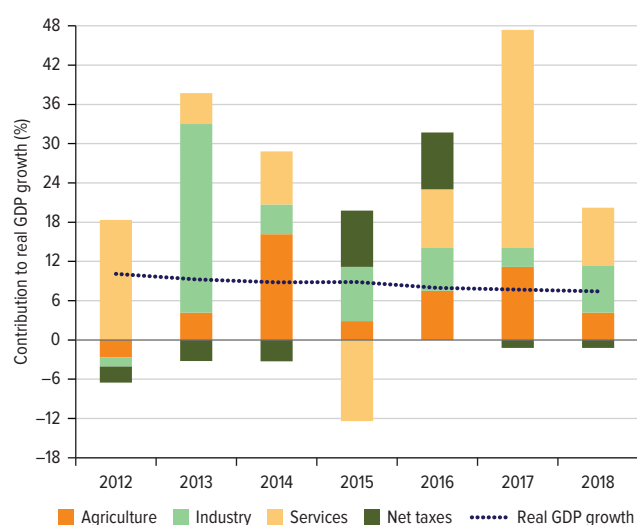
Figure 1.3. Demand components of GDP growth, 2012–18



Source: World Bank staff estimates.

The broad-based sectoral growth allowed Côte d’Ivoire to begin structural transformation—the movement of labor from low-productivity agriculture to industry and services, and from farms to cities. The share of agricultural employment declined by more than 12 percentage points, from 63.4 percent in 2002 to 51.1 percent in 2014. The share of employment in services increased from 30.4 to 42.1 percent over the same period.⁶ More recently, the share of employment in services increased further to 46 percent, while the share of employment in agriculture fell to 47.6 percent. The sectoral change in employment

Figure 1.4. Sector contributions to GDP growth, 2012–18



Source: World Bank staff estimates.

was associated with improved labor productivity. With close to 50 percent of the labor force still in agriculture, the remaining potential for large gains from structural transformation is substantial.

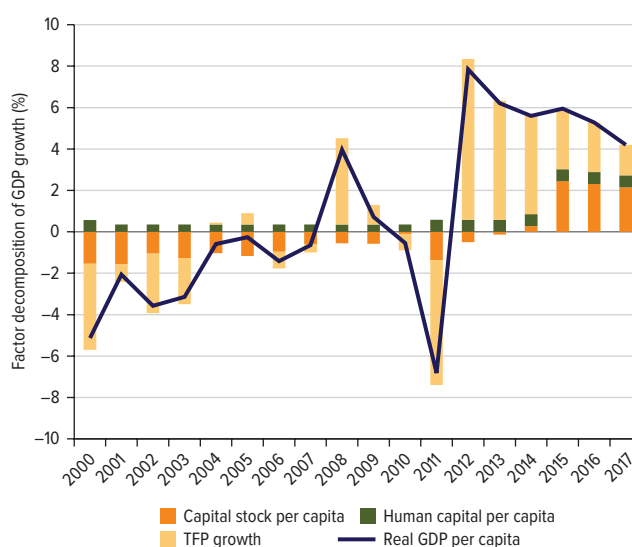
Total factor productivity (TFP) was a major driver of growth. TFP rose sharply in 2012 and remained high, coinciding with the unprecedented rapid growth that lasted until 2016. The strong contribution of TFP to growth suggests that the productive efficiency of factors of production improved amid rising infrastructure investments and business climate-enhancing reforms. But by 2017, TFP had weakened, contributing to the slight slowdown in real GDP growth that continues today (figure 1.5).

1.2.2 Solid macroeconomic stability

The expansion in economic activity was achieved with low inflation owing to the regional central bank’s prudent monetary policy. The stable CFA franc/euro peg, adequate food production (due partly to the national agricultural investment program), and improved supply and distribution channels kept inflation pressures subdued. Over 2016–19, consumer price inflation averaged 0.7 percent, down from 1.4 percent in 2012–15, and well below the WAEMU regional norm of 3 percent.

The fiscal and current account deficits widened but were contained. The fiscal deficit increased from 2.0 percent of GDP in 2015 to 3.3 percent in 2017, as public spending was pushed higher by implementation of the 2016–20 National Development Plan. Restrained spending complemented by revenue mobilization in 2019 helped bring the fiscal

Figure 1.5. Factor decomposition of real GDP per capita growth, 2000–17



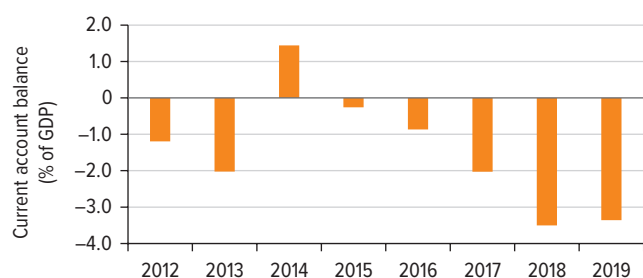
Source: World Bank staff estimates.

deficit down to an estimated 2.3 percent of GDP, within the WAEMU convergence criterion of 3 percent. Externally, the increasing public investment stimulated the import of capital goods and services. The increased demand for imports, combined with weaker export growth amid slowing global economic activity, weighed heavily on the current account balance, where the deficit increased from ½ percent of GDP in 2016 to 3½ percent in 2018 (figure 1.6). In international trade data, the current account was evolving favorably and was expected to narrow to –2.5 percent of GDP in 2020, supported by a reform-driven recovery in exports.

External and overall debt were sustainable with a moderate risk of debt distress, though exposure to swings in portfolio flows increased (figure 1.7). Faced with rising fiscal and current account deficits, Côte d’Ivoire relied on the international capital market to meet its financing needs. Large eurobond issues in 2017 and 2018 shifted the composition of external debt toward commercial debt. Several factors held down the cost of external borrowing. The country’s high growth and record of reforms helped secure fairly good terms on the sovereign bond issues. The 2018 eurobond issue was denominated in euros, minimizing exchange rate risks. And maturities ranged from 12 to 30 years, avoiding a concentration of maturities, in accord with the medium-term debt strategy.

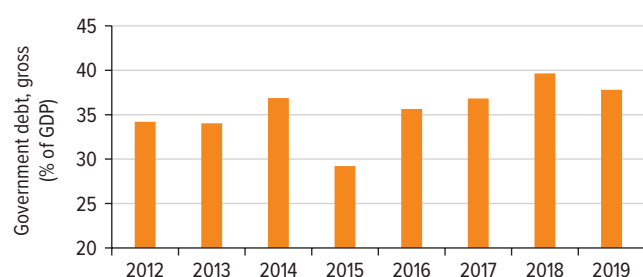
In the financial sector, the banking system continued to strengthen. The solvency ratio increased above the WAEMU and Basel II/III norms. Banks’ equity rose after banking sector regulations were implemented to improve macroprudential policies. Credit expansion was curbed as banks adjusted to

Figure 1.6. Current account balance, 2012–19



Source: World Bank staff estimates.

Figure 1.7. Government debt, gross, 2012–19



Source: World Bank staff estimates.

the new regulatory standards aligned with Basel II/III, which required banks to increase capital and loan loss provisions. The composition of the balance sheets in the banking sector changed to reflect the sectoral priorities outlined in the National Development Plan. In this environment, steps were taken by the monetary authority to enhance financial inclusion, including better access to long-term credit for small and medium enterprises.

1.2.3 Improving social indicators

Côte d'Ivoire's socioeconomic indicators also improved notably. Far more people have access to basic infrastructure. In 2018, more than 80 percent of the population had access to electricity, a 20 percentage point increase from 2015. With access to clean water above 90 percent in both urban and rural areas and across income groups, Côte d'Ivoire has almost reached universal access. The share of households that have a health center within 5 kilometers has increased by more than 30 percentage points for all households and by 37 percentage points for the poorest households. Similarly, access to primary and secondary education expanded. In 2019, a health insurance scheme was rolled out. The national results-based financing strategy, adopted in 2016 with the aim of retaining health care staff and improving data collection and reporting in health centers, extends to the whole territory. It will cover free access to health care for pregnant women and

children under age five. With these efforts, Côte d'Ivoire seeks to move closer to the averages for Sub-Saharan Africa and for lower-middle-income countries on the health and education indicators, where substantial gaps remain (table 1.1).

Before the COVID-19 pandemic, poverty had started to decline. In 2018, the poverty rate at the national poverty line was an estimated 40.0 percent, down from 45.7 percent in 2015. The growth elasticity of poverty was estimated to have increased to -0.81 in 2015–18 from -0.31 in 2008–15, suggesting that the benefits of the robust growth were beginning to be felt. Benefits were partly reflected in increased access to roads, safe water, health services, and electricity for poor households.

1.2.4 Challenges ahead

By the end of 2019, Côte d'Ivoire established itself as one of the fastest-growing countries in Sub-Saharan Africa and one of the fastest-growing developing economies worldwide. But it was far from achieving the 2016–20 National Development Plan's central objective—to transform Côte d'Ivoire by 2020 into an emerging country with a solid industrial base and a large reduction in poverty. The country faces major challenges to its ambition for sustained high and inclusive growth, including the following:

- ▶ The COVID-19 pandemic was expected to sharply reduce growth in 2020. Côte d'Ivoire's containment measures to slow the spread of the virus and mitigate the death toll and health effects have damaged the economy. In addition, the marked slowdown in global growth caused exports and foreign direct investment to fall, while tighter global financial conditions hindered access to capital market financing. The sharp decline in commodity prices and contraction of trade lowered government revenues, while efforts to buttress the health system against the virus created new demands for government spending, putting pressures on fiscal balances. The effects of the COVID-19 pandemic could be temporary, with the economy rebounding in 2021. But a slow or delayed recovery could harm Côte d'Ivoire's medium-term growth prospects.
- ▶ Growth needs to become more inclusive. Income inequality was high before the pandemic, especially in urban areas, and rural–urban disparities in access to public services persisted. Despite the recent strong growth, fewer employment opportunities were available for the working-age population. Moreover, COVID-19 could aggravate inequality by causing a sharp fall in workers' real wages, major revenue losses among small and medium-size

Table 1.1. Social and economic indicators

Indicators	Côte d'Ivoire	Sub-Saharan Africa average	Lower-middle-income country average
Population below \$1.90/day (2011 PPP) (%)	23.2 (2015)	36.6 (2015)	17.9 (2015)
Gini index	41.5 (2015)	43.9 (2015)	33.6 (2015)
Immunization, measles (% of children under age 12–13 months)	71 (2018)	78.4 (2018)	85.6 (2018)
Improved water source (% of population with access)	36.6 (2017)	23.3 (2017)	48.9 (2017):
Births attended by skilled health staff (% of total)	74 (2016)	58 (2014)	74 (2014)
Maternal mortality ratio (modeled estimate, per 100,000 live births)	61.7 (2017)	53.4 (2017)	254 (2017)
Mortality rate, under five (per 1,000 births)	81 (2010)	78 (2013)	49 (2018)
Life expectancy at birth, total (years)	57 (2017)	61 (2017)	68 (2017)
Secondary school enrollment (% of gross)	51 (2010)	43 (2018)	68 (2018)
Literacy rate, adult total (% of people ages 15 and above)	47 (2010)	66 (2018)	77 (2018)
Literacy rate, youth total (% of people ages 15–24)	58 (2018)	77 (2018)	90 (2018)

Source: World Development Indicators, World Bank.

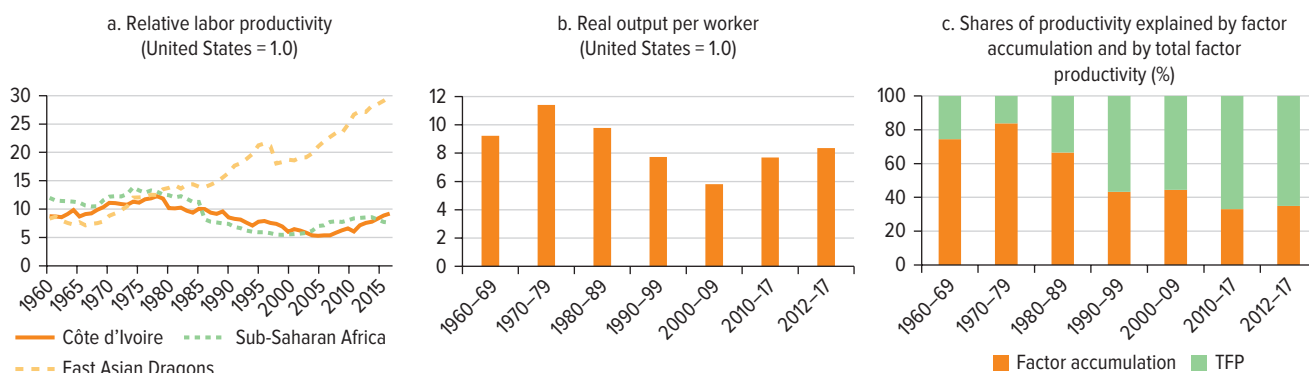
enterprises, and reduced livelihoods for vulnerable and lower-income households. Making growth inclusive will require spreading its benefits more widely to rural and urban areas, creating jobs that can substantially raise workers' real wages, and expanding social safety nets to protect the most vulnerable groups.

- ▶ The economy's productive capability needs strengthening. Labor productivity in Côte d'Ivoire remains low, especially in comparison with the fast-growing East Asian countries, such as the Republic of Korea, that Côte d'Ivoire seeks to emulate (figure 1.8). Relatively low labor productivity largely results from weak TFP. In 2012–17, real output per worker in Côte d'Ivoire was 8.4 percent of that in the United States, the international benchmark. Two-thirds of this gap was due to low TFP, with the rest explained by factor accumulation. To achieve the performance of high-growth countries, Côte d'Ivoire will need sustained boosts to both TFP and factor accumulation, especially through high rates of investment.⁷ In this context, ensuring that resources are put to their most productive use and accelerating investment and the pace of technology adoption are critical.
- ▶ Structural transformation in Côte d'Ivoire is still in its early stages. New, higher-productivity industries are emerging and expanding, and labor is shifting from traditional or lower-productivity activities to modern ones.⁸ But about 48 percent of the workforce remains self-employed in agriculture, which generates about a fifth of GDP, and 30 percent is self-employed in nonagricultural industries.

Structural change so far has mostly involved workers transferring from agriculture to services within the informal sector. In contrast, in fast-growing Asian countries, the transfer has been from low-productivity agriculture to high-productivity manufacturing. Although in Côte d'Ivoire the share of wage employment in services and manufacturing has increased somewhat, it is the share of self-employment in services and manufacturing that has increased enough to counterbalance the decreased share of employment in agriculture. Rapid growth of output per worker can take place when strong within-sector productivity growth accompanies rapid movement of labor into higher-productivity sectors.⁹ For Côte d'Ivoire to sustain strong growth in output per capita will require rapid structural transformation with higher productivity.

- ▶ Côte d'Ivoire's outward orientation has not kept pace with its economic objectives. To industrialize, it needs to aim for exports and attract firms that can compete on world markets. Yet, the ratio of exports of goods and services to GDP stood at 25.0 percent in 2017, lower than in other WAEMU countries such as Benin, Burkina Faso, and Togo. Exports consist mostly of agricultural products, with cocoa and cocoa byproducts dominating all others. In 2018, manufactures were 11 percent of merchandise exports, far below the 22 percent average of Sub-Saharan Africa. An open economy is crucial to developing manufacturing industries, since Côte d'Ivoire's domestic market is far too small to accommodate modern manufacturing at competitive costs, and expanding exports would enable firms to exploit the benefits of scale economies.

Figure 1.8. Labor productivity and total factor productivity



Source: World Bank staff estimates.

▶ Despite robust economic growth, Côte d'Ivoire lags in mobilizing tax revenue. The tax revenue ratio, 12.1 percent of GDP in 2018, is well below WAEMU's convergence target of 20 percent. Côte d'Ivoire's tax revenue underperformance is due to several factors. Key drivers of the economy, such as agriculture, mining, construction, transportation, and the public sector, are not fully included in the tax net. Taxes on international trade remain major sources of government revenue despite their volatility, accounting for nearly 28 percent in 2017. Meanwhile, value-added tax revenues amount to less than 4 percent of GDP, owing to inefficiencies and a wide range of exemptions. Côte d'Ivoire has launched an ambitious program to digitalize revenue administration, broaden the tax base, and simplify tax schemes. It needs to mobilize more tax revenue to help finance the development projects that can undergird an emerging market economy while preserving fiscal sustainability.

▶ The macroeconomic policy environment—exchange rate management, monetary policy, and budgetary policy—must remain sound if Côte d'Ivoire is to sustain high economic growth. As a member of WAEMU, Côte d'Ivoire does not have independent monetary or exchange rate policies. But since domestic prices adjust, an increase in the relative price of nontradable goods and services can cause the real exchange rate to appreciate and so to harm exports. Another vulnerability arises because during 2017-18, the fiscal and current account deficits widened, resulting in increased external borrowing. Although the country remains at moderate risk of debt distress, the high ratio of external public debt to GDP and greater reliance on commercial public debt are sources of vulnerability. And higher debt service payments mean that fewer budgetary resources would be available for infrastructure projects and priority spending. Without major policy changes, larger imbalances could undermine growth prospects.

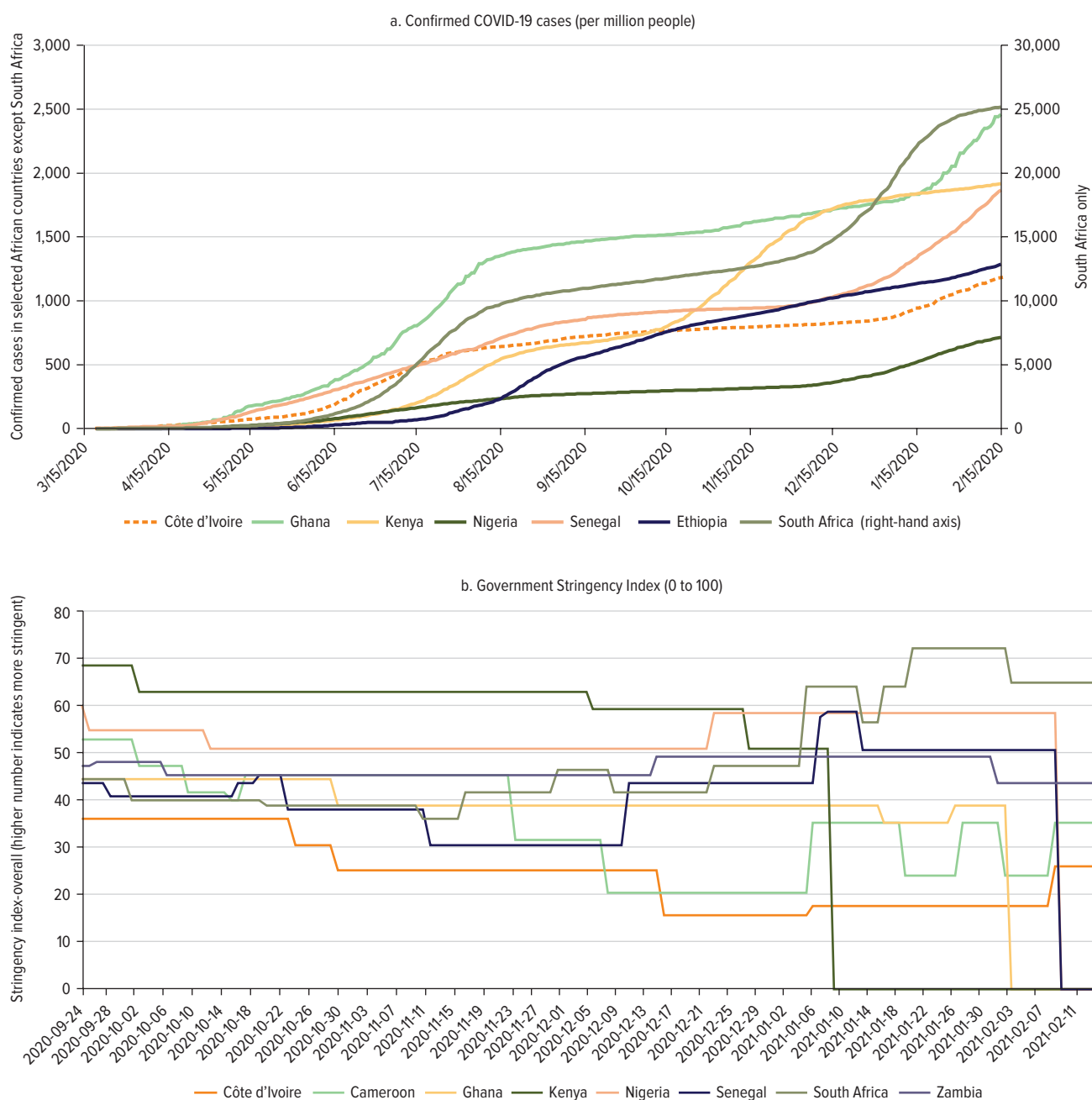
1.3 Economic impact of COVID-19

Beyond taking a huge toll on human lives and health, the rapid spread of the COVID-19 virus has damaged world trade, tourism, global supply chains, financial markets, and commodity prices. Economic activity has contracted in countries across the world. Côte d'Ivoire has not been spared, facing a pronounced slowdown and urgent external and fiscal financing needs. It reported its first case on March 11, 2020. As of May 14, the country had 1,912 confirmed cases and 24 deaths. Since its testing capacity was limited, the true number of cases was considerably higher. Like many countries, Côte d'Ivoire implemented economic lockdown measures, the only tool that was available to reduce economic and social contacts in communities, reduce contagion, and mitigate the death

toll and health effects of the virus. However, the containment measures harmed the economy (figure 1.9).

The authorities swiftly declared a state of emergency, established a curfew from 9:00 p.m. to 5:00 a.m., and prohibited public gatherings of more than 50 people. They closed schools, restaurants, and recreational facilities. They restricted public transportation and movements between regions in the country and banned all international travel (with an exception for humanitarian aid). With the support of the World Health Organization, they adopted an emergency health plan to provide free care for infected people, equip intensive care units, strengthen epidemiological and

Figure 1.9. Evolution of reported cases of COVID-19 and the Government Stringency Index



Source: <https://ourworldindata.org/coronavirus>. Data as of February 15, 2021.

Note: The stringency index measures the pandemic's impact on mobility from 0 to 100 (100 = strictest). The index consists of nine metrics: school closures, workplace closures; cancellation of public events; restrictions on public gatherings; closures of public transport; stay-at-home requirements, public information campaigns, restrictions on internal movements, and international travel controls.

biological surveillance, and reinforce the pharmaceutical industries. An economic support plan bolstered the income of the most vulnerable segments of the population through agricultural input support and expanded cash transfers, relief to hard-hit sectors and firms, and support for public agencies in the transport and port sectors to ensure supply chain continuity.¹⁰

On May 7, 2020, the authorities announced the relaxation of the containment measures. In the Grand Abidjan district, a reduced curfew from 11:00 p.m. to 4:00 a.m. remained in place until May 15. The closure of restaurants and recreational facilities was lifted on May 15. The isolation of the Grand Abidjan district was to continue and be reinforced. In the other regions, the curfew and the closure of restaurants,

schools, and recreational facilities were lifted on May 8, and the size limit for public gatherings was expanded from 50 to 200 people.

1.3.1 Channels of transmission and their economic impact

An evaluation of the potential impact of COVID-19 on the Ivorian economy distinguished three channels for containment measures and other efforts to influence economic activity (box 1.1). The three channels are the forced restrictions on nonessential economic activity; decreased household incomes due to containment measures, reducing demand; and reduced commodity prices and exports due to disrupted global trade. These channels have knock-on effects spreading throughout the economy. Each industry buys from and sells to others in the supply chain. Since supply

and demand are interdependent, the COVID-19 shocks will work their way through succeeding rounds of sales and purchases. The direct and indirect effects will thus permeate the economy.

The evaluation models two recovery scenarios that differ in the length of time the shocks will continue to spread throughout the economy. In the first—the quick or short scenario—the virus spread is ended by the containment measures in four quarters. In the second—a slow or more prolonged scenario—the introduction of vaccines and drugs halt the deadly spread of the virus and the associated lockdown by the eighth quarter.

In the quick case, the impact is assumed to hit hardest immediately, in the first two quarters, and to taper off gradually in the next two. In the slow case, the effects build slowly and peak in the third and fourth quarters, with

Box 1.1. Short-run impact of COVID-19: Channels of transmission and assumptions

The COVID-19 pandemic is affecting Côte d'Ivoire's economy through three main channels:

- » *The forced restrictions on nonessential economic activity reduce the production and consumption of goods such as trade, transportation, and business services.*
 - Household consumption of goods related to trade, transportation, finance and business services, and other services is assumed to fall 15 percent. This assumption follows the examination of COVID-19's impact on global value chains by Maliszewska, Mattoo, and Van Der Mensbrugge.^a
 - Consumption of health services is assumed to increase 10 percent as the government expands the provision of health care services to meet household demand. This assumption is calibrated using trends for conditional cash transfers and social programs for food and health care.^b
- » *Additional macroeconomic feedbacks reduce aggregate absorption.*
 - The containment measures will dampen economic activities, decreasing labor and household incomes. As plant closings and layoffs take hold, household consumption will decrease further. It is assumed conservatively that household consumption uniformly falls 2.5 percent. Côte d'Ivoire's self-employed labor, which constitutes more than half of the labor force, provides a safety valve through widespread informal economic activity and home production. And a major portion of skilled labor works in public administration and the sector associated with education and health, which may benefit from countercyclical fiscal spending.
 - Heightened risk in business prospects will depress investment, which is assumed to fall 10 percent. Foreign direct and portfolio investments constitute about 28.5 percent of gross capital formation in Côte d'Ivoire—if they fall by half due

to the effects of COVID-19 on advanced and large emerging economies, the decline in investments could be higher, on top of possible reductions in domestic sources or other foreign savings.^c

- It is assumed that the government will undertake countercyclical measures and social safety net spending. Those steps would maintain the base-year level of government consumption. But a temporary shortfall of tax revenues during the lockdown constrains the amount of spending. And with government debt rising, fiscal space to address the pandemic more effectively is limited.
- » *The disruption of global trade constrains commodity prices and Côte d'Ivoire's exports.*
 - Exports of cacao-related products and other crops are assumed to fall 8 percent. This assumption fits with the projected decline in prices and demand for cacao, for example, in the latest World Bank *Commodity Market Outlook*.^d
 - Oil prices are assumed to fall by 40 percent, reducing oil exports straightforwardly.
 - The World Bank's *Global Economic Prospects* projected that global trade would fall by nearly 15 percent in 2020. Taking that figure as an upper bound, nonagricultural exports are assumed to decline 10 percent, and agricultural exports by half that (5 percent), reflecting the combined fall in prices and demand.^e

a Maliszewska, Mattoo, and Van Der Mensbrugge 2020.

b World Bank 2011.

c World Bank 2020b.

d World Bank 2020d.

e World Bank 2020b.

economic activity returning by the eighth quarter. In either case, the return to normalcy means the economy resumes its base year values.

The methodology employs multipliers from a newly constructed social accounting matrix (SAM) for Côte d'Ivoire to analyze the short-term impact of COVID-19 on the economy.¹¹ The observed shocks work through the economy in weeks or months, not years. In such a short period, production technologies, relative prices, and the wages of employed labor are unlikely to be changed much by the pandemic. In this short-term environment, when many markets are not working due to the lockdown, multiplier analysis is more appropriate than a market-oriented full computable general equilibrium model (used to evaluate the long-term performance of the economy in section 1.4). The SAM integrates the input-output accounts with the national income and product accounts. It shows the flow of goods and services around the economy, and the corresponding income and expenditures of all economic actors. The SAM used in this analysis reflects the economic structure of Côte d'Ivoire in 2017, using data from the National Statistical Office. It contains the country's key production sectors and their interactions, factors of production, and the accounts or budgets of different actors (including the government, households, firms, and the rest of the world).¹² The results of the multiplier analysis are not forecasts; they represent possible outcomes given the assumed shocks.

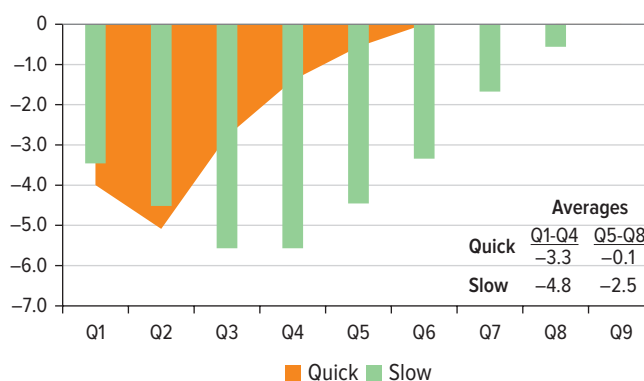
1.3.2 Macroeconomic impact

Illustrative simulations for the quick scenario suggest that real GDP could fall by 4 percent or more in the first two quarters from the baseline (figure 1.10). The shocks gradually weaken to almost zero by the fifth quarter. Overall, GDP could be reduced by 3.3 percentage points in 2020 from a no-COVID-19 baseline. The shocks fade by early 2021, with GDP through 2021 broadly similar to a no-COVID-19 projection.

In the slow or prolonged case, the impact on GDP peaks in the fourth quarter of 2020 and lingers before fading in the last quarter of 2021. Overall, GDP is reduced by 4.8 percent in 2020, and by 2.5 percent in 2021 relative to a no-COVID-19 baseline.

The COVID-19 containment measures will depress domestic consumption and investment, affecting key macroeconomic aggregates (table 1.2). Government countercyclical measures and spending will strengthen health care delivery, expand social safety nets, and provide support to hard-hit sectors, so government consumption remains fairly stable despite falling revenue and a lack of fiscal space. But lower demand from trading partners will undermine trade expansion. The euro area and China, the regions hardest hit by the pandemic, account for nearly 50 percent of Côte d'Ivoire's exports and imports. The slowdown in those countries will reduce Côte

Figure 1.10. Quarterly GDP projected impact of COVID-19, quick and slow scenarios, 2020–21
Percent change from a no-COVID-19 base year



Source: World Bank staff estimates.

d'Ivoire's export growth sharply and weaken its trade balance considerably. And international investors' loss of confidence is likely to reduce foreign direct investment and other private investment inflows, and constrain the government's access to external borrowing.

1.3.3 Sectoral impact

Disruption in the domestic market and supply chains caused by the containment measures will severely hinder production. The country will see a broad contraction in production (table 1.3). The sectors harmed most across the quick and slow scenarios due to significantly weaker regional and global demand are export-oriented goods (such as cacao-related products, cashews, other export crops, and mining) and light manufacturing industries. Construction and other services that depend on retail trade and transportation will also be hit hard by the containment measures. But government administration and health sector services are likely to benefit from government measures to strengthen health care delivery and related services.

1.3.4 Incomes impact

Factor incomes will fall across all categories of labor, capital, and land in the short run due to COVID-19 (table 1.4). The containment measures that imposed business closures and restrictions on people's movements will lead to a sharp decline in business profits, especially among small and medium-size enterprises, and a loss of wages for workers. Low-skilled labor, most of whom operate in the informal sector, and the self-employed will suffer proportionately greater harm. More broadly, resources that were engaged in production at the start of the year will become idle, damaging the well-being of families and communities. Already vulnerable groups could slip into poverty. Skilled labor incomes will decline the least, mainly because many skilled workers are employed

Table 1.2. Quarterly projected impact of COVID-19 on macroeconomic aggregates, quick and slow scenarios, 2020–21
Percent change from no-COVID-19 baseline

	Base year level	Q1	Q2	Q3	Q4	Average Q1–Q4	Q5	Q6	Q7	Q8	Average Q5–Q8
1. Quick scenario											
C	10,493.2	-4.0	-3.2	-2.0	-1.0	-2.6	-0.4				-0.1
I	6,027.5	-5.0	-10.0	-5.0	-2.5	-5.6	-1.0				-0.3
G	3,045.0	0.1	0.1	0.0	0.0	0.1	0.0				0.0
X	7,464.8	-5.5	-10.2	-5.2	-2.6	-5.9	-1.0				-0.3
M	7,075.6	-4.8	-7.1	-3.7	-1.9	-4.4	-0.7				-0.2
GDP	29,954.9	-4.0	-5.1	-2.8	-1.4	-3.3	-1.3				-0.5
Absorption	29,565.7	-3.3	-4.3	-2.4	-1.2	-2.9	-0.5				-0.1
Trade balance in levels	389.2	-18.8	-67.5	-31.3	-15.6	-33.3	-6.3				-1.6
2. Slow scenario											
C	20,493.2	-3.1	-3.5	-4.0	-4.0	-3.7	-3.2	-2.4	-1.2	-0.4	-1.8
I	6,027.5	-5.0	-7.5	-10.0	-10.0	-8.1	-8.0	-6.0	-3.0	-1.0	-4.5
G	3,045.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
X	7,464.8	-5.5	-7.9	-10.4	-10.4	-8.5	-8.3	-6.2	-3.1	-1.0	-4.7
M	7,075.6	-4.2	-5.9	-7.5	-7.5	-6.3	-5.0	-4.5	-2.2	-0.7	-3.4
GDP	29,954.9	-3.5	-4.5	-5.6	-5.6	-4.8	-4.5	-3.3	-1.7	-0.6	-2.5
Absorption	29,565.7	-3.1	-4.0	-4.8	-4.8	-4.2	-3.9	-2.9	-1.4	-0.5	-2.2
Trade balance in levels	389.2	-28.2	-45.4	-62.5	-62.5	-49.6	-50.0	-37.5	-18.8	-6.3	-28.1

Source: World Bank staff estimates.

Note: C = private final consumption expenditure; G = government final consumption expenditure; I = gross capital formation; X = exports of goods and nonfactor services; M = imports of goods and nonfactor services; Absorption = total absorption = C + G + I. Base-year levels and trade balance in billions of CFA francs and constant base year prices.

in government services that are considered essential and in the health and education sectors, which benefit from the government's countercyclical measures.

In summary, simulations with the SAM multiplier model using plausible assumptions¹³ suggest that the COVID-19 pandemic could cause Côte d'Ivoire's GDP to fall

by 3.3 percent over four quarters from a no-COVID-19 base level. If the recovery takes hold only after eight quarters after the introduction of vaccines and drugs, the harm to the economy could be more pronounced. Consumption, investment, and imports will be depressed. The disruption of global trade will reduce exports substantially. Incomes will fall across the economy.

1.4 Long-term growth of the economy

Côte d'Ivoire's aspiration to become an emerging market economy depends on its ability to sustain high economic growth for an extended period and to make it inclusive. These endeavors require decisive initiatives extending recent reforms to create a strongly outward-looking economy, deepening investment in sectors in which the country enjoys a comparative advantage, adopting new technologies, and raising the real incomes of households.

With Côte d'Ivoire facing this challenge, this section will evaluate different growth scenarios and policies that

could shape the long-term performance of the country's economy.¹⁴ First, a no-COVID-19 reference path will be estimated for 2020–30. The reference path illustrates the development of Côte d'Ivoire's economy if the policies applied in 2012–19 before the COVID-19 crisis could have continued. The reference path forms the basis for comparing different growth scenarios. Second, a high-growth scenario reflects Côte d'Ivoire's aspirations, and the requirements for realizing it are presented. Third, a low-growth scenario considers the possibility that future growth in Côte d'Ivoire

Table 1.3. Quarterly impact of COVID-19 on aggregate sectoral output, quick and slow scenarios, 2020-21
Percent change from no-COVID-19 baseline

	Base year level	Q1	Q2	Q3	Q4	Average Q1-Q4	Q5	Q6	Q7	Q8	Average Q5-Q8
1. Quick scenario											
Cacao	2,395.2	-4.0	-7.9	-3.9	-2.0	-4.4	-0.8				-0.2
Processed cacao and coffee	1,644.5	-3.9	-7.4	-3.7	-1.9	-4.2	-0.7				-0.2
Cashews	236.1	-3.8	-7.1	-3.6	-1.8	-4.1	-0.7				-0.2
Other export crops	1,123.7	-2.9	-3.7	-2.0	-1.0	-2.4	-0.4				-0.1
Other agriculture	6,383.3	-2.6	-2.4	-1.4	-0.7	-1.8	-0.3				-0.1
Food, beverages, and tobacco	2,806.0	-2.7	-2.3	-1.4	-0.7	-1.8	-0.3				-0.1
Mixing	1,989.7	-5.7	-9.2	-4.8	-2.4	-5.5	-1.0				-0.2
Light manufacturing (textiles and paper products)	1,559.5	-3.7	-5.5	-2.9	-1.5	-3.4	-0.6				-0.1
Other industries	7,342.5	-4.0	-5.9	-3.1	-1.6	-3.6	-0.6				-0.2
Construction	2,211.6	-4.9	-9.6	-4.8	-2.4	-5.4	-1.0				-0.2
Public administration, health and education	4,091.8	2.8	2.3	1.4	0.7	1.8	0.3				0.1
Other services	16,812.2	-6.5	-6.6	-3.8	-1.9	-4.7	-0.8				-0.2
Total	48,596.1	-4.1	-5.2	-2.8	-1.4	-3.4	-0.6				-0.1
2. Slow scenecario											
Cacao	2,395.2	-3.9	-5.9	-7.9	-7.9	-6.4	-6.3	-4.7	-2.4	-0.8	-3.6
Processed cacao and coffee	1,644.5	-3.7	-5.6	-7.5	-7.5	-6.1	-6.0	-4.5	-2.2	-0.7	-3.4
Cashews	236.1	-3.6	-5.4	-7.2	-7.2	-5.8	-5.7	-4.3	-2.1	-0.7	-3.2
Other export crops	1,123.7	-2.0	-3.0	-4.0	-4.0	-3.3	-3.2	-2.4	-1.2	-0.4	-1.8
Other agriculture	6,383.3	-1.4	-2.1	-2.8	-2.8	-2.3	-2.3	-1.7	-0.9	-0.3	-1.3
Food, beverages, and tobacco	2,806.0	-1.5	-2.2	-2.8	-2.8	-2.3	-2.3	-1.7	-0.9	-0.3	-1.3
Mixing	1,989.7	-5.1	-7.4	-9.6	-9.6	-7.9	-7.7	-5.7	-2.9	-1.0	-4.3
Light manufacturing (textiles and paper products)	1,559.5	-3.0	-4.4	-5.8	-5.8	-4.8	-4.7	-3.5	-1.7	-0.6	-2.6
Other industries	7,342.5	-3.4	-4.8	-6.2	-6.2	-5.2	-5.0	-3.7	-1.9	-0.6	-2.8
Construction	2,211.6	-4.8	-7.3	-9.7	-9.7	-7.9	-7.7	-5.8	-2.9	-1.0	-4.3
Public administration, health and education	4,091.8	2.8	2.8	2.8	2.8	2.8	2.3	1.7	0.8	0.3	1.3
Other services	16,812.2	-5.9	-6.8	-7.6	-7.6	-7.0	-6.1	-4.6	-2.3	-0.8	-3.4
Total	48,596.1	-3.5	-4.6	-5.7	-5.7	-4.9	-4.5	-3.4	-1.7	-0.6	-2.6

Source: World Bank staff estimates.

Note: Base year levels in billions of CFA francs. For convenience, sectors are aggregated from the sectors in the social accounting matrix.

Table 1.4. Quarterly impact of COVID-19 on real factor incomes, quick and slow scenarios, 2020–21
Percent change from no-COVID-19 baseline

	Base year level	Q1	Q2	Q3	Q4	Average Q1–Q4	Q5	Q6	Q7	Q8	Average Q5–Q8
1. Quick scenario											
Self-employed labor	9,324.0	-4.4	-5.6	-3.1	-1.5	-3.7	-0.6				-0.2
Low-skilled labor	2,074.9	-4.5	-5.7	-3.1	-1.6	-3.7	-0.6				-0.2
Skilled labor	5,298.5	-2.2	-2.7	-1.5	-0.7	-1.8	-0.3				-0.1
Land	2,178.0	-3.0	-4.0	-2.2	-1.1	-2.6	-0.4				-0.1
Capital	8,851.5	-4.9	-5.9	-3.3	-1.6	-3.9	-0.7				-0.2
Total	27,727.0	-4.0	-5.0	-2.8	-1.4	-3.3	-0.6				-0.1
2. Slow scenario											
Self-employed labor	9,324.0	-3.8	-5.0	-6.2	-6.2	-5.3	-4.9	-3.7	-1.9	-0.6	-2.8
Low-skilled labor	2,074.9	-4.0	-5.1	-6.2	-6.2	-5.4	-5.0	-3.7	-1.9	-0.6	-2.8
Skilled labor	5,298.5	-1.8	-2.4	-3.0	-3.0	-2.5	-2.4	-1.8	-0.9	-0.3	-1.3
Land	2,178.0	-2.2	-3.3	-4.3	-4.3	-3.5	-3.5	-2.6	-1.3	-0.4	-2.0
Capital	8,851.5	-4.4	-5.5	-6.5	-6.5	-5.7	-5.2	-3.9	-2.0	-0.7	-2.9
Total	27,727.0	-3.5	-4.5	-5.5	-5.5	-4.8	-4.4	-3.3	-1.7	-0.6	-2.5

Source: World Bank staff estimates.

Note: Base year levels in billions of CFA francs.

could be below that suggested in the reference path or the high-growth scenario. Finally, the discussion will evaluate the implications of the COVID-19 shock for the country's long-term prospects.

1.4.1 No-COVID-19 reference path

The reference path estimates how continuing the economic trends and policies prevailing at the end of 2017–19 would affect Côte d'Ivoire's growth and poverty rates. It assumes modest productivity growth, stable world prices of main exports, and no increase in the foreign financing of investment.

The reference path reveals three major issues for Côte d'Ivoire. First, continuing the current trends and policies would lead to a stable but noticeably lower growth rate of the main economic indicators (table 1.5). Real GDP growth would slow to an average of 6.5 percent a year (4.0 percent in per capita terms) in 2020–30, in line with the slowing growth of demand in the economy. Although real GDP growth is likely to remain robust, it would be insufficient to increase per capita income to the desired level. GDP per capita would be moderately higher by 2030, keeping Côte d'Ivoire in the lower range of the middle-income economies.

Second, the contribution to growth of the productivity residual, which includes TFP and other technical changes,

would continue to decline (table 1.6). This trend is worrisome, since sustained productivity growth is the main driver of long-term per capita income growth. Capital accumulation would replace productivity as the main driver of growth, boosted by private and public investments. But investment growth is limited by the availability of new funding, including foreign savings, which are fixed, and its efficiency is modest. The supply of skilled labor would rise, but its contribution to growth would stabilize after a few years, with self-employed labor continuing as the main support of economic activity.

Third, the government would nonetheless get part of the way to its goal of reducing poverty to low levels. The solid and steady pace of GDP growth would support households' income and consumption. All workers would see their real wages rise, and household income in both rural and urban areas would improve. The extreme poverty rate, starting at an estimated 24.4 percent in 2019 at the \$1.90 a day poverty line,¹⁵ would be reduced by more than half to 10.1 percent by 2030.

In summary, the continuation of trends and policies as assumed in the no-COVID-19 reference path would lead to stable growth of real GDP, but it would be insufficient to boost per capita income to the emerging market level. The poverty rate would fall, supported by an increase in real wages and incomes across the economy. But to balance among economic

Table 1.5. Reference path trajectory

Indicator	Share of GDP (%)			Average annual growth (%)				
	2017	2020	2025	2030	2017–20	2020–25	2026–30	2020–30
Private consumption	-63.4	68.6	68.8	69.0	7.2	6.6	6.6	6.6
Government consumption	10.2	9.7	9.4	8.9	5.5	5.9	5.4	5.6
Gross capital formation	20.1	20.6	21.0	21.4	7.9	7.0	6.9	7.0
Exports of goods and services	24.8	25.1	25.1	25.2	7.4	6.6	6.6	6.6
Imports of goods and services	-23.6	-24.0	-24.3	-24.7	7.8	6.8	6.8	6.8
Trade balance	-1.3	-1.0	-0.7	-0.5	n.a.	n.a.	n.a.	n.a.
Current account balance	5.1	4.2	3.0	2.2	n.a.	n.a.	n.a.	n.a.
GDP	7.1	6.6	6.5	6.5	7.1	6.6	6.5	6.5
Absorption	7.2	6.6	6.5	6.5	7.2	6.6	6.5	6.6

Source: World Bank staff estimates.

Note: Absorption = total absorption = private consumption + government consumption + gross capital formation.

Table 1.6. Contributions of labor, capital, and TFP to GDP growth in the reference path

	2017–20	2020–25	2026–30	2020–30
Self-employed labor	14.3	9.0	8.5	8.9
Low-skilled labor	3.2	2.8	2.8	2.8
Skilled labor	8.1	10.1	10.1	10.1
Land	1.1	1.2	1.2	1.2
Capital	25.5	31.8	35.7	32.9
Productivity	47.9	45.2	41.7	44.0
Total	100.0	100.0	100.0	100.0
<i>Of which</i>				
All labor	25.6	21.9	21.4	21.9

Source: World Bank staff estimates.

Note: Productivity is the Solow residual. It includes total factor productivity (TFP) and other technical changes.

growth, a stronger increase in households' real incomes, and faster poverty reduction, the Ivorian government would need to reevaluate its development strategy.

1.4.2 High-growth scenario

The high-growth scenario reflects Côte d'Ivoire's income aspiration. It shows that real GDP growth could rapidly accelerate with efficient public investment, higher foreign financing, and increased world prices for Côte d'Ivoire's exports brought about by deeper integration with other African countries. Real GDP growth would rise from an estimated 7.1 percent in 2017–19 to 8.8 percent (6.0 percent in per capita terms) by 2021 and reach 9.0 percent by 2030. GDP per capita would increase to about \$4,398 by 2030, more than double its 2018 level, and above the current threshold for upper-middle-income status.¹⁶

1.4.3 Requirements of the high-growth scenario

To maintain the economy on a higher growth path, investment will have to rise considerably. From 2012 to 2017, Côte d'Ivoire invested about 20 percent of GDP on average, a sharp increase from the 10 percent of the previous decade. But the country's ambitions require a further increase of 12 percent a year in real terms through 2030, bringing the investment ratio to more than 26 percent of GDP (table 1.7). To reach this will require a major increase in public and private investment and a rise in financing, including foreign savings and foreign direct investment. Policy reforms that improve productivity and the investment climate would likely spur the necessary investment growth and its financing from investors and donors.

Exports also need to expand. A stronger outward orientation of the economy will be necessary to connect the increased

Table 1.7. GDP and final demand

A. Growth rate	Initial conditions and years	Base			High			Low		
	2017–20	2020–25	2025–30	2020–30	2020–25	2025–30	2020–30	2020–25	2020–30	2025–30
C	7.2	6.6	6.6	6.6	9.2	9.7	9.5	4.4	4.1	4.3
G	5.5	5.9	5.4	5.6	8.8	7.8	8.3	4.7	4.3	4.5
I	7.9	7.0	6.9	7.0	11.2	12.3	11.7	4.9	4.5	4.7
X	7.4	6.6	6.6	6.6	8.9	11.3	10.1	5.1	5.0	5.0
M	7.8	6.8	6.8	6.8	12.2	14.1	13.2	3.1	3.0	3.0
GDP	7.1	6.6	6.5	6.5	8.8	9.2	9.0	5.0	4.7	4.8
Absorption	7.2	6.6	6.5	6.6	9.6	10.1	9.9	4.5	4.2	4.4
B. Share of GDP	2017	2020	2025	2030	2020	2025	2030	2020	2025	2030
C	68.4	68.6	68.8	69.0	68.4	69.9	71.5	68.5	66.6	64.8
G	10.2	9.7	9.4	9.0	9.8	9.8	9.2	9.7	9.6	9.4
I	20.1	20.6	21.0	21.5	20.7	23.1	26.6	20.7	20.6	20.4
X	24.9	25.1	25.1	25.2	25.1	25.2	27.7	25.1	25.2	25.6
M	23.6	-24.1	-24.3	-24.7	-24.0	-28.1	-35.0	-24.1	-22.0	-20.2
Trade balance	1.3	1.1	0.8	0.6	1.0	-2.9	-7.3	1.1	3.3	5.3
Current account	-5.2	-4.2	-3.1	-2.2	-4.2	-3.5	-2.9	-4.2	-3.3	-2.6
Absorption	98.7	98.9	99.2	99.4	99.0	102.9	107.3	98.9	96.7	94.7

Source: World Bank staff calculations.

Note: Growth rates are in annual percent change for indicated period and in constant prices; shares of GDP are in constant base-year prices; Initial cnds/yr = initial conditions and years;

C = private final consumption expenditure; G = government final consumption expenditure; I = gross capital formation; X = exports of goods and nonfactor services; M = imports of goods and nonfactor services; absorption = total absorption = C + G + I.

investment with robust export performance. Export growth will have to average 10 percent annually, with the ratio of exports to GDP rising to 28 percent by 2030. The growth of exports could come both from better prices for more processed products and from better integration into regional and world markets.

Exporting sectors will have to expand rapidly so Côte d'Ivoire can exploit economies of scale, which are otherwise impossible given the smallness of the domestic economy (table 1.8). As exports expand, domestic industries that supply intermediate inputs to the exporting sectors will benefit from increased demand. Export growth will create extra demand for labor and various types of services, including banking and telecommunications. It will also improve Côte d'Ivoire's use of its capacity by ensuring regular supplies of intermediate inputs and equipment, since imports of goods and services will grow vigorously, partly aided by the availability of foreign exchange from exports and foreign funds to finance a wider external current account deficit. Higher import capacity will facilitate access to high-technology goods and foster the competition that drives productivity.

Higher productivity growth is another requirement for the high-growth scenario. Given the structure and circumstances of Côte d'Ivoire's economy, higher growth will have to be driven by both capital accumulation and TFP (table 1.9). But sustaining higher growth will require accelerating productivity growth, with TFP accounting for half or more of GDP growth in 2020–30.

The contribution of TFP to growth, which has declined in recent years, needs to be boosted. In global experience, the principal requirements for sustained high-productivity growth are scale economies, less financial friction, less distortion in allocating resources, and economic specialization in areas of comparative advantage, in a context of increased competition and rapid technology adoption. To achieve scale and specialization, Côte d'Ivoire will have to exploit external opportunities and enhance the benefits of urban agglomeration (chapter 6). The efficiency of public infrastructure investment must also improve. To succeed in these areas, Côte d'Ivoire must have a capable and motivated domestic enterprise sector, both public and private, with a strong potential to do well in competitive environments (chapter 4).

Table 1.8. Value added by sector
Annual growth in constant base year prices (%)

	Initial conditions and years	Base			High			Low		
	2017–20	2020–25	2025–30	2020–30	2020–25	2025–30	2020–30	2020–25	2025–30	2020–30
Cacao	7.3	5.7	6.0	5.9	8.8	13.2	11.0	4.8	4.9	4.9
Processed cacao and coffee	7.1	5.7	5.9	5.8	8.7	13.2	11.0	4.9	5.0	4.9
Cashews	7.9	6.3	6.3	6.3	7.4	7.6	7.5	4.7	4.3	4.5
Other export crops	7.6	6.6	7.1	6.9	9.0	10.6	9.8	4.5	4.5	4.5
Other agriculture	7.5	6.5	6.9	6.7	6.9	6.9	6.9	4.7	4.4	4.5
Food, beverages, and tobacco	7.4	6.9	6.8	6.8	8.4	8.3	8.4	5.1	4.7	4.9
Mixing	5.8	6.9	6.3	6.6	8.7	8.6	8.6	7.2	6.4	6.8
Light manufacturing (textiles and paper products)	8.5	7.6	7.6	7.6	9.8	9.9	9.8	4.8	4.4	4.6
Other industries	8.0	7.2	7.1	7.2	10.1	10.5	10.3	4.9	4.5	4.7
Construction	7.9	7.0	6.9	7.0	11.2	12.1	11.6	4.8	4.4	4.6
Public administration, health and education	5.4	5.7	5.2	5.5	8.6	7.3	7.9	4.3	3.9	4.1
Other services	7.2	6.8	6.6	6.7	9.1	8.9	9.0	5.0	4.6	4.8
Total	7.1	6.6	6.5	6.5	8.8	9.2	9.0	5.0	4.6	4.8

Source: World Bank staff estimates.

Note: For convenience, sectors are aggregated from the sectors in the social accounting matrix.

Table 1.9. Contribution of labor, capital, and total factor productivity to GDP growth (%)

	Initial conditions and years	Base			High			Low		
	2017–20	2020–25	2025–30	2020–30	2020–25	2025–30	2020–30	2020–25	2025–30	2020–30
Self-employed labor	14.3	9.0	8.5	8.9	5.9	3.8	4.9	17.7	18.4	18.2
Low-skilled labor	3.2	2.8	2.8	2.8	1.7	1.5	1.6	3.7	3.9	3.9
Skilled labor	8.1	10.1	10.1	10.2	8.6	9.0	8.9	7.6	7.9	7.9
Land	11	1.2	1.2	1.2	0.9	0.8	0.9	1.6	1.7	1.6
Capital	25.5	31.8	35.7	32.9	29.6	36.9	32.3	39.5	40.8	39.3
TFP and other technical change	47.9	45.2	41.7	44.0	53.5	47.9	5.14	29.8	27.3	29.1
Total	100	100	100	100	100	100	100	100	100	100
<i>Of which</i>										
All labor	25.6	21.9	21.4	21.9	16.2	14.4	15.4	29.0	30.2	30.0

Source: World Bank staff estimates.

Note: TFP is total factor productivity. TFP and other technical change is the Solow residual in growth accounting, including the effects of embodied technical change. Entries are contributions to GDP growth in the period indicated.

Labor productivity will have to grow from its current low level, both economywide and within sectors. This growth will require larger investments in human resources, physical capital, and organizational and managerial capabilities. Strong government spending on education and health will be needed to increase the growth and productivity of skilled labor.

A broad-based increase in tax revenues would be necessary to finance higher spending, with an increasing share going to the health and education sectors to accelerate human capital formation (table 1.10).

1.4.4 Implications for poverty reduction

An overall increase in productivity will increase output per unit of labor and capital, contributing to higher real GDP

growth, increased income and expenditure, and improved well-being of the population. In the high-growth scenario, all real wages rise substantially (table 1.11). Household incomes grow by more than two times by 2030. The poverty rate at \$1.90 a day could fall to a single digit—5.3 percent—by 2030.

1.4.5 Low-growth scenario

The low-growth scenario projects long-term economic performance if the key drivers of the high-growth scenario are disrupted. World prices of exports are assumed to fall due to a slowdown in activity among Côte d'Ivoire's trading partners. Foreign saving and external financing are fixed at their base year levels, reflecting tighter financial conditions. Government spending on education and health raises the growth of skilled labor, but less progressively than in the

Table 1.10. Fiscal accounts

	Initial year	Base			High			Low		
	2017	2020	2025	2030	2020	2025	2030	2020	2025	2030
A. Level (billions of CFA francs)										
Current revenue										
Direct taxes	1,032.9	1,344.9	1,991.4	2,899.5	1,362.8	2,338.8	4,041.3	1,344.8	1,758.3	2,250.0
Import taxes	527.6	660.1	929.6	1,300.1	667.1	1,017.3	1,608.1	660.7	878.0	1,153.4
Export taxes	535.5	667.6	907.3	1,250.8	668.9	1,004.9	1,730.2	668.3	846.5	1,076.3
Production taxes	353.7	425.7	570.4	762.4	429.8	658.6	1,055.7	425.8	518.2	624.3
Commodity taxes	811.0	999.7	1,380.4	1,899.1	1,010.3	1,546.6	2,429.0	1,000.6	1,284.2	1,628.6
Transfer from rest of world	319.3	319.9	323.3	325.7	320.2	281.2	237.0	319.9	352.5	388.0
Consumption (wages and goods)	2,882.0	3,590.0	5,008.1	6,929.0	3,623.6	5,758.9	9,319.4	3,590.4	4,532.9	5,638.0
Index (2017 = 1.00)	1.00	1.25	1.74	2.40	1.26	2.00	3.23	1.25	1.57	1.96
Government current savings	6,981	827.9	1,094.3	1,508.7	835.5	1,088.5	1,781.9	829.6	1,104.8	1,482.7
B. Growth (%)										
Current revenue										
Direct taxes	3.4	3.7	3.9	4.2	3.7	4.1	4.4	3.7	3.8	4.0
Import taxes	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	2.0
Export taxes	1.8	1.8	1.8	1.8	1.8	1.7	1.9	1.8	1.8	1.9
Production taxes	1.2	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1
Commodity taxes	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.8	2.9
Transfer from rest of world	1.1	0.9	0.6	0.5	0.9	0.5	0.3	0.9	0.8	0.7
Consumption (wages and goods)	9.6	9.7	9.9	10.0	9.8	10.0	10.2	9.7	9.8	9.9
Government current savings	2.3	2.2	2.2	2.2	2.2	1.9	1.9	2.3	2.4	2.6

Source: World Bank staff estimates.

Table 1.11. Wages and household incomes in indices 2017 = 100

	Base				High				Low			
	2017	2020	2025	2030	2017	2020	2025	2030	2017	2020	2025	2030
Exchange rate, real	1.00	1.00	1.01	1.02	1.00	1.00	0.88	0.74	1.00	1.00	1.10	1.21
Foreign saving/finance	1.00	1.00	1.00	1.00	1.00	1.00	1.28	1.63	1.00	1.00	1.00	1.00
Real wages of factors												
Self-employed labor	1.00	1.10	1.34	1.61	1.00	1.11	1.55	2.21	1.00	1.10	1.18	1.25
Low-skilled labor	1.00	1.11	1.31	1.55	1.00	1.12	1.52	2.12	1.00	1.11	1.20	1.28
Skilled labor	1.00	1.12	1.27	1.45	1.00	1.11	1.38	1.73	1.00	1.13	1.23	1.32
Land	1.00	1.19	1.54	1.99	1.00	1.20	1.72	2.51	1.00	1.19	1.41	1.64
Capital (returns)	1.00	1.07	1.13	1.18	1.00	1.05	1.18	1.27	1.00	1.07	1.05	1.03
Real household income												
Rural	1.00	1.11	1.34	1.61	1.00	1.12	1.54	2.16	1.00	1.10	1.19	1.27
Urban	1.00	1.14	1.40	1.70	1.00	1.15	1.58	2.21	1.00	1.15	1.28	1.41

Source: World Bank staff estimates.

high-growth scenario. And TFP growth slows in all sectors due to a lack of progress in structural reforms.

Under these assumptions, real GDP growth would average 4.9 percent (2.4 percent per capita) over 2020–30, compared with 6.5 percent in the reference case and 9.0 percent in the high-growth scenario. Growth would weaken across all components of domestic absorption (consisting of private and public consumption and gross investment), partly due to the lack of foreign funds to finance a wider external current account deficit. A slowing world economy dampens export growth, while goods and services imports grow much more slowly. With lower productivity growth, TFP would account for less than a third of real GDP growth by 2030, while capital and labor supply together account for about two-thirds, more than in the reference case. And increased capital accumulation is not matched by increased efficiency. The growth of skilled labor supply slows, so the role of the self-employed and low-skilled labor, operating mostly in the informal sector, grows.

The slowdown in economic activity due to lower investment and current expenditure decreases the growth of GDP, in turn affecting household income and consumption. All workers are likely to see smaller gains in their real wages compared with the reference path. Households in both rural and urban areas witness a modest increase in real incomes. So, although the

poverty rate declines over 2020–30, it remains considerably higher by 2030 than in the reference path, at 16.1 percent (\$1.90 a day in constant dollars at 2011 purchasing power parity).

1.4.6 COVID–19 implications for long-term growth

The three long-run growth paths of the economy presented above provide valuable reference points to examine a post-COVID–19 trajectory for Côte d’Ivoire. The short-run impacts of the outbreak on the economy could create a structural break in Côte d’Ivoire’s current path, since new growth trends are likely to appear in the aftermath of the pandemic (table 1.12). As the short-run analysis of the COVID–19 impact has shown, if the pandemic is contained quickly and the economy bounces back, output in 2021 will be broadly like the output that would have been projected without any outbreak (the no-COVID–19 reference path). But if it takes longer to contain the pandemic and the economy is slower to recover, the low-growth scenario could materialize. Or, a combination of growth trajectories could follow over the medium and long term, with a soft (low-growth) recovery taking hold during 2020–25, followed by more vigorous trends over 2025–30 like those in the reference path or high-growth scenario.

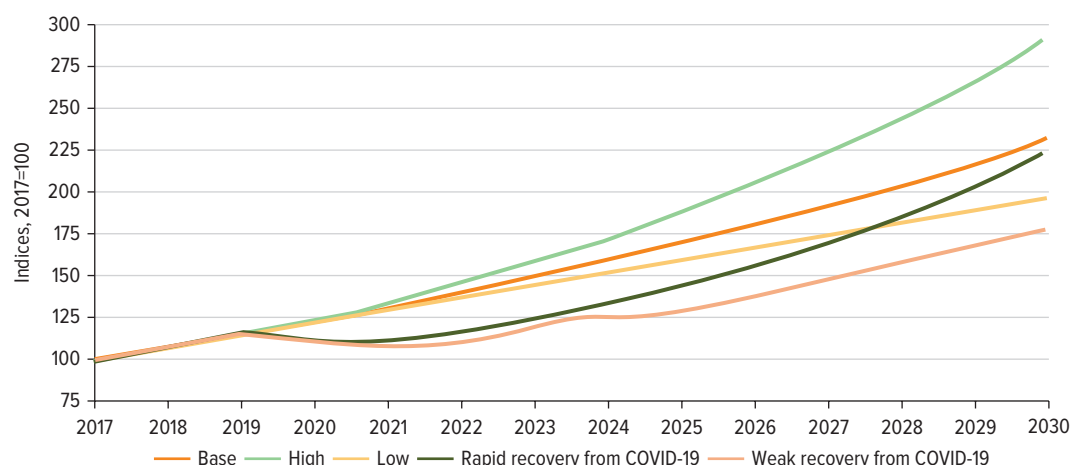
Table 1.12. Possible growth trajectories after COVID-19, 2021-30

Potential growth combinations	Rapid recovery and growth			Weak recovery and growth		
	2020	2021-25	2025-30	2020-21	2022-25	2025-30
C	-2.6	6.6	9.7	-2.7	4.4	6.6
G	-5.6	5.9	7.8	-6.3	4.7	5.4
I	0.1	7.0	12.3	0.1	4.9	6.9
X	-5.9	6.6	11.3	-6.6	5.1	6.6
M	-4.4	6.8	14.1	-4.8	3.1	6.8
GDP	-3.3	6.6	9.2	-3.6	5.0	6.5
Absorption	-2.9	6.6	10.1	-3.2	4.5	6.5

Source: World Bank staff estimates.

Note: C = private final consumption expenditure; G = government final consumption expenditure; I = gross capital formation; X = exports of goods and nonfactor services; M = imports of goods and nonfactor services; Absorption = total absorption = C + G + I. Reported entries are annual growth rates in the period indicated. The slow COVID-19 recovery is for two years; hence, the cumulative impact will be double the annual percent changes shown.

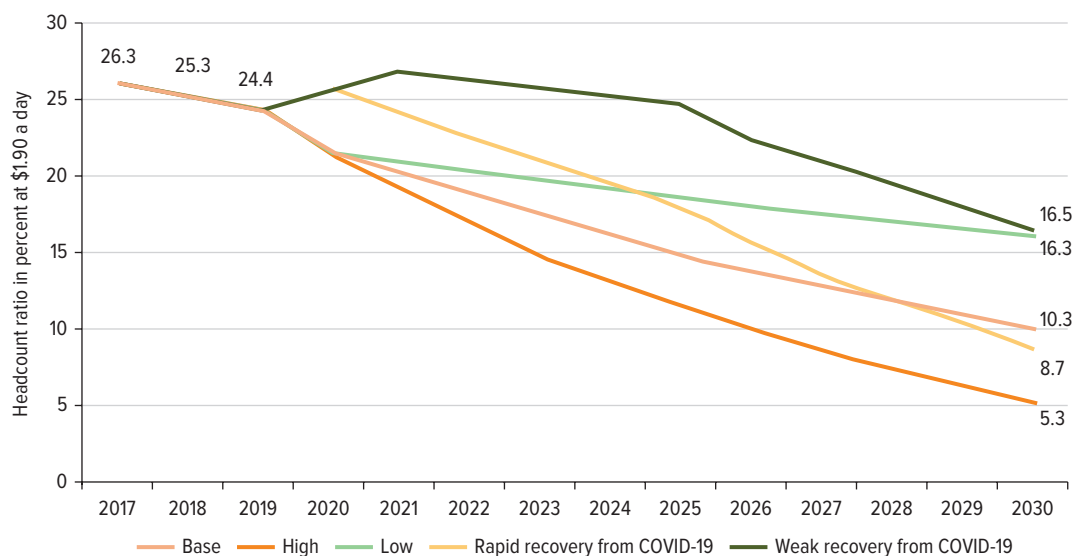
Figure 1.11. Evolution of GDP, by growth and COVID-19 scenario, 2017-30



Source: World Bank staff estimates.

GDP in a rapid COVID-19 recovery will reach close to the level of the base case in 2030 and likely exceed it after that (figure 1.11). In a weak recovery, however, GDP will remain below the level of the low case in 2030. The poverty pattern follows approximately the same story (figure 1.12). In the

rapid recovery, extreme poverty will pass the headcount rate of the base case but remain close to it at about 9 percent in 2030. But in the weak recovery, the poverty rate of 16.5 percent is close to the low case but slightly above it by 2030.¹⁷

Figure 1.12. Evolution of poverty by growth and COVID-19 scenario, 2017–30

Source: World Bank staff estimates.

Note: Poverty rate at \$1.90 a day, constant dollars at 2011 purchasing power parity.

1.5 Conclusions and recommendations

Before the COVID-19 crisis, Côte d'Ivoire's economy was growing at a solid pace. Per capita GDP growth averaged more than 4 percent a year over 2010–18. The national poverty rate had begun to decline, and the access of poor households to basic infrastructure and public services had been improving. The COVID-19 pandemic was expected to slow growth sharply in 2020 as containment measures lowered external and domestic demand and disrupted the domestic market and supply chains. Lower growth will hinder advances in living standards.

Côte d'Ivoire faces major challenges in the context of COVID-19. Strict lockdowns in Côte d'Ivoire's major trading partners—notably China and the euro area—will depress exports. Investment is expected to fall as uncertainty about the pandemic's duration and effects discourages both foreign and domestic investors, while heightened risk aversion inhibits access to capital market financing. And lower commodity prices, as part of the unfolding global recession, could affect both traditional export crops and incipient oil products. The pandemic's effect on growth could be even larger if it lasts longer and is more intense. Meanwhile, people's livelihoods could be threatened by prolonged containment measures, and health care infrastructure could be overwhelmed by a rapid increase in the number of cases.

The Ivorian authorities' immediate priority should be to protect lives and livelihoods. They should pursue well-targeted

economic policies to support health care, cushion the effect of the outbreak on vulnerable social groups, and protect solvent firms.¹⁸ After the spread of the virus has been controlled and containment measures removed, the authorities will need to promote much higher investment rates and productivity growth to accelerate the recovery and maintain high economic growth.

A range of domestic and external factors will determine whether investment continues to rise. Domestic investment will be influenced by Côte d'Ivoire's Doing Business and competitiveness rankings. Foreign direct investment will hinge on the state of the global economy and the attractiveness of opportunities in Côte d'Ivoire compared with those of its neighbors. And Côte d'Ivoire would need to ensure that any new investment is productive by taking steps not just to stem the current decline in TFP but to accelerate its growth.

Against this background, six major policy initiatives should figure prominently in a comprehensive reform program that boosts investment and productivity to generate and sustain rapid growth.

- **Contain the spread of the COVID-19 virus and protect vulnerable groups and viable firms.** The government responded to the pandemic with appropriate speed, introducing social distancing and containment measures and an emergency health plan supported by the World Health Organization.

The authorities also announced an ambitious economic plan to prop up the income of the most vulnerable segments of the population. The plan offers agricultural input support and expanded cash transfers, relieves hard-hit sectors and firms, and supports public entities in the logistics sectors to ensure continuity in supply chains (box 1.2).

- ▶ **Emphasize private sector investment and accelerate reforms to creating a friendly investment climate.** Once the COVID-19 crisis passes, government investment must promote growth as effectively as possible. Strict criteria for the productivity of such investment must be imposed, channeling it into sectors that promise the most rapid, broad-based growth and crowd in private investment. An investment climate improved by government stabilization and reform policies offers the best prospects of a major rise in domestic and foreign private investment. Côte d'Ivoire must follow up on its notable progress in improving the business climate. Businesses in Côte d'Ivoire still face

higher costs, notably for energy, finance, and trade logistics, than in other economies at similar stages of development. Greater competition should be fostered across the economy, especially in sectors such as transport and telecommunications where monopolies still dominate, and the Competition Act should be enforced vigorously. Ongoing reforms should continue to streamline bureaucratic procedures, simplify corporate taxes, and support small and medium enterprises. And deeper institutional reforms to fight corruption, protect property rights, strengthen the rule of law, and enhance the efficiency of the judiciary are needed to attract greater and more effective private investment.

- ▶ **Expand external trade.** The fastest-growing developing economies have pursued export-led growth and progressively opened their economies to trade and investment—even where the domestic market is large, as in China and India. Other examples include Botswana; Chile; Indonesia; Korea; Malaysia; Taiwan,

Box 1.2. Policy response to COVID-19

Saving lives and protecting livelihoods is the immediate priority. This requires both short-term measures for relief and stimulus measures to keep the economy running. Policies should strengthen health systems, provide income and in-kind support to formal and informal workers, provide liquidity support to viable formal and informal businesses, and guarantee the provision of public services. Given fiscal constraints, priority should be given to strengthening human and technical public health capabilities to respond to the COVID-19 crisis—protecting health workers, equipping them with all the necessary protective gear to avoid depleting their already small numbers, and scaling up testing for infection, including in rural areas.

Implementing social protection programs would help workers, especially those in the informal sector. Cash transfers are the most widely used instrument in most developing countries, including some Sub-Saharan African ones. Measures include online payments, in-kind transfers (food distribution), wage subsidies for preventing massive layoffs, social grants to the elderly and persons with disabilities, and fee waivers for such basic services as electricity tariffs and mobile money transactions.

Minimizing disruptions in critical regional food supply chains and keeping logistics open would avert a looming food crisis. Government action is critical to reduce international and domestic trade barriers and ensure that food system workers can go to work. Funding for agriculture and agribusiness needs to be protected.

Digital technologies can help anticipate problems, smooth temporary shortages, and build food chain resilience. Early warning systems for food shortages and associated emergency food provisioning systems for both rural and urban areas must be adjusted to increase attention.

Regional coordination can enhance the policy response. Although some countries are choosing national solutions, autarkic policies, or noncoordinated interstate efforts, economic integration and deepened regional cooperation are needed. Pre-COVID-19 priorities, including implementing the African Continental Free Trade Area (AfCFTA), increasing intraregional trade, building regional energy markets, and increasing digital and financial inclusion, should be pursued.

Social and economic policies can sow the seeds of future resilience. Beyond the much-needed quick fixes, the policy response should consider strategies to boost water and sanitation services, address the human capital crisis, especially in the health sector, leverage digital technologies for trade and government effectiveness during and after the crisis, and foster intra-African value chains under the umbrella of the AfCFTA. Policy makers need policies to build resilience and boost productivity so the economy can recover faster and thrive after COVID-19.

Source: Based on Calderon et al. 2020.

China; and Thailand. To develop a more diversified, modern economy, Côte d'Ivoire will have to produce for the wider markets of West Africa and the outside world. Its trade regime must invite new investors to produce for export and make it easy for them to do so. The components of such a trade regime include:

- Tariffs as low and as uniform as possible.
 - Economic integration within West Africa, the natural market for many of Côte d'Ivoire's potential exports.
 - Active participation in the African Continental Free Trade Area.
 - An efficient customs administration aiming to simplify procedures, minimize delays, and generally make it cheap and easy for firms to import and export.
 - Improved infrastructure for transportation and communication with the region and the world.
 - Investment taxes that are competitive with those in low-tax countries, including duties on capital equipment and taxes on profits and dividends.
- **Strengthen technology adoption and innovation capabilities.** Efficiently allocating resources and quickly adopting new technologies affect a country's TFP growth. New technologies mainly spread through international trade, foreign direct investment, and international research and development collaborations. Technology penetration in a country is influenced by country-specific characteristics (such as political risk), firm-level characteristics (such as managerial quality), and general factors (such as infrastructure, market competition, and research and development). In Côte d'Ivoire, policy makers also need to improve the operating environment, human capital, and firm capabilities. Recent studies suggest that Ivorian policies could encourage investment in productivity-enhancing innovation by enabling the entry of more productive firms and the exit of less productive ones.¹⁹ To do so, policies must exploit the country's comparative advantage, open its markets to international trade, and expose state-

owned enterprises to competition. Success is not guaranteed. It depends on firm capabilities, which, in turn, reflect the quality of human capital and governance institutions.

- **Mobilize more domestic revenue.** Boosting domestic revenue requires improving tax collection and broadening the tax base. A competitive tax structure is needed to attract foreign and domestic investment, which may require reducing the corporate profit tax. To make up for lost revenue, the government could increase the excise, value-added, or petroleum product taxes. Côte d'Ivoire has already adopted several measures to broaden the tax base: eliminating value-added tax (VAT) exemptions on cell phones, tablet imports, and sheltered investment projects; increasing the tobacco excise rate from 35 percent to 37 percent; and introducing a 10 percent excise duty on vehicles. Auditing companies that benefit from a VAT credit should reduce revenue leakages. A retail fuel price adjustment mechanism to preserve revenue from oil products is being implemented. These tax measures are consistent with the WAEMU action plan on revenue mobilization and should be implemented vigorously. Recent revenue administration advances, including digitalizing tax revenue and payments and using valuation risk analysis and controls in customs administration, should be sustained.
- **Continue sound macroeconomic management.** Macroeconomic stability—reflecting sound exchange rate management, monetary policy, and budgetary policy—is necessary for sustained economic growth. Ivorian authorities should monitor the real exchange rate closely to guard against a real appreciation, which could harm exports and depress economic activity. Budgetary policy should vigorously reallocate expenditures toward the population's education and health and toward investments in strategic infrastructure that supports export industries. Once the COVID-19 crisis abates, fiscal policy should return to its pre-crisis path to preserve recent gains, particularly the 3 percent of GDP deficit ceiling and a moderate risk of debt distress.

Box 1.3 summarizes the key recommendations for 2021–25 and 2026–30.

Box 1.3. Key recommendations**2021–25**

- » To fight the COVID–19 pandemic and prepare for future health emergencies, reorient government expenditures to increase the capacity of the health care system.
- » Expand social safety nets to provide direct income support to vulnerable populations.
- » Increase the efficiency of public investment and attract more private sector investment, both domestic and foreign. Improve Doing Business and global competitiveness rankings.
- » Expand trade vigorously by adopting a trade regime that reduces tariffs and other trade barriers and includes economic integration within West Africa, an efficient customs administration, improved infrastructure for transportation and communication, and a competitive tax regime.
- » Foster innovation by creating incentives for researchers to develop and adapt innovations that benefit industries in Côte d'Ivoire and for firms to invest in productivity-enhancing innovation.

- » Promote competition in factor and product markets.
- » Increase domestic revenue mobilization and allocate more resources to health and education to boost human capital development.

2026–30

- » Strengthen research and development and innovation capabilities.
- » Harness trade and regional integration to achieve structural transformation with higher productivity and increasing returns to scale.
- » Develop a competitive domestic enterprise sector.
- » Maintain a sound macroeconomic policy environment—exchange rate management, monetary policy, and budgetary policy.

Annex 1.A Assumptions of the growth analysis

The growth analysis presented in the report consists of two parts. For analyzing the long-term growth potential, a computable general equilibrium (CGE) model is used to conduct the growth scenarios.²⁰ The exercise updates a 2006 social accounting matrix (SAM) projecting to 2017. To do this, it employs a cross-entropy method that estimates a new SAM and tracks recent national income, fiscal, balance of payments accounts, and other information from the national statistical office, the World Bank, and the International Monetary Fund (IMF).

For the short-run analysis of the impact of COVID-19, the SAM multipliers are used to isolate possible economic consequences of the containment measures. A SAM multiplier model captures short-run shocks in which markets are not entirely functioning.

For long-term growth scenarios with the CGE model

In the baseline and low-growth scenarios, foreign savings or external finance is kept at the base year level of 1,544 billion CFA francs. In the high-growth scenario, foreign savings grow by 5 percent a year from 2020 to 2030. Labor supply, defined as the working-age population, is assumed to increase by 3 percent a year during 2017–20 and by 2.43 percent a year from 2020 to 2030.²¹ In future periods (2020–30), government spending on education and health raises the growth of skilled labor, taken as applicable in the baseline,

progressively more applicable in the high-growth scenario case, but less applicable in the low-growth scenario. World prices of exports are expected to change according to the outlook of the scenarios. They remain constant in the baseline, increase in the high-growth scenario, but decline in the low-growth scenario to mimic a global recession.

The public investment efficiency parameter is set at 0.5 as the starting point for the baseline and doubled in the high-growth scenario.²² In the low-growth scenario case, the value returns to 0.5. External financing of government operations ranges from 0.3 to 0.74 of capital expenditure from 2017 to 2019, following the IMF Article IV report.²³ The share of external resources that finance public investment such as infrastructure is set at 0.3, in line with the literature. This source of capital formation by the public sector will likewise be affected by the efficiency parameter. In the high-growth scenario, the value of 1 puts it on par with private investment, so the source of capital formation becomes irrelevant.

For the short-term analysis of the effects of COVID-19

The effects of economic lockdown and social distancing work through three channels. The first comprises the forced restrictions of nonessential economic activities and their impact on the production and consumption of goods such as trade, transportation, and business services. For the level of aggregation in the SAM of Côte d'Ivoire, household

consumption is reduced by about 50 percent for goods related to trade, transportation, finance and business services, and other services. Consumer demand for food, livestock, processed food, beverages, and tobacco is decreased by 10 percent due to market and transportation disruptions. But consumption of health and education is increased by 10 percent as both households and the government try to enhance them during the epidemic. Conditional cash transfers and social programs for children's food and health care are tied to schooling.

The second channel consists of the additional macroeconomic feedbacks that reduce aggregate absorption. As plant closings and layoffs take hold, household consumption is

conservatively cut further by 10 percent across the board. The elevated risk to business prospects dampens investment by the same percentage. Even so, it is assumed that the government will undertake countercyclical measures and spending on social safety nets. Hence, the base year level of government consumption is maintained. But government consumption does not increase further since tax revenues suffer a temporary shortfall during the lockdown, constraining the fiscal space.

The third and final channel pertains to the disruption of global trade, with adverse effects on commodity prices and thus on Côte d'Ivoire's exports. Exports are assumed to fall by 30 percent across the board.

Notes

1. World Bank 2020a.
2. IMF 2018; EIU 2020.
3. WAEMU consists of eight countries that share a common currency, the CFA franc, which is pegged to the euro at a fixed exchange rate. The eight countries are Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo.
4. In February 2020, Côte d'Ivoire updated the base year for calculating its national accounts from 1996 to 2015. The rebasing may have affected the GDP growth rates between 2015 and 2018.
5. Christiaensen and Premand 2017.
6. Buera and Shin 2013; World Bank 2020a.
7. Rodrik 2014.
8. Newfarmer, Page, and Tarp 2018.
9. IMF 2020.
10. The applications of SAM multipliers and the assumptions used in the analysis follow Arndt et al. (2020) and ongoing works at the International Food Policy Research Institute for China and Mexico and at the Peterson Institute for International Economics for the United States and the United Kingdom.
11. A full description of the SAM and multiplier analysis is provided in the background report for this study prepared by Go et al. (2020).
12. Consistent with the World Bank's latest *Commodity Markets Outlook*, *Africa's Pulse*, and *Global Economic Prospects* (World Bank 2020a, 2020b, 2020c).
13. The long-term growth analysis is based on a computable general equilibrium (CGE) model of Côte d'Ivoire. The assumptions of the model are presented in annex 1.A. A full description of the model, assumptions, and results is in Go et al. (2020).
14. In constant dollars at 2011 purchasing power parity.
15. In the World Bank income classification, lower-middle-income economies are defined as those with gross national income (GNI) per capita between \$1,006 and \$3,955, and upper-middle-income economies are those with GNI per capita between \$3,956 and \$12,235 (2018).
16. The poverty line is at the lower end of the income distribution curve, which has a slanting slope. As per capita income rises, the shift in the curve to the right will decrease the number of people in poverty proportionately more when compared with a uniform distribution. The methodology for the poverty calculations also allows for changes in the shape of the income distribution curve, depending on the changes in relative prices of goods and factors of production. See Go et al. (2020) for details.
17. Loayza and Pennings 2020.
18. Cusolito and Maloney 2018.
19. See Go et al. (2020) for details.
20. Christiaensen and Premand 2017, table B.1, p. 65.
21. Following the suggestion in the growth literature. See discussion in Go et al. (2020).
22. IMF 2018.
23. IMF 2020.

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CHAPTER 2

Realize human potential

2.1 Introduction

Côte d'Ivoire's human development systems have produced some impressive improvements over the past decade in a political, economic, and demographic context that presented formidable challenges. A long period of political instability degraded these systems, and the economy left a wide swath of the population in abject poverty. And demographic trends steepened the slope of the already frustrated demand for better human capital outcomes.

These systemic features have curbed the development of human capital. Young children do not live long enough in good enough health because basic essential services are not within their reach and especially within the reach of mothers. Where child survival rates are low, there is a lack of quality basic health care for mothers and newborns. This starts before birth, as mothers are often deprived of prenatal care; during the first month and year of life, infants do not always have access to basic health services.

Access to schooling is improving as a result of government efforts to build more schools and hire more teachers. But it is limited by the selectivity of the education system, which leads to high levels of repetition, dropout, and family decisions not to continue schooling. Within the education system, there appears to be more emphasis on ensuring learning in the upper grades than in the lower grades. The availability and quality of key inputs are too low for an effective learning environment. Learning outcomes are below international standards, and the quality of education is equally low.

All measures of learning outcomes reveal a disturbing lack of mastery of basic skills and competencies in reading

and mathematics. All children should be able to read and do basic math before leaving primary school. Lower secondary education should focus on consolidating these skills rather than simply selecting students for further education. Quality improvement will require a focus on supporting teachers, improving the school and classroom environment, establishing greater accountability of school and system leadership for results, and ensuring a steady supply of key inputs (such as books and school supplies). In addition, schools must provide safe and supportive learning environments for all. This is particularly important for removing barriers to girls' access and achievement. If too little attention is paid to any of these dimensions, further expansion will create places but foster little learning.

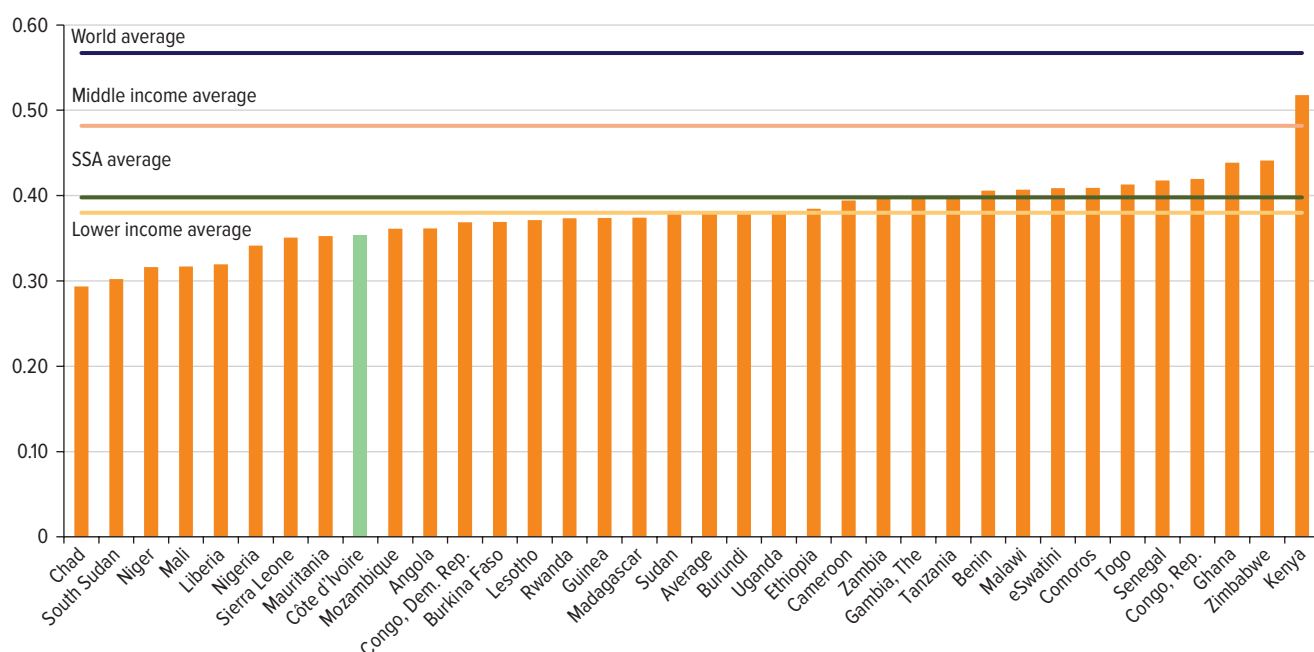
Côte d'Ivoire wishes to further develop its human capital, and thus surpass peers and meet aspirations. So it must address some fundamental and systemic weaknesses that continue to curtail the effective delivery of human capital services, which are unevenly distributed geographically. Lower income groups tend to attain lower human capital outcomes and use human capital services of lower quality. Demand-side factors contribute to negative human capital outcomes and less access to human capital services, and these factors are not taken sufficiently into account. The staff responsible for human capital development are unevenly distributed in numbers and skills. Trained and motivated staff are the foundation of human capital development systems, so if teachers and health workers are not in the right place and at the right time to carry out the right actions in a targeted manner, human capital outcomes will suffer.

2.2 The state of human capital in Côte d'Ivoire

Human capital outcomes have improved over the past eight years, and many investments in the education and health systems should bear fruit. As a "snapshot," the Human Capital Index does not necessarily capture trends or the potential impact of current reforms and initiatives. Consider the increase in access to basic education. Full primary education enrollment has been achieved relatively recently, as has the reduction of the gender gap. Other success stories include the dramatic drop in the prevalence of HIV/AIDS and tuberculosis, as well as a decline in the rate of stunting. This said, looking more closely at each human capital indicator shows uneven development, which at first glance is not obvious and points to areas of focus for decision makers and the general public.

With a Human Capital Index of 0.38, Côte d'Ivoire ranks among the lowest internationally (158 of 174) and well below other Sub-Saharan African countries (28 of 42). Most of Côte d'Ivoire's peers record substantially higher levels, including Kenya (0.55), Ghana (0.45), and Senegal (0.42) (figure 2.1).¹ Schooling and adult survival rates pull down Côte d'Ivoire's score. And a disaggregation of the Human Capital Index shows significant income differences. For example, in Côte d'Ivoire, productivity as a future worker of a child born today in the richest 20 percent of households is 58 percent, but it is 40 percent for a child born in the poorest 20 percent, a gap of 18 percentage points. This is larger than the typical gap found in the 50 countries included in this analysis, which is 15 percentage points (table 2.1 and box 2.1).²

Figure 2.1. Human Capital Index for Sub-Saharan Africa



Source: World Bank 2018.

Table 2.1. Human Capital Index for Côte d'Ivoire and comparators

Indicator	Côte d'Ivoire	Kenya	Ghana	Senegal	Low- and lower-middle-income SSA countries
Probability to survive to age 5	0.92	0.96	0.95	0.96	0.93
Expected years of schooling (0–14)	8.1	11.6	12.1	7.3	8.0
Harmonized learning results (300–625)	373	455	307	412	366
Proportion of children under age 5 with a healthy growth rate (0–1) (w/o stunting)	0.78	0.74	0.82	0.81	0.68
Proportion of youth age 15 who survive to age 60 (0–1)	0.66	0.77	0.77	0.83	0.73
Human Capital Index	0.38	0.55	0.45	0.42	0.38

Source: World Bank 2020.

2.2.1 Child survival: Will children born today survive to school age?

According to the Human Capital Index, 91 percent of children born today in Côte d'Ivoire will live to age five. For boys, the share is 90 percent, and for girls it is 91 percent. Among low- and low-middle-income countries in Sub-Saharan Africa, Côte d'Ivoire ranks 34 of 41 countries on this indicator. Kenya ranks 9, Ghana 13, and Senegal 8.

Child survival increased over the past decade. The proportion of deaths per 1,000 live births declined from 84 in 1995 to 60 in 2015 for children under age one year and from 125 to 96 for children under age five years. Girls are more likely to

survive to the age of five than boys, regardless of age cohort. Of 1,000 live births, the risk of death under age five is 87 for girls and 105 for boys.

Of those who do not survive until age five, 28 percent die before reaching 28 days, 34 percent between ages 28 and 364 days, and 38 percent by age four years (table 2.2). The causes of death are different for each cohort. Prematurity, asphyxiation and other traumatisms, and septicemia are the main causes for children who die during the first month of life (figure 2.2). Pneumonia, diarrhea, malaria, and wounds are the main causes of death during the first year of life (figure 2.3).

Box 2.1. Human Capital Index and its components

“Human capital can be defined as the sum of a population’s health, skills, knowledge, experience, and habits, and forms the basis for individual and societal well-being. It enables people to realize their full potential and is the primary factor driving nations’ economic growth.”

—Human Capital Project, World Bank

Recognizing the importance of human capital outcomes for individual and societal well-being, the World Bank launched the Human Capital Project in October 2018. The project seeks to build commitment for effective reforms and investments that will transform human capital outcomes for the greater good of both people and economies. As a first step, a Human Capital Index (HCI) was developed to assess relative human capital outcomes across countries.

The HCI measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared with a benchmark of complete education and full health. Constructed for 157 countries, it now includes five measures closely linked with the Sustainable Development Goal targets for health, education, and nutrition:

Child survival. This component of the index reflects the unfortunate reality that not all children born today will survive until the age when

the process of human capital accumulation through formal education begins. It is measured using the under-five mortality rate.

Schooling. The quantity of education is measured as the number of years of school a child can expect to obtain by age 18 given the prevailing pattern of enrollment rates. The maximum possible value is 14 years, corresponding to the maximum number of years of school obtained by age 18 of a child who starts preschool at age four.

Learning. The quality of education is measured through the harmonization of test scores from major international student achievement testing programs, such as the Trends in International Mathematics and Science Study, the Programme for International Student Assessment, and the Programme for the Analysis of Education Systems. This provides a comparable measure of learning outcomes.

Healthy growth among children under age five. This is measured using stunting rates, as 1 minus the share of children under age five who are below normal height for age. Stunting serves as an indicator of the prenatal, infant, and early childhood health environments, summarizing the risks to good health that children born today are likely to experience in their early years, with important consequences for health and well-being in adulthood.

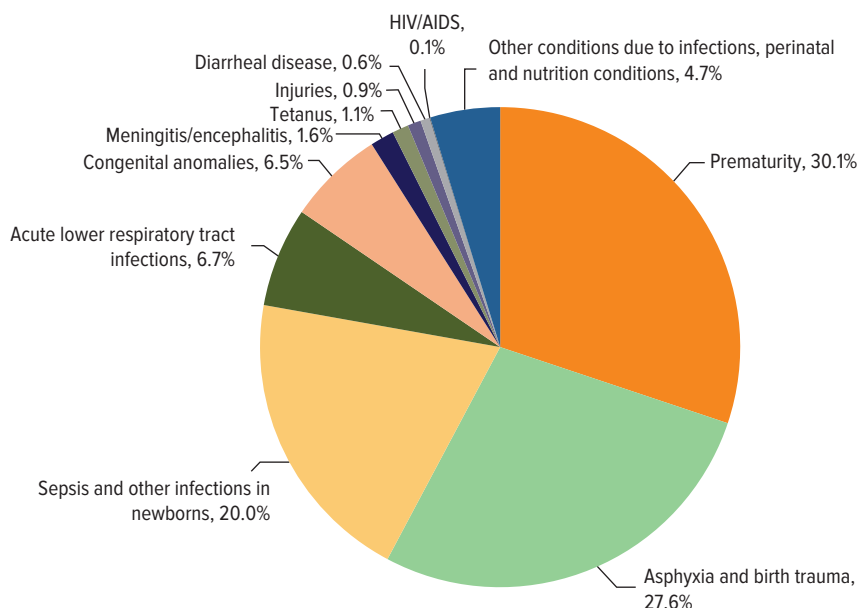
Adult survival. This is measured as the share of youth age 15 who survive until age 60, as a proxy for the range of nonfatal health outcomes that a child born today would experience as an adult if the current conditions prevail in the future.

Table 2.2. Trend in the number of deaths per 1,000 live births by age four

Age group	1998	2005	2012	2016
0–1 year	112	84	68	60
0–4 years	181	125	108	96

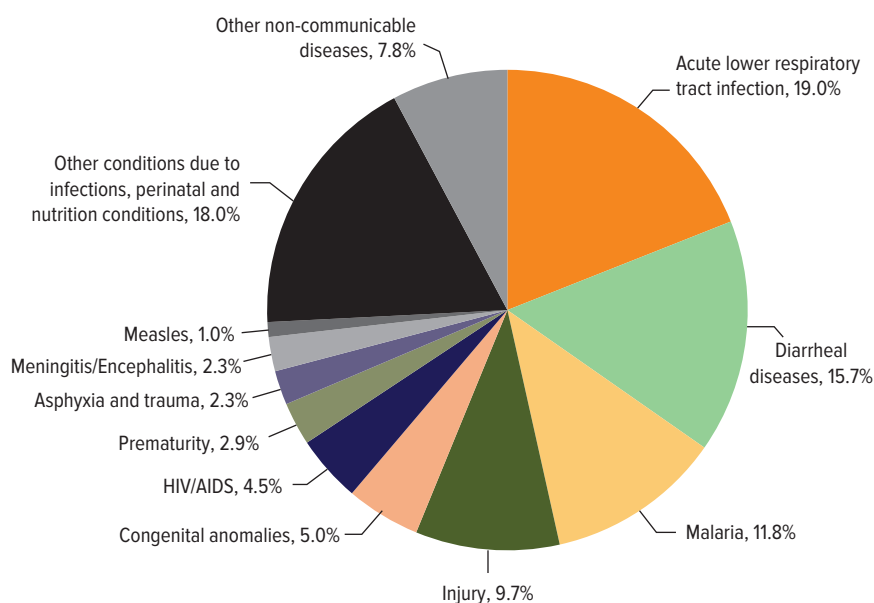
Source: Multiple Indicator Cluster Survey 2016.

Figure 2.2. Causes of death of children from birth to age 27 days, 2015



Source: Multiple Indicator Cluster Survey 2016.

Figure 2.3. Causes of death of children ages 28 to 365 days, 2015



Source: Multiple Indicator Cluster Survey 2016.

Child survival is higher in urban areas (78 deaths per 1,000 live births) than in rural areas (108). Furthermore, the number of deaths per 1,000 births is half as high in Abidjan (64) as in the northern regions (125).

Deaths per 1,000 live births are relatively high during the first 28 days of life in the northern region and among children ages one to five years in the central-west and northeastern regions (table 2.3).

Table 2.3. Child survival, by region

Region (% of children)	Number of deaths for every 1,000 live births			
	0-27 days	28-364 days	1-4 years	Total (< 5 years)
Center (5.3)	17	27	29	73
Center-East (2.3)	40	28	23	91
Center-North (6.5)	26	25	36	87
Center-West (15.2)	41	25	51	117
North (7.3)	53	38	34	125
Northeast (5.0)	30	36	48	114
Northwest (7.2)	41	31	45	118
West (11.6)	33	36	40	108
South (12.7)	30	27	39	96
Southwest (9.7)	24	31	25	80
Abidjan (17.3)	30	10	23	64

Source: Multiple Indicator Cluster Survey 2016.

Table 2.4. Child survival, by income quintile

Income (% children)	Number of deaths for every 1,000 live births			
	0–27 days	28–364 days	1–4 years	Total
Poorest (25.1)	40	43	37	120
Poor (23.1)	29	25	39	93
Medium income (19.5)	32	23	51	106
Rich (18.0)	31	25	27	83
Richest (14.3)	33	6	22	61

Source: Multiple Indicator Cluster Survey 2016.

Child survival is strongly associated with income (table 2.4). Rates among the very poorest are 120 of 1,000 live births and drop to 61 for the richest quintile. The main factors contributing to the low child survival rate are low child survival rates in some regions and among the poorest, and diseases that lead to child mortality, most of which are largely preventable and treatable.

2.2.2 Healthy start: Will children stay healthy as they grow?

According to the Human Capital Index, 78 percent of five-year-old children experience healthy early years development (are not stunted). This places Côte d'Ivoire among the top performers in Sub-Saharan Africa (7) on this indicator, ahead of Kenya (11). The prevalence of stunting increased from 2000 to 2006 but has since been in decline. Stunting remains serious, however, with about 2 in 10 children at risk of limited cognitive and physical development (table 2.5).

Table 2.5. Prevalence of stunting, by sex and year

Sex (% of children)	2000	2006	2012	2016
Male (50.6)	32.7	44.0	33.7	23.2
Female (49.4)	31.7	37.7	27.2	19.9
Total	32.2	40.5	29.9	21.6

Source: Multiple Indicator Cluster Survey 2016.

And regional differences are substantial. Stunting rates in rural areas are more than twice those in urban areas (27.4 percent versus 12.5 percent). Stunting in Abidjan is about 10 percent, but it ranges from 17 to 30 percent in the rest of the country. Stunting is particularly prevalent in the northern and west-central regions.

Poverty is strongly linked to stunting. Stunting among the extreme poor is above 30 percent, but it is around 20 percent for intermediate incomes (table 2.6).

Table 2.6. Proportion of children with stunted growth, by income quintile

Income level (% of children)	Children who are stunted (%)
Poorest (25.1)	30.1
Poor (23.1)	28.5
Middle income (19.5)	21.6
Rich (18.0)	11.0
Richest (14.3)	8.7

Source: Multiple Indicator Cluster Survey 2016.

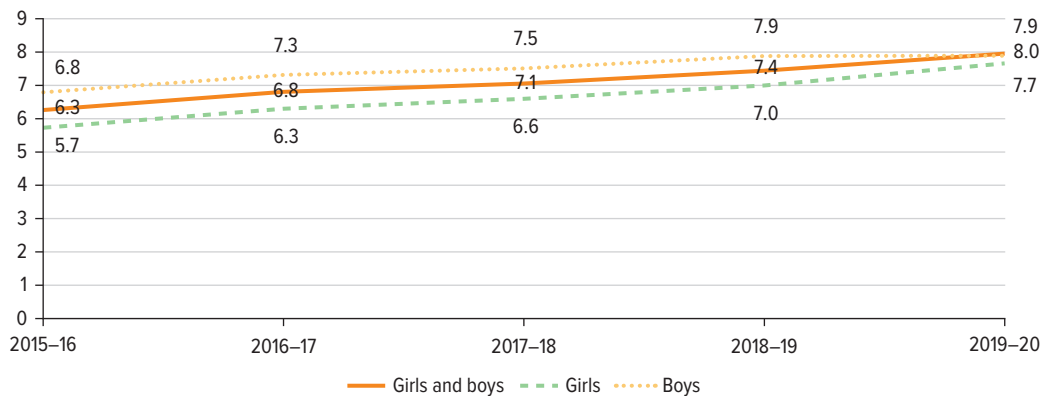
Similar to child survival, stunting is closely related to maternal characteristics. For example, the mother's education has a strong correlation with stunting. When mothers or guardians have only primary education, their children have a 20.1 percent chance of stunting, and with no education, 23.6 percent. For mothers or guardians with higher levels of education, stunting rates fall to 15.4 percent.

Côte d'Ivoire has made considerable progress in reducing stunting, and its position in the region is commendable. Even so, the prevalence of stunting remains an important concern. The clear association between stunting and child survival indicates that the main causes could be similar.

2.2.3 Schooling: How much schooling will children complete?

Children in Côte d'Ivoire complete 7.2 years of schooling on average.³ This ranks Côte d'Ivoire at 31 of 41 Sub-Saharan African countries. Ghana, Kenya, and Senegal rank higher than Côte d'Ivoire (3, 4, and 30, respectively). Since 2015, the years of schooling have increased from 6.3 to 7.4, reflecting the government's objective to bring Côte d'Ivoire's education system in line with international standards (figure 2.4).

Figure 2.4. Number of years of schooling, 2018–19



Source: World Bank staff calculations, based on data from the UNESCO Institute for Statistics and DSPS.

Côte d’Ivoire has reached full enrollment at the primary level and made significant gains at lower secondary.⁴ During the 2017–18 school year, 759,362 children enrolled in the first grade. The Education Development Plan expects 4.6 million primary students in 2024–25 (4 million today) based on projections of a gross admission rate of 110 percent and a retention rate of 90 percent.

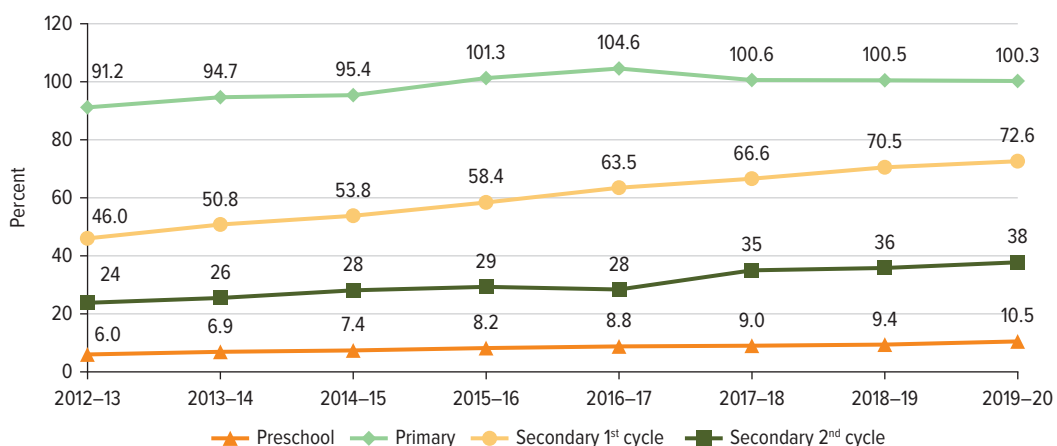
The growth in primary enrollment and completion rates (figure 2.5) increases pressure for entry to lower secondary school. The transition rate from sixth grade to lower secondary was 54 percent in 2011 and increased steadily to 84.5 percent in 2019. The government aims to increase transition rates further to reach 90 percent by 2025. The number of lower secondary school students is increasing at a sustained pace, with between 89,000 and 148,000 additional students per year over the past three years. This steady rise of more than 100,000 additional middle school students requires 1,000 more lower secondary schools by 2025. Overall, the system can accommodate 67 percent of children eligible to enter lower secondary.

Preschool and upper secondary enrollment rates pull down the overall years of schooling, in part as a result of structural constraints. The government policy to increase preschool enrollment was adopted only three years ago, so both supply and demand remain limited.⁵ Further, the increase in primary and lower secondary enrollment will take time to affect upper secondary enrollment. Preschool is not required for access to primary education and so does not have the same follow-on effects.

Growth has also been curtailed by inefficiencies that slow the flow of students through the system. Retention rates decline as students advance (figure 2.6), particularly for high-stakes grades,⁶ as children tend to either drop out or repeat grades.

In general, repetition rates have declined, but they spike for high stake grades. Repetition is at an all-time low for most grades (around 7 percent), but it increases to about 26 percent for the last grade of lower secondary and upper secondary (figure 2.7).⁷

Figure 2.5. Evolution of gross enrollment rates, by level of education, 2012–20

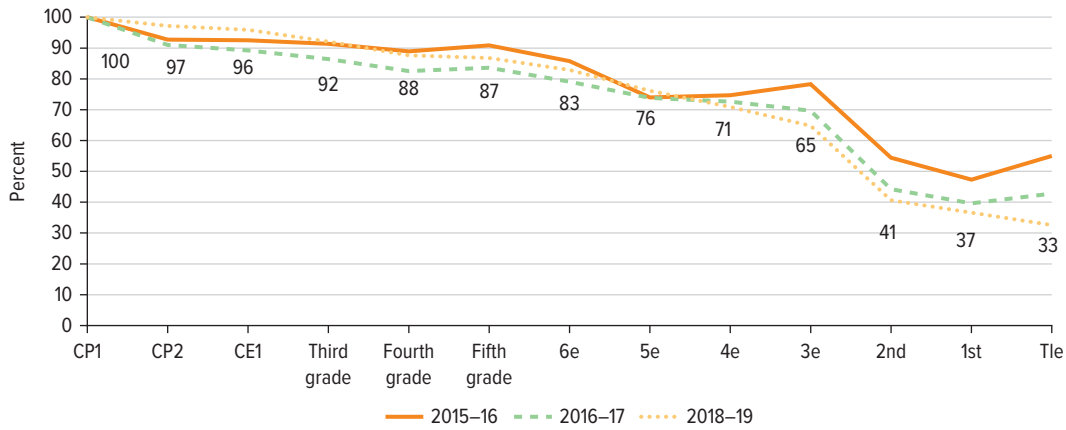


Source: DSPS Pocket Statistics, 2012–13 to 2019–20.

Although they are growing overall, pass rates on national exams remain relatively low, especially between lower and upper secondary (figure 2.8).⁸ In 2019, only 84.5 percent of students

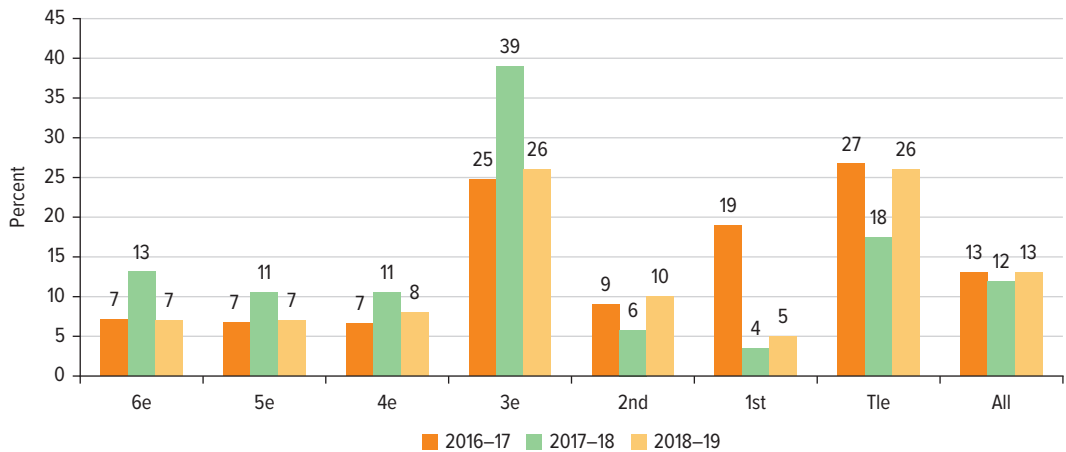
who took the end-of-primary exam were admitted to lower secondary, and only 60.1 percent of those who took the end-of-lower secondary exam were admitted to upper secondary.

Figure 2.6. Retention as students advance, 2014–17



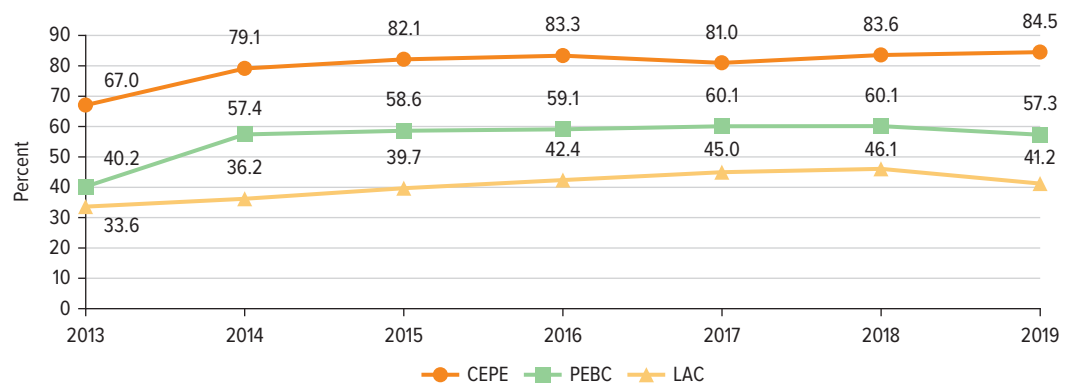
Source: DSPS Statistical Analysis Reports, 2016–17 and 2018–19.

Figure 2.7. Proportion of grade repeaters in general secondary education, 2016–19



Source: DSPS Pocket Statistics, 2016–17 to 2018–19.

Figure 2.8. Trends in national exam success rates, 2013–19



Source: DSPS Pocket Statistics, 2013–14 to 2019–20.

While the gender gap closed at all levels over the past eight years—the gender parity index has reached 1.00 at the primary level—progress was slower at the upper secondary level (table 2.7).⁹ The average number of years of schooling is 6.5 years for girls and 7.5 years for boys. In 2018, the gross enrollment rate for boys and girls widened at the lower secondary (74 versus 66 percent) and upper secondary levels (41 versus 31 percent). Although the transition rate to upper secondary is more favorable for girls (48.9 percent) than for boys (28.5 percent), this does not ensure a better gender balance. Because of the low retention rate for girls during lower secondary, access remains higher for boys.

Table 2.7. Evolution of the Gender Parity Index, by level of education, 2012–19

	Preschool	Primary	Lower secondary	Upper secondary
2012–13	1.02	0.89	0.70	0.63
2013–14	1.02	0.90	0.72	0.98
2014–15	1.07	0.94	0.80	0.68
2015–16	1.07	0.95	0.78	0.71
2016–17	1.08	0.97	0.81	0.72
2017–18	1.08	0.98	0.86	0.77
2018–19	1.08	1.00	0.89	0.79

Source: DSPS Pocket Statistics, 2013–19.
 Note: The index is girls/boys.

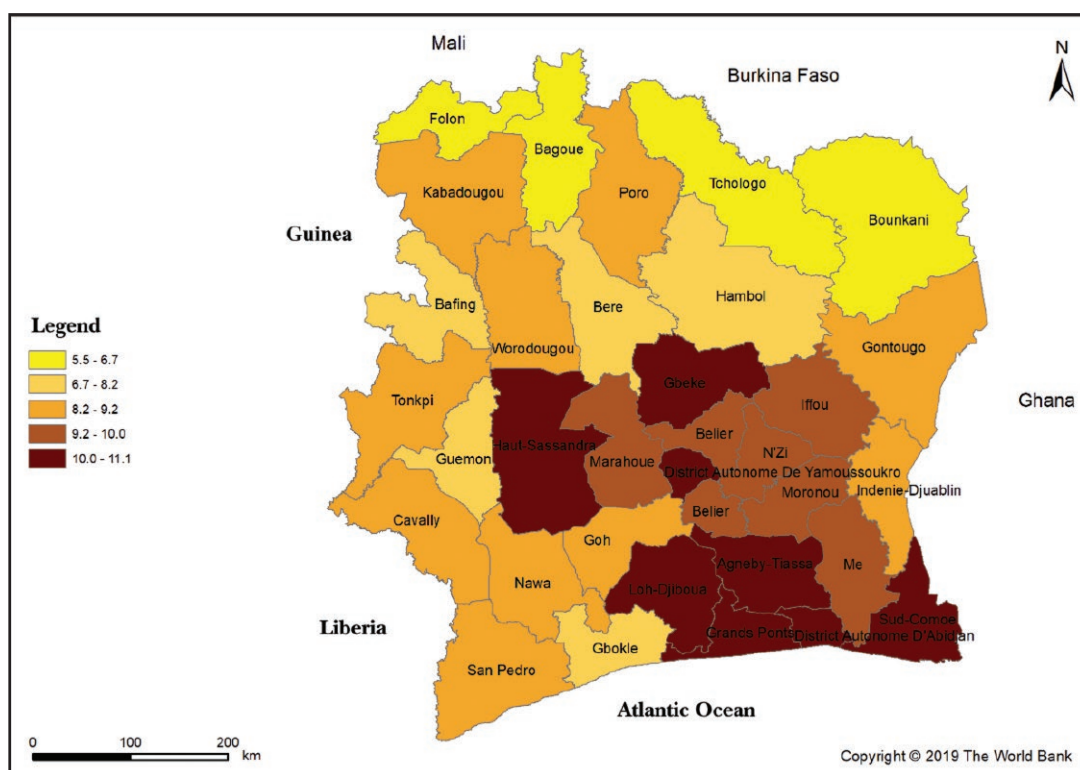
As with other HCI indicators, geography plays a major role in the distribution of schooling. There are substantial geographic disparities in the number of years of schooling by region (figure 2.9). The poorest regions have about two years of schooling less than the richest. Further, a child in the richest 20 percent of households who starts school at age six can expect to complete 10 years of school by her 18th birthday, while a child from the poorest 20 percent can expect to complete 6.2 years, a gap of 3.8 years. This is larger than the typical gap across the 50 countries included in the World Bank analysis of disaggregated results, which is 2.4 years.

Ensuring adequate access to schooling remains a challenge in Côte d’Ivoire, especially at the preschool and secondary levels. While monitoring demographic and structural demands are part of the problem, transition rate inefficiencies from one level to another are also key factors.

2.2.4 Will children learn the basics while in school?

Completing the unfinished agenda of universal basic education is essential. But being in school alone is not enough. On harmonized international test scores, Côte d’Ivoire ranks 21 of 41 Sub-Saharan African countries.¹⁰ The country scores higher than Ghana (30), but lower than Senegal (8) or Kenya (9). The difference in scores between girls (371) and boys (375) is minimal. Côte d’Ivoire scores lower than other countries on the

Figure 2.9. Distribution of number of years of study, by region



Source: DSPS Pocket Statistics, 2013–2019.

Table 2.8. Student performance on the second grade PASEC test, 2014

	Côte d'Ivoire	Average of 10 countries covered by PASEC	Côte d'Ivoire	Average of 10 countries covered by PASEC
Second grade test		Reading		Mathematics
Below "minimum" threshold (%)	82.7	70.0	66.2	47.1
Above "upper level" score (%)	5.6	14.1	9.6	23.2
Average score	484.1	500	465.9	500
Sixth grade test		Reading		Mathematics
Below "minimum" threshold (%)	52.0	57.30	73.1	59
Above "upper level" score (%)	22.4	17.1	3.2	14.7
Average score	517	500	475.7	500

Source: DSPS Pocket Statistics, 2013–2019.

Programme for the Analysis of Education Systems (PASEC) for second but above others at the sixth grade level (table 2.8).

The Early Grade Reading Assessment (EGRA) and the Early Grade Mathematics Assessment (EGMA) confirm the low learning levels in Côte d'Ivoire. These tests were administered to a representative sample of 1,200 third grade students from 150 schools across the country (table 2.9). On average, Ivorian pupils scored 24.1 out of 100 in reading and 46.8 out of 100 in mathematics, indicating a very low level of achievement in both areas. Girls do better than boys in reading (26.0 versus 22.1), but the reverse is true in math (45.6 versus 47.9). The low level of pupils' reading skills is particularly worrying since it is the basis for understanding all the subjects taught.

Table 2.9. EGRA and EGMA scores for primary school third grade students, 2019

	Girls	Boys	Total
Reading	26.0	22.1	24.1
Mathematics	45.6	47.9	46.8

Source: DPSP 2019.

Another measure of student achievement is the recently established Learning Poverty Index, which measures whether children can read and understand a short, age-appropriate text by age 10. Today in Côte d'Ivoire, 82 percent of children at late primary age are not proficient in reading (adjusted for the number of out-of-school children). While the Learning Poverty Index for Côte d'Ivoire is 4.3 percentage points higher than the average for the Sub-Saharan Africa region, it is 27.3 percentage points lower than the average for lower-middle-income countries.

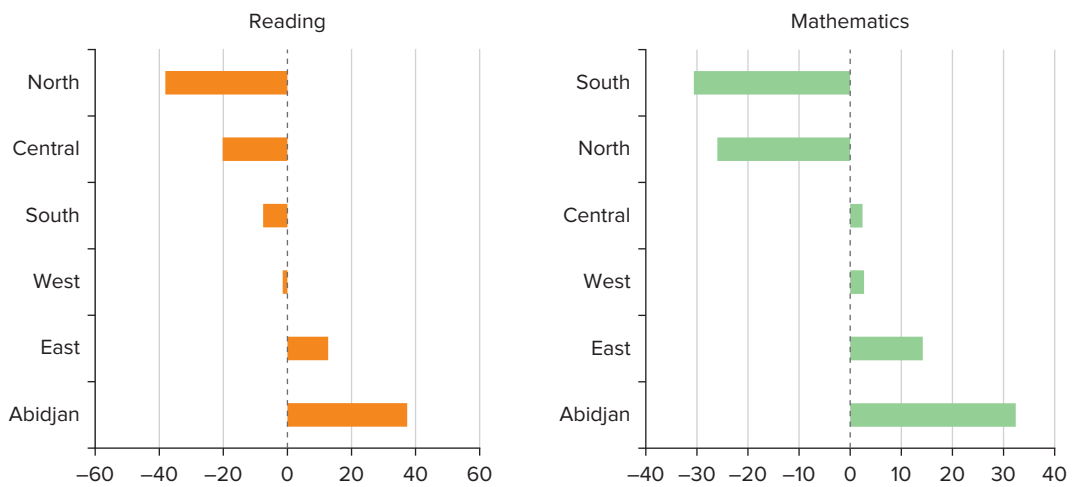
Learning outcomes are not the same across the country, although they tend to be low regardless of region (figure 2.10). Although there are no disaggregated results for the

international harmonized test scores, PASEC and national exams indicate that there may be important differences in outcomes by region (figure 2.11). Abidjan and the eastern regions score higher on both second grade and sixth grade tests. The northern region has the lowest scores, while the western region has average scores at the second grade level but low scores at the sixth grade level.

Côte d'Ivoire is experiencing a learning crisis. Despite the increase in the number of years of schooling, children are not acquiring the needed basic skills. In fact, when the schooling indicator for the Human Capital Index is corrected for learning achievement, the numbers of years of schooling declines from 7.0 to 4.2.

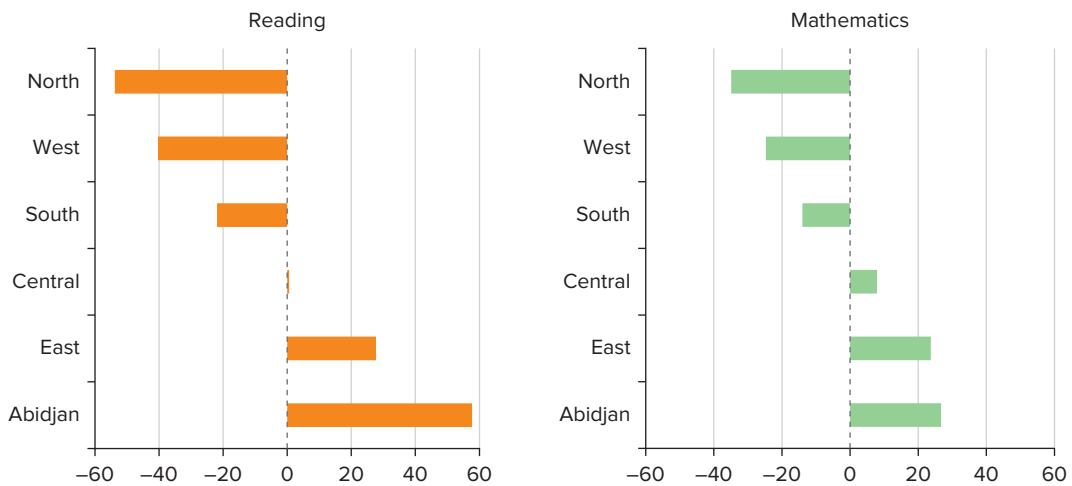
Vietnam provides a good example of how a country at a certain level of development can provide high-quality education. Despite its relatively low level of economic development, Vietnamese students outperform students in Organisation for Economic Co-operation and Development (OECD) countries on average in the Programme for International Student Assessment (PISA). Recent analysis of Vietnam's success identified five important contributing factors. First, Vietnam has always prioritized investment in primary and basic literacy education. Spending is also directed toward equity, which is an important factor contributing to Vietnam's high and relatively equitable learning outcomes. Second, the government has implemented policies to attract and support qualified teachers through incentives and continuous professional development. Third, targeted public spending on preschool enabled the government to achieve universal preschool education for five-year-old children. Fourth, to increase access, the government has also mobilized communities and the private sector in the provision of preschool education. Fifth, Vietnam has effectively benchmarked its student assessment system against international good practices and used assessment results to improve the system. For instance, in response to the

Figure 2.10. Differences in performance between regional groups and the national PASEC score for second grade, 2014



Source: DSPS Pocket Statistics, 2013–2019.

Figure 2.11. Differences in performance between regional groups on the national PASEC score for sixth grade, 2014



Source: DSPS Pocket Statistics, 2013–2019.

PISA 2012 results, Vietnam changed the legal framework for large-scale exams to diversify testing methods, improve item quality, and pave the way for competency-based assessment.

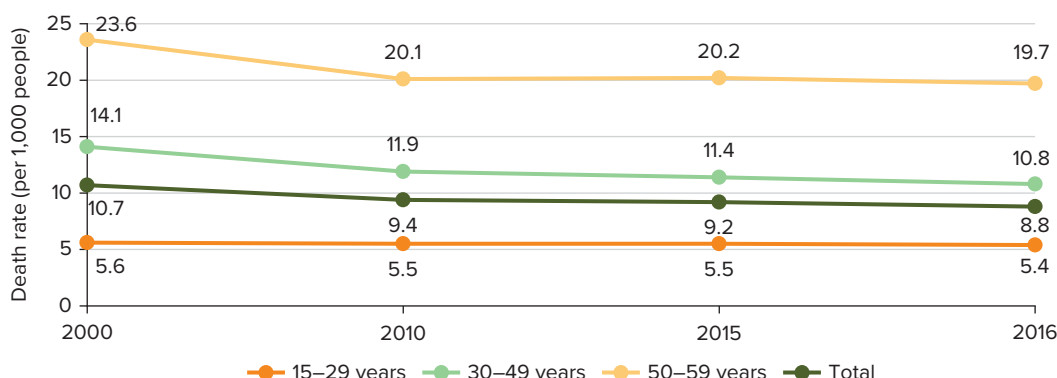
2.2.5 A healthy life: Will youth experience a lifetime of good health?

For Côte d'Ivoire, the most worrying indicator within the Human Capital Index is adult survival. Only 60 percent of youth age 15 today will reach age 60. This places Côte d'Ivoire among the bottom performers in Sub-Saharan Africa (38 of 41), well behind Ghana (16), Kenya (9), and Senegal (3).

The rate of death changed over time and for different cohorts (figure 2.12). In total, adult death rates have declined from 10.7 to 8.8 per 1,000 people over 2000–16 (latest year available). The death rate for adults age 15 to 29 remained approximately the same, declining from 5.6 to 5.4 per 1,000. Death rates decreased more for the other age groups: from 14.1 to 10.8 per 1,000 for the cohort age 30–49 and from 23.6 to 19.7 per 1,000 for the cohort age 50–59.

Although it has declined since 2000, the maternal mortality rate is among the highest in the region, at 617 per 100,000 births (table 2.10). The average for Sub-Saharan Africa is 542.

Figure 2.12. Adult survival, by age cohort, 2000–16



Source: Multiple Indicator Cluster Survey 2016.

The main causes of maternal death in Côte d’Ivoire are direct causes. These include hemorrhages (25 percent), hypertension (16 percent), complications related to unsafe abortions (10 percent), and sepsis (10 percent).

Table 2.10. Rates and causes of maternal mortality

Year	2000	2005	2010	2015	2017
Rate for 1,000 live births	704	704	701	658	617

Source: WHO 2019.

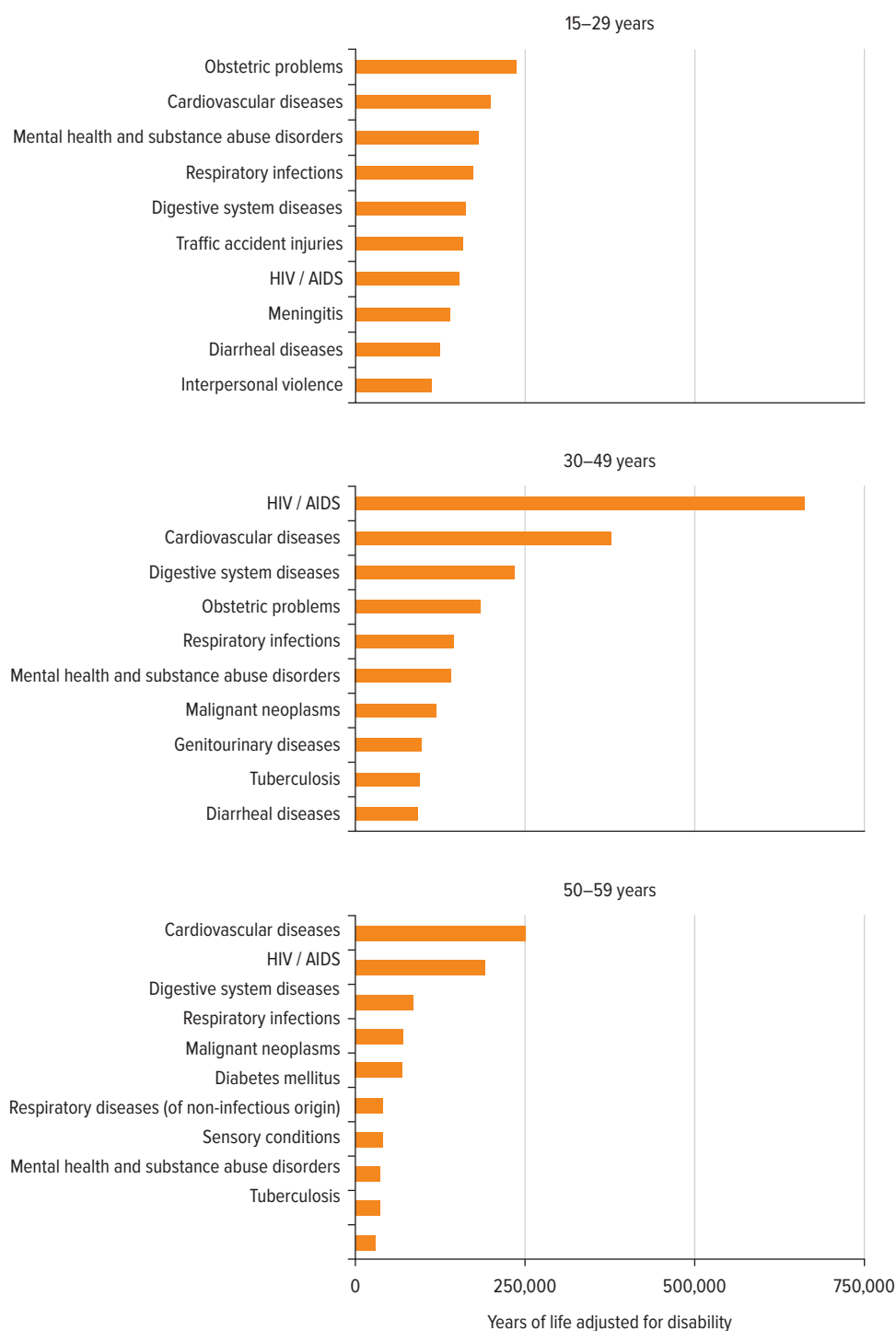
The number of disability-adjusted life years lost among adults ages 15–59 in Côte d’Ivoire is high (figure 2.13).¹¹ This loss mainly affects Ivorians ages 15–29 (41 percent) and 30–49 (43 percent). HIV/AIDS took the most years off a perfectly healthy life (100 years per 1,000 people). Cardiovascular disease was second (83 per 1,000), followed by unintentional injuries (72 per 1,000).

Cardiovascular disease was the second most common disease (825,600 years), followed by unintentional injuries (718,900 years).

In terms of perfectly healthy life years, the burden of disease varied by age group. In 2016, the highest burdens were: maternal disease (24 years per 1,000) for ages 15–29, HIV/AIDS (66 per 1,000) for ages 30–49 (the heaviest disease burden for any group), and cardiovascular disease (25 per 1,000) for ages 50–59.

Overall adult health in Côte d’Ivoire is at crisis level, shown by the number of healthy lives lost due to death and disability. Given that more than half of the population is under age 19 years, the causes of death for this cohort are a major concern. Further, although considerable progress has been made, the contribution of AIDS to death and disability, particularly for ages 30–49, is especially worrying.

Figure 2.13. Disability-adjusted life years lost, by cause, 2016



Source: World Health Organization, 2019.

2.3 Drivers of human capital formation in Côte d’Ivoire

Côte d’Ivoire’s human capital development trajectory can be defined as one of “catch-up.” Over a period of two decades, the access to and quality of social services stagnated and often declined. Political instability and the consequent economic and financial fallout led to intermittent interruptions in social service delivery, reducing their reach and quality. In addition, demographic pressure—past and present—dampened efforts to meet ambitious human capital targets. What Côte d’Ivoire has achieved under these circumstances is laudable.

2.3.1 Demography—the backdrop to human capital formation

Attaining better human capital outcomes is conditioned by a country’s demographic profile. Côte d’Ivoire’s rapidly growing population is estimated at 26.5 million in 2020, up from 20.5 million in 2010 (figure 2.14). The median age is 18.9 years, and young people under age 15 make up 41 percent of the population. This results in a high dependency ratio of 79.8 (figure 2.15), similar to the average of other Sub-Saharan African countries (82.0) but much higher than lower-middle-income countries (53.8).

Côte d’Ivoire is a country with a pre-demographic dividend due to its high fertility, declining mortality rate, and young age structure. Mortality rates have gradually declined. But the total fertility rate, while having also dropped, remains high, with an average of 4.7 children per woman in 2017.

Fertility rates vary between groups in Côte d’Ivoire. The 2016 Multiple Indicator Survey shows substantial regional variation in the rates, with the lowest in Abidjan (2.8) and the highest in the north western (6.7) and western (6.2) regions of

the country.¹² Fertility rates also vary according to wealth—2.7 in the richest quintile versus 6.7 in the poorest quintile—and by level of education—2.9 among women with secondary education and beyond and 5.5 among women with no formal education.

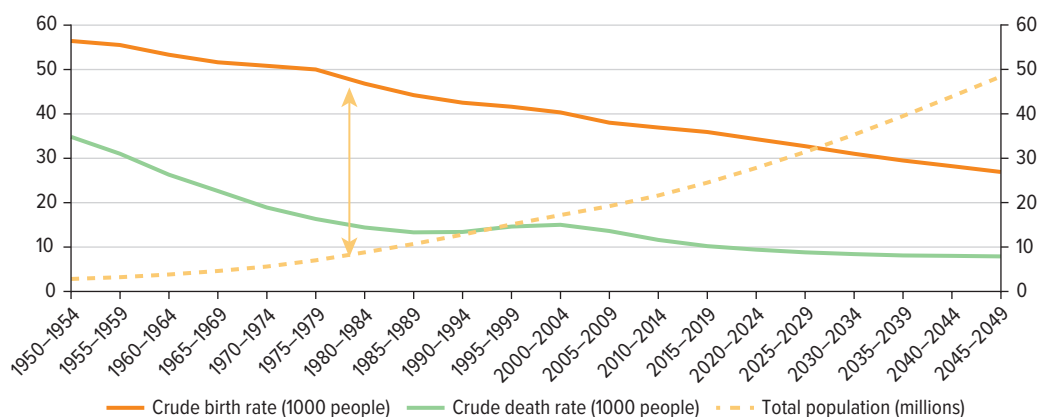
With a slow decline in fertility and improving mortality rates, Côte d’Ivoire will continue to experience rapid population growth and the age structure will continue to be heavily biased in favor of young dependents (figure 2.16). It is estimated that by 2050 the population under age 15 years will hardly decline, going from 41 to 34 percent (in the high-fertility variant), or from 41 to 31 percent (in the low-fertility variant). Even if fertility rates in Côte d’Ivoire immediately reach replacement levels, there will be several decades of residual population growth.

The shape of Côte d’Ivoire’s age pyramid is both a challenge and an opportunity. Because of the large proportion of young people under age 15, by 2050 the working-age population will increase from 56 to 62 (low-fertility variant) or to 64 percent (high-fertility variant). So, the demand for human capital services will increase, as will the potential contribution of the population to future development. These young people could live longer, be healthier, and be better educated. But this will only occur if social services support youth in an equitable and effective transition.

2.3.2 The health system

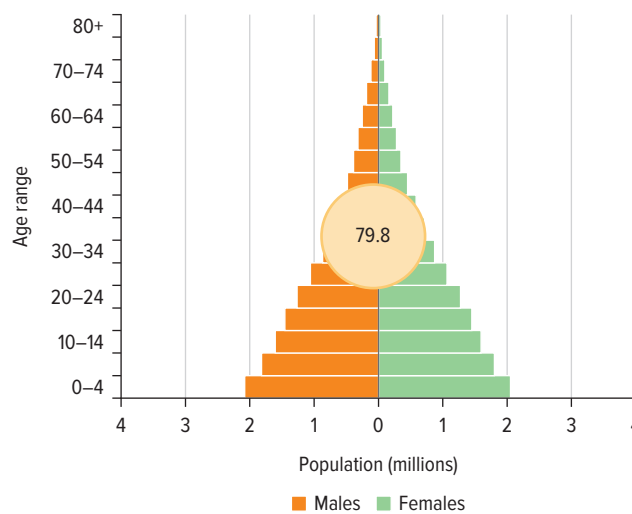
In 2016, it was estimated that 57 percent of deaths were due to the poor quality of health services,¹³ resulting in an estimated 31,929 deaths (at all ages), or 141 deaths per 100,000 people.

Figure 2.14. Population trends in Côte d’Ivoire, 1950–2049



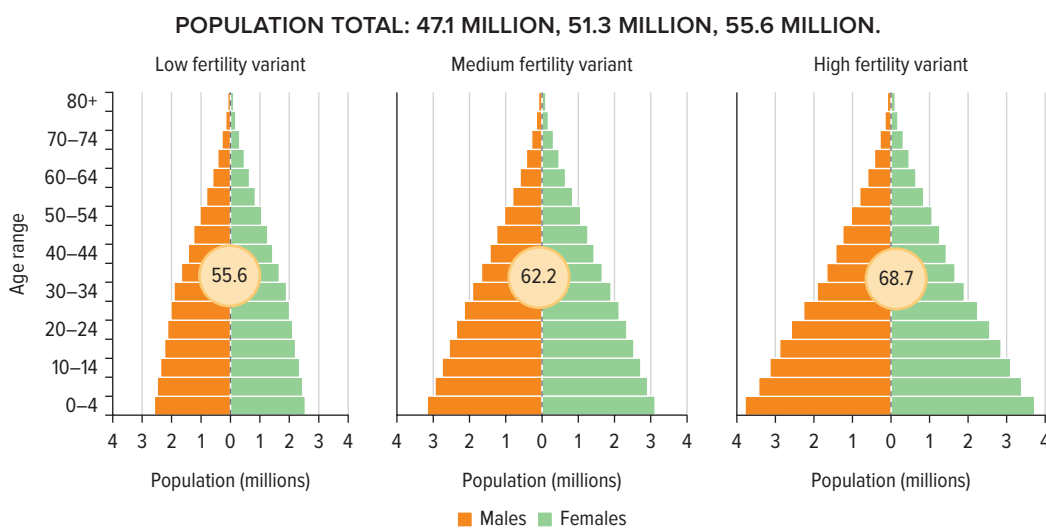
Source: United Nations Population Division n.d.

Figure 2.15. Age pyramid and dependency ratio, 2020



Source: United Nations Population Division n.d.

Figure 2.16. Age pyramid projected until 2050



Source: United Nations Population Division n.d.

Note: Population total: 47.1 million, 51.3 million, 55.6 million, for the low-, medium, and high-fertility projections, respectively.

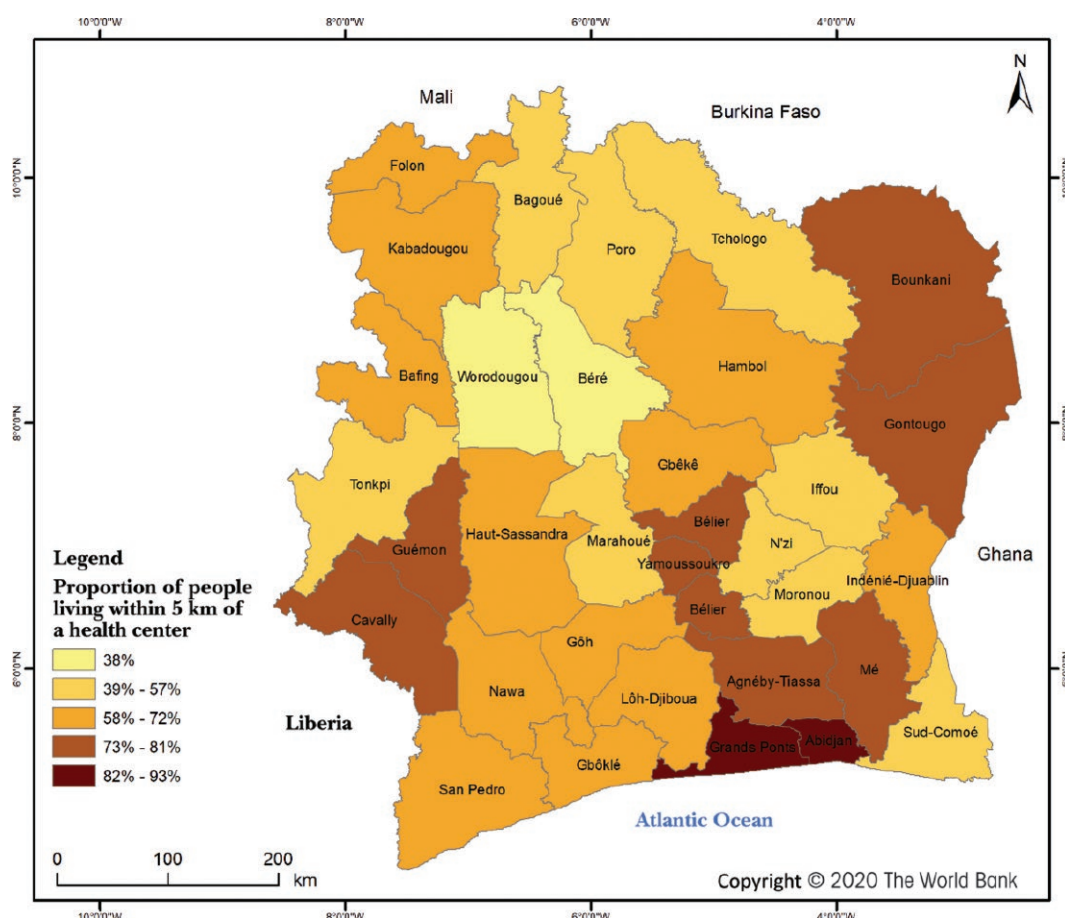
Difficult access for a large part of the population

Most people in Côte d'Ivoire's live far from health care facilities (figure 2.17). The World Health Organization's (WHO's) recommendation is that people should live within 5 kilometers of a health facility. Nationally in Côte d'Ivoire in 2018, 69 percent of the population lived within 5 kilometers of a health facility. But this geographic access varies significantly by region, with Abidjan 1 (93 percent) and Abidjan 2 (91 percent) having the largest share of their

population less than 5 kilometers from a health facility,¹⁴ and Worodougou and Béré (both northern health districts) having only 38 percent within 5 kilometers. In 2018, 9 percent of the overall population was located more than 15 kilometers from a health facility. In the north, the Poro, Tchologo, Bagoué, and Tonkpi districts have 22 percent of their population farther than 15 kilometers from a health center.

There are too few personnel in the health care system, and they are inequitably deployed. According to the WHO, there should be one nurse per 5,000 people, one midwife per

Figure 2.17. Access to health facilities, by region, 2018



Source: RASS 2018.

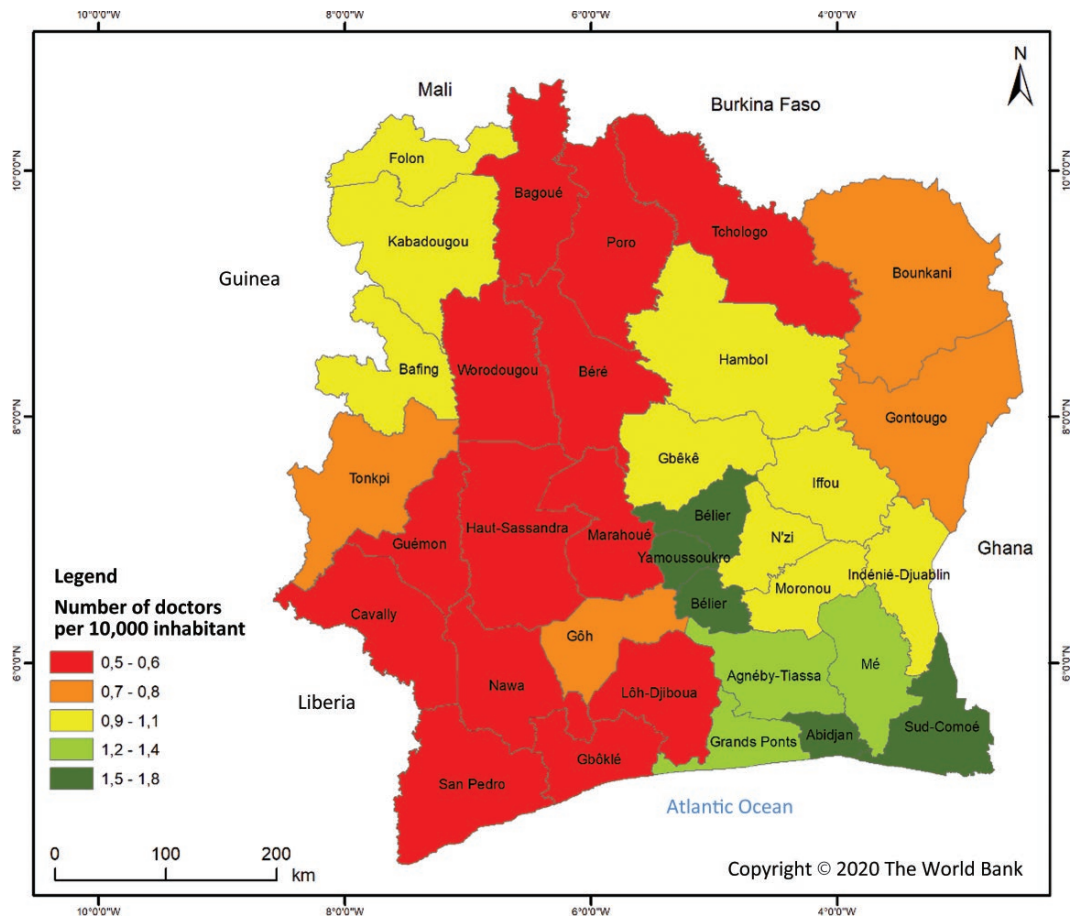
300 women of reproductive age, and one doctor per 10,000 inhabitants (figure 2.18). At the national level, the ratios for nurses and midwives have been in line with WHO standards. But the ratio for doctors is in line with the WHO standard in only eight of 20 health districts. Between 2012 and 2018, the ratios evolved differently depending on the region. Some regions had constant growth while others had periods of both growth and decline. For example, in 2015 Abidjan 2 had a ratio of 2.9 doctors per 10,000 inhabitants, but this fell to 1.4 in 2018. Critical challenges are the lack of new health personnel, particularly for staffing newly constructed facilities, and the low institutional capacity of the Ministry of Public Health and Hygiene to regulate and govern the workforce.¹⁵ The skills of medical personnel are variable. For example, according to the results of the 2015 Service Availability and Readiness Assessment (SARA) survey, few personnel working in the field of maternal and child health had adequate training (table 2.11).

Table 2.11. Availability of health workers with appropriate training, 2016

At least one health worker trained in the field of:	Health facilities with agents (%)
Infant health	42
Surgery according to national obstetric guidelines	54
Neonatal resuscitation	34
Intermittent preventive treatment for pregnant women (malaria)	58
HIV testing and counseling	71
Prevention of mother-to-child transmission of HIV services	70

Source: Ministry of Health and Public Hygiene 2016.

Figure 2.18. Availability of doctors, by region, 2012–18



Source: RASS 2018.

Essential medicines and services are often not available. For example, only 33 percent of health facilities offered treatment for sepsis, 33 percent offered growth monitoring for children, and 44 percent had essential drugs such as ampicillin powder for injection, oral rehydration salts, and artemisinin-based therapeutic combinations. Further, none of the health facilities providing basic emergency obstetric and neonatal care had all of the relevant markers.¹⁶ These facilities are also expected to provide parenteral antibiotics, parenteral oxytocin, parenteral anticonvulsants, assisted vaginal delivery, manual removal of the placenta, manual removal of retained products, and neonatal resuscitation. The mean score for availability of tracer items among facilities that provided oral rehydration solutions was 59 percent.

Vaccines are not always available or free. According to the national guidelines of the Expanded Program on Immunization, children under age five should have free access to vaccines. However, during 2013–15, 30 to 40 percent of women reported paying between 100 and 1,000 CFA francs to vaccinate their child. In 2015, vaccines were available at

health facilities 80 to 87 percent of the time. And during 2013–15:

- ▶ Among children ages 12–23 months, 11.9 percent had not received any vaccine before their first birthday—more than double the prevalence during 2009–11 when it was 5.4 percent.
- ▶ Among children ages 24–35 months, 14.9 percent had not received any vaccine before their second birthday.
- ▶ Only 38.4 percent of children ages 24–35 months had been fully vaccinated according to current standards.¹⁷

There were also clear differences depending on the level of education of the mother, region, place of residence, and income level (table 2.12).

Weak infrastructure is a major challenge: 39 percent of health facilities are without electricity, 24 percent are without water, and 32 percent are without either water or electricity.¹⁸ Fragmentation and inefficiency of the public input supply chain frequently lead to stock-outs. According to the SARA

Table 2.12. Vaccination status of children 35 months or younger, 2013–15

Characteristics (% of children) ^a	Children ages 12–23 months having received no vaccine (%)	Children ages 24–35 months having received no vaccine (%)	Children ages 24–35 months completely vaccinated
Total	11.9	14.9	38.4
Sex			
Male (50.6)	11.9	15.6	38.0
Female (49.4)	11.9	14.1	38.7
Education level of mother			
None (6.,8)	15.9	18.3	31.9
Primary (23.6)	7.7	10.9	42.5
Secondary or above (14.6)	4.7	7.5	57.6
Income level			
Poorest (25.1)	21.6	29.4	26.8
Poor (23.1)	11.7	14.2	36.5
Middle income (19.5)	8.1	15.2	33.5
Rich (18.0)	8.8	4.7	46.7
Richest (14.3)	3.5	3.2	57.3

Source: Multiple Indicator Cluster Survey 2016.

a. Percent of children younger than age five in the study.

study, indicators of available medical supplies and equipment are poor in all the assessed regions, indicating systemic challenges.¹⁹ Only 17 percent of health facilities have access to all basic medical equipment,²⁰ ranging from 0 percent of health facilities in the Hambol and LOH-Djiboua health districts to 53 percent in the Abidjan-2 district.

Some medical conditions are the result of sociobehavioral factors rather than the quality of care. A good example of this is the risk of maternal mortality, which varies according to key maternal characteristics. But these factors can be influenced by effective communication and other local services (such as distributing contraceptives) provided either by health care facilities or other services. Of 1,000 live births, more than 150 children die before age five when the interval between births is less than two years. That figure drops to 95, 82, and 73, respectively, when birth intervals are two, three, and four years.

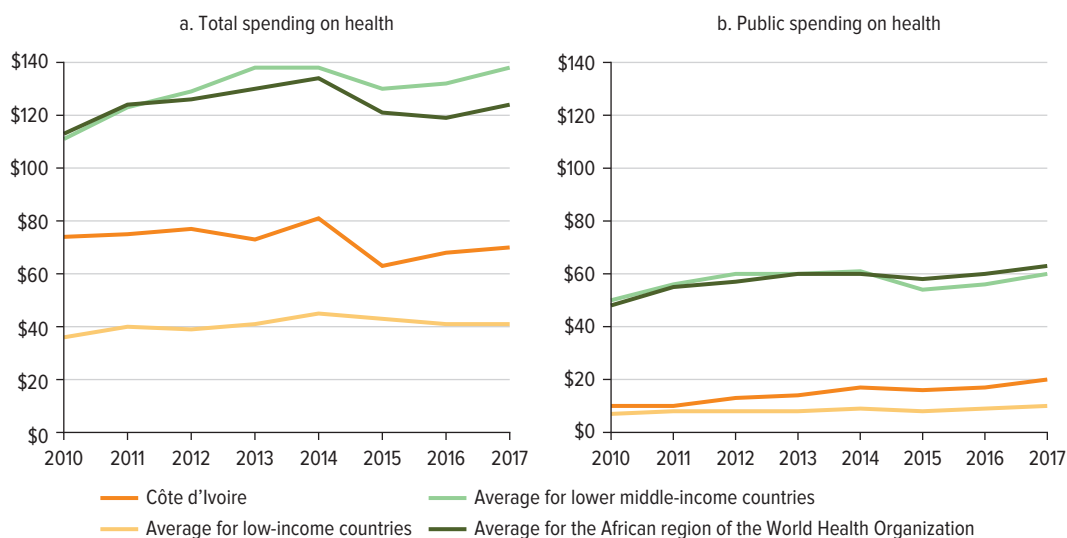
Early age pregnancy is one of the key factors influencing women's health outcomes in Côte d'Ivoire. When a mother is younger than 20, the risk of death is 109 per 1,000 live births, and when it is between 20 and 34, the figure drops to 87. This is particularly important since a quarter of women ages 20–24 have already given birth before age 18. As with most other indicators reviewed here, early pregnancy is more prevalent in rural areas and in certain regions. In rural areas, more than 35 percent of women have given birth before

age 20. In the central and northern regions, more than 38 percent of women ages 20–24 have given birth before age 18. Early pregnancy is also strongly associated with poverty. More than 40 percent of women ages 20–24 in the poorest quintile have given birth before age 18, far more than the 11 percent in the richest quintile. If the mother or guardian has had no education, the number of deaths is 111 per 1,000 live births. This figure drops to 73 if the mother or guardian has attended primary school and to 67 if she attended secondary school. School dropout is a major contributor to pregnancy at an early age.

Health finance—significantly underfinanced but also with low levels of efficient use

The share of the government budget allocated to the health sector was 4 to 5 percent in 2010–18.^{21,22} This is well below the Abuja target of 15 percent and represents approximately 1 percent of the country's gross domestic product (GDP). Total health spending per capita see-sawed considerably between 2010 and 2017,²³ between US\$63 and US\$81 (figure 2.19). Throughout this period, per capita expenditure was low compared to the average in lower-middle-income countries (US\$111–US\$138) and in the Africa region (US\$113–US\$134).²⁴ In contrast to total health spending per capita, public health spending increased linearly over 2010–17, going from US\$10

Figure 2.19. Per capita spending on health, 2010–17 (US\$)



Source: World Health Organization, 2019.

to US\$20. However, this increase was not substantial, and the country nevertheless remained far from the level of other lower-middle-income countries.

Over this period, households contributed the most to financing health services. Although these direct payments have declined, they remain high. From 2010 to 2015, the household share of financing health services was well above the average for lower-middle-income countries and countries in the Africa region.

The majority of out-of-pocket payments are directed toward private pharmacies and hospitals. Despite the government introducing a free health care scheme (*gratuité*) for selected conditions in children, pregnant women, and for emergencies, out-of-pocket payments remain high. Patients continue to pay informally for services that are meant to be free, as well as for services that are not included in the *gratuité* package. In 2016, 64 percent of all spending at the hospital level, 45 percent of spending at the primary health care level, and 97 percent of spending on drugs and medical supplies was financed by households.²⁵ The Ivorian population is at increased risk of financial catastrophe and impoverishment due to out-of-pocket spending. In 2015, an estimated 17 percent of the population was pushed further into poverty due to direct health spending, including 8–15 percent²⁶ of the poorest (first quartile) and 0–6 percent of the richest Ivorians.²⁷

Rather than private spending per capita (including direct payments), the factor most closely linked to the efficiency of health spending is public spending per capita. But in Côte d'Ivoire, an increase in public spending on health has translated very little or not at all into an improvement in

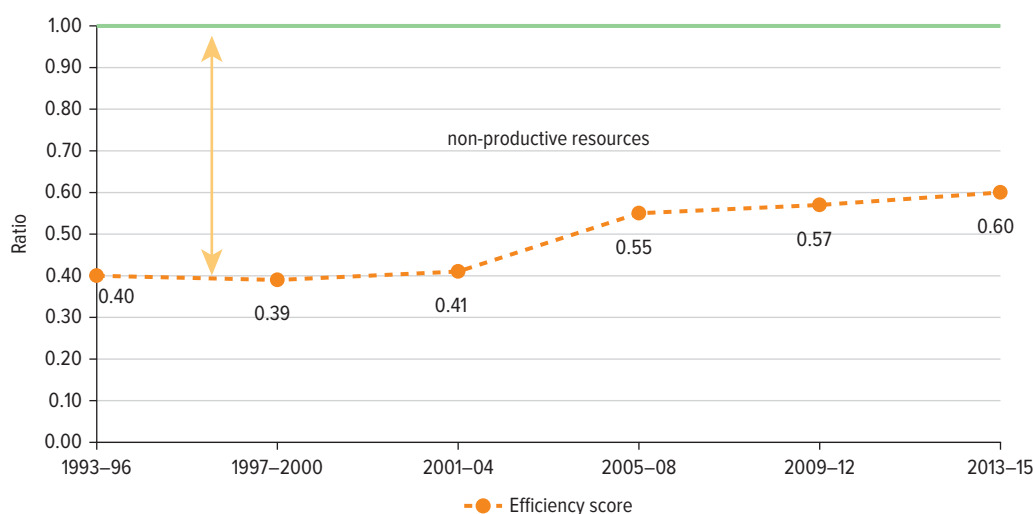
health indicators.²⁸ The indicators included the general state of health, the neonatal survival rate, the infant survival rate, the maternal survival rate, the incidence of tuberculosis, and the success rate in treating tuberculosis. Only in the case of antiretroviral coverage for HIV/AIDS was there a clear positive relationship—4 percent following a budget increase of 1 percent.

Spending efficiency was not optimal between 1993 and 2015 (figure 2.20). Although the efficiency score increased over this period, it has remained low, reflecting high levels of waste. It is estimated that the government could have achieved the results observed in 2015 with only 60 percent of the financial resources deployed. With the same level of funding, it would have been possible to obtain 67 percent more results.

The low levels of financing are compounded by inefficiencies in the allocation and use of resources. A recent study found that Côte d'Ivoire could have attained twice the level of health with the same total health spending.²⁹ For example, primary health care services receive the smallest share of the health budget (19 percent) despite providing the most cost-effective treatment for the majority (>80 percent) of the population. Moreover, the current mode of service delivery is input-based, which is a passive purchasing mechanism, and it is not strategic nor is it based on data. A historical (incremental) budgeting approach is used, which leads to uneven resource allocation and inflexibility in addressing priorities.

The high level of household health care costs has had a direct impact on access to services. In a 2015 household living standards survey, cost of care was the main reason for non-consultation by sick people—47 percent of sick

Figure 2.20. Efficiency of public expenditures



Source: World Health Organization, 2018.

people considered that care and services were too expensive (table 2.13). This percentage was even higher among the poor.

Table 2.13. Reasons for not seeking care in Côte d’Ivoire, 2015

Reason	Non-poor (%)	Poor (%)	All (%)
High cost	39.9	56.2	46.9
Distance or nonavailability of treatment services	9.7	9.8	9.7
Treatment considered unnecessary/tradition	22.6	14.3	19.1
Other	27.8	19.8	24.4

Source: Household Survey of Côte d’Ivoire, 2015.

2.3.3 Education sector—access soars but learning is in crisis

The challenges of “catch-up” are most clear in the education sector, where an ever-growing number of children are demanding entry to school and continuously outstripping supply. Government success in getting all children into primary school has ironically led to higher levels of the education system being overwhelmed by demand. So, Côte d’Ivoire now faces a double challenge of finding places for ever larger cohorts of young children entering preschool and primary school while also ensuring that their older siblings continue their studies. What Côte d’Ivoire has been able to achieve under these circumstances is laudable.

The demand for education is growing and putting pressure on the capacity of the entire system

To keep up with the increasing number of school-age children entering the system requires constant teacher recruitment and classroom construction (table 2.14). Urban and rural areas suffer from overcrowded primary and lower secondary schools, but for different reasons. In Abidjan, finding space to build more schools is very difficult. In many rural areas, 19 percent of schools only have three classes because of previously low levels of enrollment.

To keep up with growth, the primary teacher corps increased by an average of 5.7 percent a year over 2013–17. Consequently, Côte d’Ivoire reduced primary education student–teacher ratios from 49:1 in 2012 to 42:1 in 2018. This reflects the government’s effort to bring the education system in line with international norms and to keep up with population growth. But, despite these efforts, the government has yet to reach the 40-pupils-per-teacher target as defined in its Medium-Term Action Plan for Education.

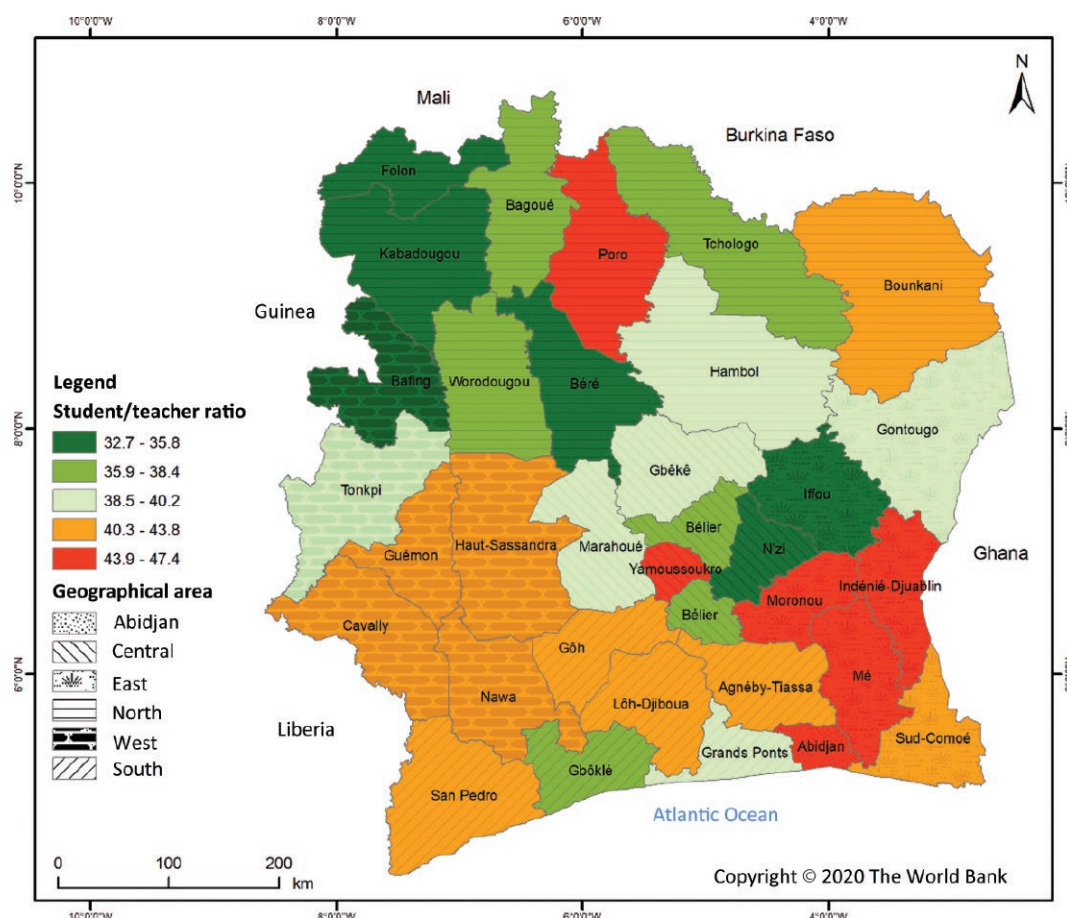
Although they have remained stable over time, primary student–teacher ratios are not uniform across regions (figure 2.21). This reflects the continuing differences in enrollment rates between urban and rural areas. For example, the Folon region has the lowest student–teacher ratio (31:1) but one of the lowest primary enrollment rates, while Abidjan and the Bounkani region have the highest ratios (50:1). As enrollment grows in the north and west, keeping up with

Table 2.14. Changes in the number of schools, classrooms, and teachers in public primary education, 2010–20

School year	Schools		Classrooms		Teachers	
	Staff	Change (%)	Staff	Change (%)	Staff	Change (%)
2010–11	10,123	-	54,598	-	56,792	-
2011–12	10,755	6.2	58,090	6.4	59,372	4.5
2012–13	10,691	-0.6	58,083	0.0	61,955	4.4
2013–14	11,233	5.1	60,906	4.9	61,322	-1.0
2014–15	11,870	5.7	62,347	2.4	65,308	6.5
2015–16	12,537	5.6	68,660	10.1	70,324	7.7
2016–17	13,195	5.2	74,874	9.1	72,648	3.3
2017–18	13,784	4.5	77,261	3.2	76,375	5.1
2018–19	14,246	3.4	77,629	0.5	78,196	2.4
2019–20	14,613	2.6	78,523	1.2	81,424	4.1
Average		4.2		4.2		4.1

Source: DSPS Pocket Statistics, 2010–11 to 2019–20.

Figure 2.21. Primary school pupil-teacher ratio, by administrative region, 2018



Source: DSPS Statistical Yearbooks of Primary Education, 2018–19 and 2019–20.

teacher recruitment in less attractive areas of the country may become a concern.

The number of pupils per teacher is greater in the earlier grades (first, second, and third grades), where basic learning is normally attained. But student–teacher ratios in these early grades are on average 30 percent larger than in later grades. While this may reflect structural growth, it also reflects changes in retention rates from grade to grade.

The quality of education is low and unequal

The Ivorian education system is oriented toward selection rather than teaching and learning. The curriculum is designed to prepare students for further study at upper levels rather than to have students learn the fundamentals in the early grades. Lower secondary is considered preparation for upper secondary, rather than for providing students with skills and knowledge, and for preparing students to transition to the world of work. Students who are unsuccessful are expected to leave the system, so retention rates dip for critical grades.

The emphasis on selection rather than learning is even more acute at the upper secondary level. High school ends with the baccalaureate diploma, which gives automatic access to higher education. A student can receive a “Bac” diploma in one of four disciplines—literature, economics, natural sciences, and physical sciences. Consequently, upper secondary students are guided into a series of courses that prepare them for one of the Bac exams. There is little concern that students attain basic skills and knowledge commensurate with their level of study. This emphasis on the Baccalaureate diploma in upper secondary cascades through lower levels of the education system.

Regardless of the overall emphasis of the curriculum, many students do not receive the necessary or mandated number of days and hours of instruction. In 2017–18, at the primary level, of a total of 120 days of lessons, 36 days were lost due to the absence of the student and/or the teacher, corresponding

to approximately 20 percent of time lost on the curriculum. In 2017–18, secondary school teachers provided, on average, 17 hours of lessons per week against the mandated 21 hours. This means that high school students lost 136 hours of lessons. A key cause of school closures has been teacher strikes, some of which have extended over several months and in some cases resulted in canceled school years.

In the broadest sense, teacher characteristics do not appear to influence learning levels. Although teacher pay, experience, and academic levels are relatively high compared to other countries, teachers’ ability to translate these characteristics into learning is limited. For example, 34.0 percent of teachers have a lower secondary degree; 52.6 percent have the Baccalaureate, and 13.4 percent have attended university. In addition, 83.3 percent of primary school teachers have a teaching diploma (equivalent to an upper secondary education degree). But there appears to be little relationship between teacher qualifications and test results.

While teacher accountability can contribute to better outcomes, classroom observations reveal substantial gaps in teacher practice. Observations of grades one to three made in French and mathematics classes provide some insight (table 2.15). Teachers whose didactic knowledge of subjects is insufficient find it difficult to use the textbooks (when they are available), to prepare a sheet for each session, or even to choose one on the internet (for those who have access to the internet). And, in supervisors’ coaching of teachers, the focus is more on teaching than on learning. In essence, teachers are not prepared to teach, regardless of their qualifications, experience, training, or incentives.

The lack of a relationship between teacher seniority, education levels, and learning is because of the ineffectiveness of teacher training. There are 16 preservice training centers (CAFOP) for primary school teachers that have a total capacity of 5,886 student teachers. These centers cannot meet the growing demand for teachers and this has led to the recruitment of “community” or “contract” teachers with little or no pedagogical training. And the quality of preservice

Table 2.15. Results from classroom observations, grades one to three (%)

	Grade		
	First	Second	Third
Teachers conducting a reading / writing lesson whose duration is below the official duration	38	42	61
Teachers conducting a lesson in mathematics whose duration is below the official duration	68	38	27
Teachers applying only part of the steps in the educational sheets	53	64	63
Teachers who have not prepared their course	15	18	19

Source: Educational Services Delivery Support Project, World Bank/GPE, 2018.

Note: Class observations in six intervention regions.

training is considered to be low. A 2018 diagnostic study of the allocation of resources within the K–12 education system showed that a significant proportion of funds allocated to CAFOP went to catering—to the detriment of pedagogical training.

Teacher supervision and continuing education are rare. Although pedagogical support staff do exist—school directors, educational advisers, national trainers, and inspectors—they are often unavailable to teachers deployed to schools. School principals are often in charge of a full-time class and can rarely fulfill their obligations of supporting other teachers. The pedagogical advisers are responsible for too many classes and they lack the means to ensure regular follow-up with the teachers.

The quality of teacher preparation at the secondary level has similar weaknesses. Secondary school teachers are trained at the École Normale Supérieure d'Abidjan (ENS), with training that remains essentially theoretical and academic. The lessons aim to train disciplinary experts and little space is given to pedagogy and didactics. In addition, practical training is mostly unsupervised.

Other systemic characteristics of the education sector contribute to poor results. For example, repetition has a significant effect of reducing at least 25 percent of a standard deviation of the general score of students on the EGRA test.

Learning conditions at the school level are weak throughout the country (table 2.16). Many schools do not offer a conducive environment for learning, and there are substantial disparities across regions and between urban and rural areas.

The same research has indicated that certain practices appear to improve learning. These are the following:

- ▶ Helping the student with homework at home—increasing by at least 22 percent of a standard deviation the students' general score on the EGRA test.
- ▶ Having a homework book—increasing at least 21 percent of a standard deviation.
- ▶ Having teachers help a pupil in difficulty—at least 27 percent of a standard deviation.

Repetition, dropout, and transition rates reflect both the quality of education as well as its overall efficiency. The selective orientation of the education system has an impact on learning, but also on the efficiency of the system. Repetition rates are declining but persist for “high stakes” years. Research in Côte d'Ivoire indicates that repetition contributes nothing (and even negatively) to learning. Low transition rates between lower and upper secondary levels remain unchanged and it is used as a valve to control access to oversubscribed schools rather than a real measure of learning levels. Both repetition and transition appear to be closely related to dropout rates. Dropping out is perhaps the worst outcome in an education system because there is no recognition of any learning that may have taken place.

There are very different reasons for dropping out between girls and boys (figure 2.22). The main reason for dropout for the overall school population is that students consider what is taught to be too difficult (47 percent). But, when the question is asked just to girls, 36 percent answer that pregnancy is their principal reason for dropping out. In 2017–18, there were 4,475 cases of pregnancy at the secondary level, of which 90 percent were in urban areas.

Adequate funding but with obvious inefficiencies

Since 2008, the government has increased the share of public resources committed to the education sector, both in terms of share of GDP and share of the total budget (figure 2.23). Government spending for education increased overall spending on education from 4.8 percent of GDP to 5.8 percent between 2008 and 2015. During this same period, the share of the total budget devoted to the education sector increased from 23.6 to 25.4 percent.

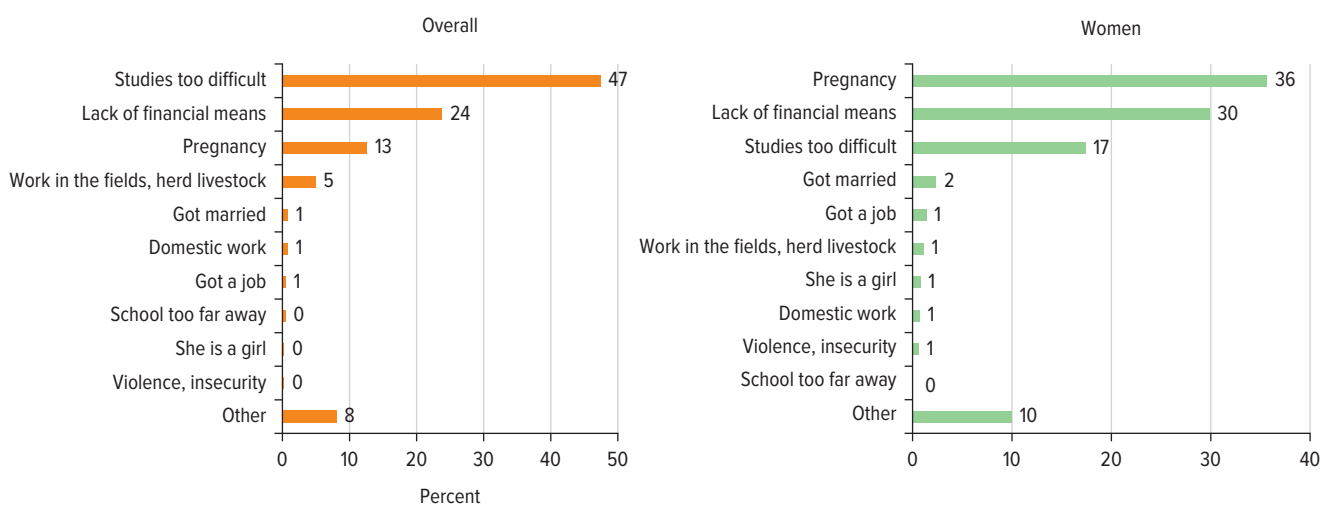
Given the benchmark recommendation of the Global Partnership for Education (GPE) that 20 percent of national spending should be spent on education, and the recommendation of the United Nations Educational, Scientific and Cultural Organization (UNESCO) that at least 6 percent of the GDP must be devoted to education, Côte d'Ivoire's overall investment in education is close to these norms.

Table 2.16. Overview of learning conditions, 2018–19

Condition	Percentage of schools	Examples
Incomplete cycles	19	3.7% in Abidjan, 42.7% in Worodougou
No electricity	73.6	14.2% in Abidjan, 95.7% in Béré; 88% in rural areas, 36.6% urban areas
No functioning latrines	57	25.1% in Abidjan, 77% in Marahoué; 62.4% in rural areas, 34.8% in urban areas
No water source	62.1	20.4% in Abidjan, 85.8% in Bafing; 71.1% in rural areas, 37.6% urban areas

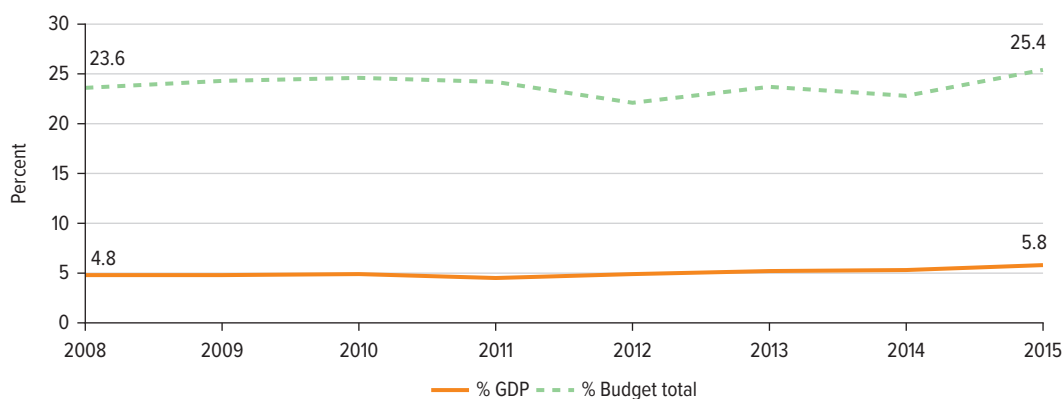
Source: DSPS Pocket Statistics, 2019.

Figure 2.22. Reasons for leaving school



Source: Programme Monitoring Department 2019.

Figure 2.23. Education spending as a proportion of GDP and total budget, 2008–15



Source: World Bank 2017.

The majority of the education budget is devoted to funding teaching and administrative staff, with educational equipment representing less than 4 percent of expenditure. As a result, many of the inputs that are considered important for learning—school environment, teacher support services—are not adequately funded. This creates a difficult situation for the government since the overall education budget is already at a high level.

Household secondary education expenditure is mostly for private education. While this is a preference for some households, a closer look indicates that many do not have a choice and households take on costs that are a burden. Because of the lack of space in public lower and upper secondary education, the government places students in private schools and provides a subsidy. About 40 percent of eligible secondary

school pupils are enrolled in private schools. So, households effectively subsidize the public sector by assuming more than 55 percent of the total unit cost of private schools, while 67 percent of all private enrollment in lower secondary are public pupils placed there by the government.

2.3.4 Enabling environment

Education and health services alone cannot lead to optimum human capital formation. Basic services—such as water and sanitation, good roads and appropriate urban planning, functioning sanitation facilities, proper housing, and a safe environment—are also a part of interactive human capital development. These all serve to increase the effectiveness of social services—preventing illness and improving learning environments.

Especially for a country where poverty is a root cause of low human capital production, a social protection system is essential. But progress on most human capital indicators is limited because the demand for services is reduced by the level of household poverty. Côte d'Ivoire has a limited number of social protection programs that have had a marginal impact on poverty reduction, and there is no social safety net system in place. The most important social protection programs are contributory programs—pensions and other limited social insurance schemes under the national pension fund for workers in the formal private sector. Noncontributory social assistance measures are limited. Interventions tend to be

time-event-driven, largely donor-driven and funded, and tend to use a variety of administrative delivery instruments. Côte d'Ivoire has a narrow social safety net that covers less than 10 percent of the population and does not reach the poorest. International experience shows that well-designed, targeted social safety net systems can alleviate poverty, reduce inequality, encourage investment in human capital, and improve productivity or livelihood diversification.

Appropriate sanitation and access to water are key components of a healthy life (table 2.7). The availability of water, sanitation, and hygiene (WASH) reduces the

Table 2.17. Sociodemographic characteristics and sanitation in Côte d'Ivoire, 2013–15

Feature (% of families) ^a	Use of drinking water from improved sources (%)	Availability of handwashing facilities ^b (%)	Use of unshared improved toilets (%)
Together	80.7	41.0	31.5
Education level of the head of the family			
None (48.3)	75.6	32.5	20.4
Primary (20.9)	79.8	34.0	27.2
Secondary or higher (29.7)	90.1	56.1	53.9
No answer / Don't know (1.0)	97.0	61.5	63.6
Region			
Central (5.6)	91.6	58.2	17.4
Centre-East (2.5)	78.9	446.6	26.7
North Central (6.8)	92.5	69.7	23.7
Central West (13.7)	58.7	11.4	23.9
North (5.8)	83.3	46.5	12.2
Northeast (4.5)	82.3	24.1	23.9
Northwest (4.6)	82.7	23.6	11.8
West (9.1)	74.2	13.6	18.2
South excluding Abidjan (13.9)	75.5	47.0	34.3
Southwest (10.3)	63.1	31.0	23.6
Abidjan (23.2)	99.1	65.8	60.6
Place of residence			
Urban (48.6)	94.2	55.4	48.7
Rural (51.4)	68.5	27.0	16.0
Income^c			
Poorest	54.8	17.5	5.0
Poor	70.2	25.9	12.2
Middle	82.2	29.3	21.4
Rich	97.1	45.8	35.0
Richest	99.1	75.5	83.7

Source: Multiple Indicator Cluster Survey 2016.

Note:

a. Percent of families in the survey.

b. Availability of a specific place for hand washing where soap and water or other cleaning products are available.

c. Percent not available.

transmission of communicable diseases and prevents stunting. Unsanitary conditions also lead to insufficient consumption of calories or nutrients. And latrines in schools have a considerable effect on girls' enrollment and attendance.

Stunting is also an indication that other basic services, such as WASH, are not available. In Côte d'Ivoire, only 36.6 percent of the population has access to well-managed potable water. This indicator falls to 17.7 percent for the rural population. Only 19.4 percent of the population has access to hand-washing facilities that include soap and water. In rural areas, only 10.2 percent do. Only 32.1 percent of the population has access to basic sanitation; 18.0 percent in rural areas.

2.4 Addressing systemic weaknesses

If Côte d'Ivoire wishes to further develop its human capital, and thus surpass its peer countries and meet aspirations, it must address some fundamental and systemic weaknesses. The following principal factors continue to curtail the effective delivery of human capital services:

- ▶ *Human capital services are unevenly distributed geographically.* For all five HCI indicators where data exist, there are significant regional differences. Mirroring these outcomes, human capital services are geographically out of reach of many Ivorians, particularly in the northern and western regions. These regions are often more difficult to access, tend to be rural, and are home to the poorest populations. Ivorians living in these parts of the country must travel the longest distances to reach human capital facilities—schools and health centers—that lack qualified personnel, receive the least support, are often dilapidated and understaffed, and lack essential inputs such as drugs, equipment, and pedagogical inputs.
- ▶ *Lower-income groups tend to attain lower human capital outcomes and access human capital services of lower quality.* Regions with the poorest populations are already disadvantaged. But even in richer regions, the poor do not have the same access to social services. The social protection apparatus is rudimentary, so the poorest Ivorians may not have the minimal resources necessary to demand better human capital services. In cases where out-of-pocket spending for human capital services is regressive (as is the case for primary health care and some levels of education), the poorest must face even more daunting obstacles.
- ▶ *Human capital services are often of poor quality.* Even where they exist, schools and health centers are often poorly equipped, understaffed, lack essential supplies, and do not receive sufficient support and supervision. As a result, these institutions are less able to provide the minimum quality of services necessary to ensure acceptable human capital outcomes.
- ▶ *Demand-side factors often contribute to negative human capital outcomes and less access to human capital services, and this dynamic is not sufficiently taken into account.* In many cases, poor human capital outcomes and limited access to services are associated with particular beneficiaries' characteristics and coping behaviors, which in many cases are gender specific. Poor women who bear children at an early age, have many children with little birth spacing, and are undernourished during and after pregnancy tend to access quality human capital services less often. Girls may not continue their schooling because of fear of sexual abuse and becoming pregnant.
- ▶ *The staff responsible for human capital development are unevenly distributed in numbers and skills.* Trained and motivated staff are the foundation of human capital development systems. If teachers and health workers are not in the right place and at the right time to carry out the right actions in a targeted manner, human capital outcomes will suffer.

The availability of transportation can address several constraints to human capital formation. The previous analysis showed that schools and health facilities are sometimes far from populations, ranging from 5 to 15 kilometers. However, it is possible that 5 kilometers on a badly maintained dirt road, often closed because of weather, renders access to services more difficult than 10 kilometers of well-maintained asphalt road that is frequented by public transportation. Further, easier access to schools and health facilities will increase enrollment, attendance (particularly for girls), and prenatal visits.

The financing of human capital services presents a mixed picture. Health sector financing does not meet international standards, leading to underfunded essential services and high out-of-pocket expenditures. Education spending

appears relatively adequate, but because of a high wage bill, critical inputs are underfunded. The issue is not only amounts, but also accountability and targeting. Shortages are particularly common in the health sector. Resources arrive late or intermittently, affecting the short- and long-term performance of the human capital system. This is preventable and reflects poor management.

The status of women is one of the most important factors limiting human capital development in Côte d'Ivoire. Throughout this chapter, the link between women's access to human capital services and the human capital outcomes has been across the board. Women often do not have the same access to gender-specific health care or education.

At the national level, gender differences in human capital development are not always obvious except for years of schooling. But more detailed analysis indicates that many human capital outcomes are the result of women's limited access to services, such as family planning, contraceptives, and professional obstetric care, and antenatal, neonatal, and postnatal care. Low transition rates to secondary education deprive girls of a complete education, with strong links between school dropout and early marriage and pregnancy. A large body of research indicates that women's access to educational opportunities is a critical factor in the development of a nation's human capital. So, women's economic empowerment should be a central component of any strategy for combating poverty.

Notes

1. We selected Kenya, Senegal, and Ghana as comparator countries for this report. Kenya scored highest among low- and lower-middle-income countries in Sub-Saharan Africa. Ghana has a similar size population and economy as Côte d'Ivoire and is a main economic competitor and partner in the region. As with Côte d'Ivoire, Senegal is a francophone country with similarly structured education and health systems.
2. World Bank 2019a. The analysis relies on the same general methodology as the global HCI but uses different data sources to allow for this disaggregation, and so is not directly comparable with the global HCI.
3. This indicator is calculated as the number of years that a child would study from age four to age 18, considering present trends. The total number of years that are possible is 14.
4. Gross enrollment rates measure the number of children enrolled at a given level of the education system as a proportion of the school-age population. As is the case in many countries, Côte d'Ivoire has both underage and overage children enrolled at each level. Net enrollment rates correct for this by including only enrolled children who are age appropriate (for instance, ages six through 11 years at the primary level).
5. The government strategy is to encourage the establishment of preschool classes within primary schools run by the community. As demand grows, however, a more concerted public sector-financed strategy is likely to be required.
6. In Côte d'Ivoire, examinations are given at the end of each level of schooling and, if passed, provide access to the next level. Consequently, grades six, nine, and 11 are high-stakes grades. Those who do not pass must either repeat the year or discontinue their studies.
7. The last year of upper secondary leads to the baccalaureate degree, which allows entry to post-secondary education.
8. National examinations are uniform in all schools across the country and are given during the same period. The difficulty of the exams and the marking and grading instructions may vary from year to year. In addition, the examinations regulate the flow between levels of education, so the results may depend on the number of places available in the next level.
9. Harmonized test scores convert a given country's results on international or regional tests in common units. The maximum value is 635 and the minimum is 300.
10. A disability-adjusted life year for a given health problem is the sum of (1) the years of life lost due to premature mortality in the population and (2) the years of life lost due to disability in those affected by the health problem in question. Disability-adjusted life years therefore represent the number of years of perfectly healthy life is lost due to death or disability.
11. MICS 2016.
12. Kurk et al. 2018.
13. The health system uses districts rather than regions as the administrative unit. These are practically the same; however, in some cases, more than one region is included in a health district and naming is slightly different.
14. World Bank 2019b.
15. Ministry of Health and Public Hygiene 2016.
16. MICS 2016.
17. PRPSSE PBF Baseline Impact Evaluation 2016.
18. Ministry of Health and Public Hygiene 2016.
19. Per the WHO's SARA methodology, basic equipment includes at least one child scale, adult scale, tension meter, thermometer, stethoscope, and electric light source
20. WHO 2019.
21. RASS 2018.
22. WHO 2019.
23. As defined by the World Health Organization.
24. World Bank 2019b.
25. Wagstaff et al. 2018. Health spending is defined as catastrophic when it exceeds 10 or 25 percent of household consumption.
26. World Bank 2019b.
27. WHO Regional Office for Africa 2018.
28. WHO Regional Office for Africa 2018.

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CHAPTER 3

Leverage
digital
technology

3.1 Introduction

Since 2011, Côte d'Ivoire has been one of the fastest growing countries in the world.¹ Reforms have improved the overall governance and business environment, making the country more attractive to private investment. But its excellent economic performance has not produced the expected social inclusion or reduced the poverty rate, which remains high. In 2018, Côte d'Ivoire ranked 170th of 189 countries on the United Nations Development Program's Human Development Index and had a low Human Capital Index score of 35.²

Côte d'Ivoire's information and communications technology (ICT) sector has consistently expanded over the past few years. Although ICT, especially the mobile subsector, is performing well, it has mostly benefited the affluent urban and educated population. A key challenge is to continue the sector's fast development, while spreading the benefits of digital technologies more widely and leveraging them to improve the productivity of society's poorest sections to generate more, better, and inclusive jobs.

Expanding the digital economy, if supported by appropriate policies, can generate positive economywide effects for businesses and workers, including increased productivity that in turn expands production and jobs through helping firms achieve economies of scale, improving firms' access to financial services, providing farms and firms with more specialized solutions, and matching buyers and sellers over digital platforms. The digital economy can benefit households that have been unserved or underserved by the traditional financial system and can provide them better and easier access to public services, including education and health care.

Expanding the digital economy also brings risks. It could reinforce existing inequalities and make firms, consumers, and the government vulnerable to cyberthreats, privacy risks, misinformation, and increased market power. To secure benefits, the government must prioritize policies for digital platforms, infrastructure, skills and literacy, entrepreneurship, and financial services. The government must also create an enabling environment for the large private investments needed to leverage public investments in complementary public goods. And policies will be necessary to manage data privacy and cybersecurity risks.

For Côte d'Ivoire, expanding the digital economy and ensuring that it expands inclusively are both top priority. National policy initiatives to attain these goals must first and foremost support the availability, affordability, and usage of digital infrastructure. Digital entrepreneurs need that infrastructure to develop better business and household solutions. And entrepreneurs in farms or manufacturing or services firms need it to adopt those solutions, boost productivity, and generate more, better, and inclusive jobs. If digital entrepreneurs are to profitably design and scale up apps aiming to be inclusive, broad usage by poorer people is

essential. That requires a deliberate public and private focus on boosting affordable access, plus the development of ways for entrepreneurs to build business models around poorer people.

Economywide identification for development and other public support for increasing digital information about the population, such as e-addresses and e-land registry for all, may be needed. And the government could support the production and adoption of apps in agricultural value chains and perhaps in education. It could subsidize low-income farmers adopting the most promising digital apps, along with insurance products to mitigate the risk farmers face when they modify their practices by adopting these digital solutions.

To succeed, national and regional initiatives must be complemented by projects addressing the critical problem of insufficient skills. Illiteracy and the general absence of basic skills hamper the adoption of mobile internet, thereby jeopardizing the most critical step of expanding the digital economy. The lack of basic digital skills limits digital adoption's productivity and welfare benefits, and the lack of advanced skills constrains the ability to develop programs and apps suitable to the domestic context to boost productivity, improve the quality of life, spread the availability of infrastructure, and support health and social policy. Addressing the skills problem should entail redoubling educational effort, expanding e-education projects, and encouraging the local, regional, and global private sector to launch e-education and mobile learning projects.

The government should accelerate the digitization of its own services and pursue universal coverage of digital identity. Regulatory measures to expand digital financial services beyond e-money—where Côte d'Ivoire has already made much progress—would support full interoperability in payment systems, liberalization of Unstructured Supplementary Service Data (USSD) codes, digitization of government-to-people transactions, and improved financial literacy. Payment system interoperability falls within the remit of the Central Bank of West African States; the rest are under national jurisdiction.

Côte d'Ivoire could play a regional leadership role. A more regional approach could especially emphasize the development of a regional wholesale bandwidth market with interconnected backbones. Such an effort would include in particular pushing forward on the incomplete implementation of Economic Community of West African States (ECOWAS) regional regulations, such as those on conditions for accessing landing stations for international submarine cables, those on access to national and international bandwidth by landlocked countries, as well as those promoting international roaming agreements that reduce excessive charges when traveling in the region. While it would appear as if the benefits of providing

landlocked countries increased access to national and international bandwidth would accrue to landlocked countries and not to Côte d'Ivoire, this is not necessarily correct. Increased access to digital infrastructure by neighboring countries would allow Côte d'Ivoire's digital entrepreneurs to reach a regional and larger market, which in turn would allow greater economies of scale.

Expanding the digital economy in Côte d'Ivoire will require coordinated and complementary actions on many fronts. For example, inclusive expansion of digital infrastructure is a condition for improving e-government and digital financial services, while improvements in e-government and digital financial services will in turn create higher demand for digital infrastructure and so help to expand it. Similarly, entrepreneurs will not design useful apps unless digital infrastructure reaches most of the population, but the availability of such apps greatly increases the benefits of digital access.

3.2 Digital infrastructure

The ICT sector in Côte d'Ivoire performs moderately well in international rankings given its economic and geographic situation. It is ranked in the upper quarter of Sub-Saharan African countries by the 2017 ICT Development Index (IDI) of the International Telecommunication Union (ITU) and the 2018 Mobile Connectivity Index (MCI) of the GSM Association (GSMA). But globally it is ranked 131st by the IDI and 122nd by the MCI. In 2013, Côte d'Ivoire ranked 151st on the IDI, and in 2014, 121st on the MCI. The substantial improvement on the IDI was due to an increase from 1.7 active mobile broadband subscriptions per 100 inhabitants in 2013 to 47.6 in 2017, according to ITU data.

Until 2012, the main legislation covering the telecommunications sector was Law 95-526 of July 7, 1995 (*Code des Télécommunications*). Ordonnance 2012-293 of March 21, 2012 fully revamped it. Subsequent decrees concerned interconnection and local loop unbundling (Decree 2013-300) and the content of telecom licenses (Decree 2013-302 and Decree 2014-104). In 2017, the country passed a Law on the Orientation of the Information Society (2017-803), which covers several topics—the most important for digital infrastructure are enforcing technology neutrality (article 5) and supporting infrastructure deployment (articles 21–30).

The following state agencies are responsible for ICT development:

- ▶ The Ministry of Digital Economy and Post (MENC, for *Ministère de l'Économie Numérique et de la Poste*), in charge of ICT and the digital economy in Côte d'Ivoire.

Designing and implementing a national digital strategy is the best way to approach these reciprocal tasks. It would clarify complementarities and coordinate the actions of domestic and regional public entities. It needs to be developed in consultation with stakeholders. It should specify targets, policy actions, and a sequence for taking them. Implementation should be supported by impact evaluation reports that would be used periodically to revise the strategy, so its design should include generation of the necessary data.

Finally, and most important, a competitive environment is crucial for developing the digital economy. So, the national strategy for the digital economy should create a system of continuously monitoring digital markets to ensure that they remain competitive, support innovation, and encourage new firm entry. The monitoring will require close collaboration between the agencies responsible for competition rules, specific regulations in telecommunications and finance, and the capacity to take corrective actions.

- ▶ The National Regulatory Authority (NRA), or *Autorité de Régulation des Télécommunications de Côte d'Ivoire (ARTCI)*, created in 2013, is a fully equipped NRA dealing with licensing, consumer protection, market regulation, and telecommunications spectrum management.
- ▶ The Ivorian Radio Frequency Management Agency (*Agence Ivoirienne de Gestion des Fréquences Radioélectriques*), founded in 2013, is responsible for radio frequency management.
- ▶ The National Agency of Universal Telecommunications Service (ANSUT, for *Agence Nationale du Service Universel des Télécommunications*), created in 2012, ensures the implementation of universal service programs on behalf of the state and manages investment operations funded by the state in the field of ICT.
- ▶ The National Society for Information Technology Development (*Société Nationale de Développement Informatique*) was created in 1999 and is a state-owned company under the supervision of the Prime Minister, in charge of information technology and information system projects for the government.

MENC has published its development strategies for the ICT sector on its website.³ The targets related to digital infrastructure in 2020 are the following:

- ▶ Mobile telephone coverage of 100 percent of the population.
- ▶ Internet/data coverage of 90 percent of the population.
- ▶ Broadband penetration of 50 percent of the population.

Progress has been considerable, though neither availability nor usage targets have been fully met. Coverage is highly uneven across operators, limiting consumer ability to benefit from the lower prices and better service expected in a competitive environment. Mobile internet penetration is not as high as it looks, since many consumers have multiple subscriptions. Unique mobile internet subscriber usage is much lower—below 30 percent, according to the GSMA (see below).

3.2.1 Current state of digital infrastructure

Deployment and usage of mobile networks

Côte d'Ivoire was relatively late in licensing 3G technology. Licenses were granted only in 2012, but growth since then has been fast. Orange, MTN, and Moov are the three operators in the mobile market.⁴ They were allowed to launch commercial 4G services in the 1,800 megahertz band starting in the first quarter of 2016 after paying the license renewal fee. During 2016, all three upgraded their networks to 4G LTE. Orange deployed the widest network by February 2019, covering 120 districts in around 70 cities and towns, while Moov reached 10 cities and

MTN just three by the same date.⁵ Spectrum in the 2,600 megahertz band was allocated to the three operators (2 x 20 megahertz each), though they are not yet using it to offer 4G services.⁶ Mobile money has been quite successful, with more than 30 percent of adults using it, the highest penetration in West Africa.

To promote competition and free up spectrum, ARTCI took drastic steps to reduce the number of players to just three, revoking the licenses of the three smallest operators, Comium, GreenN, and Aircom in March 2016.⁷

Territorial coverage is smaller than population coverage (table 3.1). That is expected, but the large gap between the two in the case of 3G, and especially 4G, suggests that in rural areas, 3G and 4G infrastructure placement has been more limited than 2G placement (table 3.1). Mobile voice services seem to be available to more than 90 percent of the population. Mobile internet availability looks more limited. For Orange, the largest operator, it is about 75 percent of the population for 3G and 55 percent for 4G. For the other two operators, the percentages are smaller. Operators have been highly uneven in deploying 3G and 4G networks.

Since the launch of 3G in 2012, market penetration has increased substantially, according to GSMA data. Total mobile access—the number of subscriptions per 100 inhabitants—increased from 87 in 2013 to 131 in 2019.⁸ More than 99 percent are prepaid. Subscriptions for 2G service declined from about 79 to 45 percent. According to GSMA, 3G connections increased from 8 to 71 percent of the population between 2013 and 2019 and 4G subscriptions reached 15 percent in 2019.

Table 3.1. Coverage of mobile networks, 2019

1. Coverage of the territory			
	ORANGE	MTN	Moov
2G Network	83.27%	80.75%	67.56%
3G Network	44.71%	56.51%	2.77%
4G Network	7.24%	6.01%	3.40%
2 Population coverage			
	ORANGE	MTN	Moov
2G Network	93.95%	91.10%	92.67%
3G Network	74.93%	68.93%	51.50%
4G Network	55.18%	34.52%	34.20%

Source: ARTCI.

Market shares in mobile markets

As of the third quarter of 2019, Orange had a market share of 42 percent of mobile subscribers and 51 percent of internet subscribers (table 3.3). Its share of revenue is larger, 49 percent for voice and 53 percent for internet. A look at the data for earlier years suggests that competitive forces have been at work. According to ARTCI reports, Orange's share of mobile internet revenue was as high as 67 percent in 2014 and 62 percent in 2015. Moov increased market share at the expense of Orange, going from 14 percent of revenue in 2014 to 22 percent in 2019. But Orange's market share of mobile voice revenue has been stable at just below 50 percent.

Consumer tariffs

Prices are difficult to evaluate. They reflect network costs; the size and distribution of household income; market characteristics such as switching costs; regulations, which themselves may affect costs (such as whether facility sharing is allowed); and the kind and degree of competition (such as whether rates for calling someone on another network are regulated). Some cost parameters (such as for equipment costs) closely follow global markets.

Table 3.2. Mobile market penetration (% of population)

	2013	2019
Market penetration total mobile	86.97	130.98
Market penetration; 2G connections	78.98	45.42
Market penetration; 3G connections	7.99	70.55
Market penetration; 4G connections	0	15.01
Market penetration; mobile broadband capable	7.99	85.57
Market penetration; unique mobile subscribers	43.78	51.25
Market penetration; unique mobile internet subscribers	12.26	27.96

Source: GSMA.

Table 3.3. Market shares (%)

	2013		2019			
	Subscribers	Turnover	Mobile voice		Mobile internet	
			Subscribers	Turnover	Subscribers	Turnover
Orange	36.5	43.8	42.0	49.0	51.0	53.0
MTN	35.8	36.6	34.0	28.0	30.0	25.0
Moov	21.8	15.2	24.0	23.0	19.0	22.0
Comium	4.2	3.7				
Green	1.5	0.7				
Cafe Mobile	0.1					

Sources: ARTCI 2013, 2019a.

Since network costs are fairly aligned across countries, comparing nominal prices globally and penetration and market shares can roughly describe market characteristics and the degree of competition. But such comparisons need to be qualified by country differences in salaries, international bandwidth costs, traffic levels (affecting unit costs in the presence of high fixed costs), and so on. And nominal prices might not be high compared with prices in competitive markets yet still be high relative to purchasing power in the country. So, prices, in addition to being compared with global benchmarks, should also be evaluated in comparison with income.

Prices are even difficult to find. Calculating unique or average prices is hard because operators typically offer a variety of packages. To overcome this hurdle, the prices of various standardized packages are usually compared.⁹

Prices of voice and data services in Côte d'Ivoire have declined but remain high, both in nominal terms and in relation to per capita income. According to data from the ITU, the price of a mobile cellular basket declined from about \$19 in 2012 to \$14 in 2017.¹⁰ But the 2017 price was still high, ranked 123rd globally and 33rd of 39 countries in Africa.¹¹ More important, at 11 percent of per capita gross national income (GNI) in 2017, it ranked 159th of 181 countries for which data exist.

The high price of mobile voice service is somewhat surprising, but it may reflect the still high mobile termination rates allowed (the charges for completing a call in a different network) and the recent launch of number portability (see below). The persistent gap between off-net and on-net calls is evidence of insufficient competition. According to the ITU, the price of the cheapest 500 megabyte package also declined considerably, from about \$10 in 2014 to \$3.40 in 2017. This is a relatively low nominal price—34th globally—but still expensive as a percentage of income—2.68 percent of per capita GNI—ranking 117th globally and 9th in Africa).¹² The price of a 1 gigabyte package declined less steeply, from about \$30 in 2013 to \$26 in 2017. This is expensive even in nominal

terms, ranking 158th globally in 2017. As a share of per capita GNI—21 percent—it ranked 169th globally.¹³

These figures suggest that unaffordability hinders the uptake of mobile phone and data services in Côte d’Ivoire. So does a consumer survey, in which 66 percent of respondents identified unaffordability as the main barrier to mobile internet usage in the country.¹⁴

Mobile termination rates

Côte d’Ivoire’s relatively high retail tariffs could reflect both insufficient competition and higher costs due to operators’ inability to achieve economies of scale. Both coverage and market share figures point to insufficient competition as a problem. Competition in mobile service is largely determined by the price of interconnection across networks, particularly mobile termination rates (MTRs), because when competing networks are of unequal size, the larger networks may charge high MTRs resulting in large differences between on-net and off-net tariffs. Smaller networks may be hurt when consumers benefit from receiving calls (the “call externality effect”) and may make it more difficult for smaller networks to acquire market share (the “foreclosure effect”). Experience in Europe suggests that regulating MTRs strongly influences retail prices and the degree of competition in mobile markets and that reducing MTRs over time has reduced retail prices and enhanced competition.¹⁵

The mobile termination rate in Côte d’Ivoire has been steadily reduced from about \$0.077 per minute in 2010 to \$0.043 in 2015 and \$0.023 in 2018.¹⁶ That reduction has been paralleled by a reduced ratio of average off-net tariffs to on-net tariffs for retail mobile voice services from more than 20 in 2014 to about 8–9 in 2015 and just below 1.5 in the fourth quarter of 2019.¹⁷ The reduced MTRs and the parallel reduced ratio of

on-net to off-net tariffs have probably increased competition and contributed to reduced mobile tariffs in Côte d’Ivoire. Yet, the remaining differential between on-net and off-net prices is likely a primary reason that consumers still pervasively (and inefficiently) hold multiple SIM cards. Such differentials have disappeared in most countries with competitive mobile markets, where most operators offer packages with uniform prices for calls to their own and competing networks.

An MTR of \$0.023 is still among the highest in Africa (figure 3.1). It is close to the average in Latin America (\$0.026) but higher than the average in Western Europe (\$0.015), Asia and Pacific (\$0.018), or Senegal (\$0.008) (figure 3.1).¹⁸

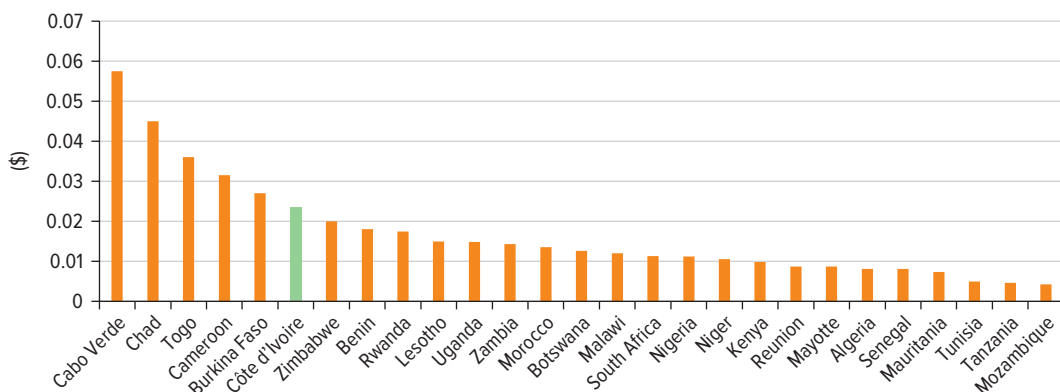
These findings suggest that it would be fruitful to explore whether further decreasing MTRs would further strengthen competition in Côte d’Ivoire. But even with increased competition, mobile internet penetration will be hampered by the low incomes of much of the population.

Number portability is another regulatory policy that affects the degree of competition between operators. ARTCI launched mobile number portability in Côte d’Ivoire in September 2018 (see also below). Its implementation will put further downward pressure on retail prices by decreasing consumer costs of switching services.

Fixed line performance

Fixed broadband penetration in Côte d’Ivoire is very limited, though not different from the rest of the region. With a few more than 200,000 fixed lines in the third quarter of 2019, fixed broadband reaches only 4.4 percent of households—slightly higher than the average for lower-middle-income countries in Sub-Saharan Africa. Growth has also been small, from 2.2 percent of households in 2010.¹⁹ Fixed broadband

Figure 3.1. Mobile termination rates in selected African countries



Source: Telegeography.

connectivity will remain elusive and limited to the biggest companies and the most affluent households. Like the rest of Africa, Côte d'Ivoire will have to rely on mobile broadband to provide internet connectivity to the masses.

But fixed broadband retains strategic importance for business customers, such as banks, industries, retail groups, and offshore information technology platforms. These customers have specific needs and service quality requirements that cannot be met by standard wireless technologies such as mobile—even 4G and 5G.²⁰ Orange is the dominant operator in the fixed broadband market, with 99 percent market share in volume (number of lines), and 83 percent market share in value.

First mile connectivity

Côte d'Ivoire has access to the world internet thanks to four international submarine cables: South Atlantic 3/West Africa Submarine Cable (SAT-3/WASC), West Africa Cable System (WACS), Africa Coast to Europe (ACE) cable, and MainOne.²¹ SAT-3/WASC was the first submarine cable to land in Abidjan in April 2002. It is owned by more than a dozen telecom operators, including the international operator Orange. In 2012 WACS and ACE were activated. WACS is partly owned by MTN, the second biggest telecom operator in Côte d'Ivoire after Orange, whereas ACE is partly owned by Orange. Finally, MainOne was initially activated in 2010 to connect Nigeria and Ghana to Portugal. The submarine cable was upgraded several times to increase its capacity, and in 2018, MainOne and Orange agreed to the construction and installation of new branches and stations to Senegal and Côte d'Ivoire, activating the Côte d'Ivoire branch in December 2019.²² With these developments, total international bandwidth used jumped from 9 gigabytes per second in 2012 to 337 gigabytes per second in 2020.

As a landing point for four international submarine fiber cables, Côte d'Ivoire has terrestrial fiber links to neighboring countries Burkina Faso, Mali, and Togo.²³ In November 2019, Orange Group announced plans to deploy a new international backbone network connecting eight countries in West Africa, to be built around a terrestrial fiber network combined with submarine cables to connect with the rest of the world. The multiregional West African network will connect all the main capital cities in the region—Abidjan, Accra, Bamako, Dakar, and Lagos. The commercial launch of the West African backbone was planned for the second quarter of 2020.

Middle mile connectivity

Orange and MTN, the two biggest telecom operators, each own a backbone that reaches the most important cities in Côte d'Ivoire. MTN has a backbone about 4,000 kilometers long, and Orange has one about 3,300 kilometers long.²⁴ But the privately owned fiber optic backbones (as well as

last mile infrastructure—see below) have failed to cover rural areas. The government has identified this as a market failure—even healthy competition is not sufficient to deliver the required connectivity—and launched a National Broadband Network (NBN) program in 2011. The NBN program is supervised by ANSUT. It will deploy 7,000 kilometers of fiber to complement the existing backbones. The first two phases, consisting of around 2,000 kilometers, have already been deployed. The last phase is currently being finalized.

ANSUT is seeking a private company to manage the backbone. Recruitment has been a lingering issue, with two failed calls for tender launched since 2014. The third call for tender, launched in 2019, led to the selection of a candidate. As of January 2020, negotiations to finalize a contract were ongoing.

Passive infrastructure sharing²⁵ is allowed by the telecommunications regulator ARTCI. In 2013, ARTCI conducted a public consultation on infrastructure sharing²⁶ but did not issue specific guidelines. No information is available on infrastructure-sharing agreements for the middle mile, such as sharing ducts, poles, and trenches or sharing utility infrastructure.

In October 2019, the regulator and five telecommunications companies—Orange, MTN, Moov, VipNet, and Yoomee²⁷—signed an agreement to set up a second internet exchange point in Abidjan to improve performance and lower costs for end users. The country already had one active internet exchange point, the Côte d'Ivoire Internet eXchange CIVIX.

Last mile connectivity

The coverage of mobile internet infrastructure is much lower in rural areas, and the affordability of both handsets and airtime constrains use even where infrastructure is available. Deployment cost per line for last mile mobile “access” infrastructure becomes lower as population density increases because of larger economies of scale. So, telecom operators tend to deploy mobile access infrastructure primarily in the most urbanized regions before extending coverage to suburban and rural areas. And since urban households have more purchasing power than rural ones, telecom operators can expect larger profits in urban areas. In Côte d'Ivoire, 56.8 percent of the rural population is below the poverty line, compared with 35.9 percent of the urban population.²⁸ So, demand in rural areas suffers from both low population density and lower incomes. And the cost of deploying a mobile site in rural areas in developing countries is no less than in urban areas or in developed countries.

Providing access to digital services in these scarcely populated areas is a main challenge that Côte d'Ivoire will need to resolve to achieve social inclusion.

Invisible mile—spectrum, mobile number portability, free roaming, and taxation

Spectrum management. According to the latest spectrum table published by the regulator ARTCI,²⁹ all the 900 and 1,800 megahertz bands have been assigned for 2G and 3G services, as well as 22.6 percent of the 800 megahertz band for 4G, 75 percent of the 2,100 megahertz band for 3G, and 50 percent of the 2,600 megahertz band for 4G. Technological neutrality has been introduced in Côte d'Ivoire according to ARTCI, and operators are now authorized to deploy 3G in the 900 megahertz band. Spectrum is still available to assign, especially in the 800 megahertz band, which has stronger propagation and penetration characteristics for 4G than the 2,600 megahertz band: to achieve the same coverage with the same level of service as the 800 megahertz band, the 2,600 megahertz band requires investments in about three times more physical sites.

Until now, mobile licenses and spectrum have been assigned through administrative procedures. No market mechanism (such as auctions) is envisaged for license renewal, future licenses and spectrum assignments, or spectrum redistribution between operators (such as a secondary spectrum market). At least one operator (MTN) has complained in the past that spectrum distribution was inefficient and that public authorities should consider reassigning frequencies depending on the actual and future needs of operators.³⁰ Equal amounts of spectrum have been allocated to the three operators in the recent past, but asymmetries in current coverage and penetration statistics suggest that at least for the moment, operators do not use spectrum proportionately.

Mobile number portability. ARTCI launched mobile number portability in Côte d'Ivoire in September 2018. The mobile number portability regulation includes conditions, such as that the number must be active for more than 60 calendar days and there must be at least 60 calendar days between two switches between mobile services.

Free roaming. Côte d'Ivoire signed a memorandum of understanding with telecommunications regulators in Guinea, Liberia, and Sierra Leone for the One Area Network initiative in April 2019. The agreement facilitates free mobile roaming services for users traveling in signatory countries.

Taxes. Several specific taxes apply to the ICT sector in Côte d'Ivoire. The country introduced an additional telecommunications tax of 3 percent of revenues in 2014. And a 5 percentage point tax is applied on top of the standard 25 percent corporate income tax for any telecommunications company,³¹ though companies providing wholesale access to passive infrastructure, such as tower companies, are outside the scope of this tax.³² Companies in the ICT sector must

invest 20 percent of the amount of dividends transferred abroad in public Treasury bonds or other borrowing instruments issued by the Côte d'Ivoire government.³³

The combined value-added tax (VAT) and customs duties represented 28 percent of the cost of a mobile phone, ranking Côte d'Ivoire the 23rd highest of 110 countries in one study.³⁴ In contrast, in August 2015, a government decree excluded from the VAT and reduced customs duties on electronic equipment, a measure that ended in 2018.³⁵ Operators who were interviewed noted increased sales of devices during that period, but no quantitative study is available.

Regulatory governance

Since the end of the 2011 postelectoral war, Côte d'Ivoire has taken major steps to promote efficient regulation and competition in the telecommunications industry. It has a fully equipped regulatory authority, regularly assesses market power in the fixed and mobile telecommunications industries, and periodically analyzes the relevant markets. Although no formal framework shapes collaboration between ARTCI and the Competition Commission, the commission has issued several important opinions on competition issues in mobile markets.³⁶ Since spectrum has been allocated administratively, not through auctions (which are generally believed to be most efficient), the practice of allocating similar amounts of spectrum to the three mobile operators was probably a second best. Other correct steps taken include issuing global licenses in line with technological neutrality, gradually reducing mobile termination rates, introducing mobile number portability, and creating a framework for sharing infrastructure.

Côte d'Ivoire also benefits from a regional regulatory framework thanks to initiatives of ECOWAS and the West African Economic and Monetary Union (WAEMU), though coordination between national and regional regulatory frameworks needs to be strengthened.³⁷ The recent ECOWAS decision on the Free Roaming Initiative is a step in the right direction.³⁸

Recommendations on digital infrastructure

Despite substantial achievements, Côte d'Ivoire has a long way to go before achieving near-universal mobile broadband coverage. Prices are still high, and even when they reach internationally competitive benchmarks, services could remain unaffordable for an important part of the population, especially the rural population.

Two types of regulatory issues need to be addressed. First, to enhance competition and improve the efficiency of spectrum use, the authorities should improve the general regulatory

governance of the telecommunications industry, considering the following specific measures³⁹:

- ▶ Relying increasingly on auctions to allocate spectrum, and preventing collusion while doing so.
- ▶ Allowing for spectrum trading after allocation, subject to an assessment by ARTCI or the competition agency.
- ▶ Establishing a mechanism of formal collaboration between the telecommunications regulator and the national competition agency allowing the two institutions to share information, best practice, and staff, to organize joint events, and so on.
- ▶ Interacting closely with other national regulatory authorities in the region and the regional regulatory arms of ECOWAS and WAEMU to collaborate more effectively and divide labor more coherently between regional and national areas of responsibility.
- ▶ Considering further reductions in mobile termination rates to strengthen competition between operators.

Second, to achieve near-universal coverage and affordable adoption of mobile broadband, the authorities should go further and consider combinations of the following types of policies:

- ▶ Imposing stronger coverage obligations, perhaps defined at the regional-departmental level rather than the national level, in return for accepting lower spectrum revenues.
- ▶ Offering tax incentives for building infrastructure in rural areas.
- ▶ Encouraging facility-sharing arrangements more strongly.
- ▶ Using the National Telecommunications Funds, universal service funds to support rural telecommunications, to subsidize the deployment of sites in rural areas. Or implementing a “pay-or-play” mechanism whereby operators investing in rural areas can deduct their investments from their contribution to the National Telecommunications Funds.
- ▶ Finalizing a management contract for middle mile connectivity with a private partner as soon as possible. The National Broadband Network deployed by ANSUT should support expanding digital access and services in rural areas by increasing the reach of fiber networks to connect public administrations as well as private mobile towers.

- ▶ Enforcing wholesale fixed broadband remedies to stimulate the retail fixed broadband market. For the fixed broadband market, the regulator ARTCI has passed Decree 2013-300 on local loop unbundling or LLU,⁴⁰ which allows alternative internet service providers to lease the copper line owned by Orange to sell broadband access to individual and business consumers using digital subscriber line technology. LLU, a widespread wholesale offering in much of the developed world, is a key to stimulating the retail fixed broadband market. Unfortunately, LLU has never been fully implemented in Côte d’Ivoire. Alternative operators claim that Orange, the dominant operator, does not provide a technically and financially viable LLU offer. The recommendation is thus that to stimulate the retail fixed broadband market, ARTCI should effectively enforce wholesale fixed broadband remedies, such as the obligation for Orange to provide LLU to alternative operators.

Côte d’Ivoire should also seriously consider a more regional approach. A regional market with a common regulatory environment would allow operators to take advantage of economies of scale and scope, as well as other cost savings through, for example, avoiding duplication of costs along borders. Such a regional orientation could initially focus on the development of a regional market in wholesale bandwidth with interconnected backbones. This would include in particular pushing forward on the incomplete implementation of ECOWAS regional regulations, such as those on conditions for accessing landing stations for international submarine cables and those on access to national and international bandwidth by landlocked countries, as well as those promoting international roaming agreements that reduce excessive charges when traveling in the region. Such an effort would allow Côte d’Ivoire’s digital entrepreneurs to reach a broader regional market.

None of these policies is likely to work alone, because they rely on complementarities. For example, measures to enhance competition are not going to work unless competing operators provide wide enough coverage. Similarly, coverage alone will not result in service adoption without special policies to support people with low incomes. A coherent package of policies is needed. Designing it will require ingenuity, trust, and mechanisms of credible commitment. It would best be designed transparently with participation by operators, regulators, and entities that could credibly represent groups or communities of consumers, especially in rural areas. The results could be synthesized in a strategy document specifying targets and implementation steps.

3.3 Digital skills and literacy

Infrastructure will yield limited welfare or productivity unless a large part of the population has the skills to use the services it offers. Digital skills are generally evaluated in three levels:

- ▶ ICT user skills are digital skills that enable the safe use of the technology. They are the basic skills of digital literacy—the ability to understand and master the internet and the digital tools of ICT.
- ▶ ICT practitioner skills are the more advanced digital skills of ICT professionals, such as coding.
- ▶ E-business skills (or e-leadership skills) are a mix of digital skills and entrepreneurial skills that identify how digital technologies can create new business opportunities and models.

All three skills are low in Côte d'Ivoire.

3.3.1 Current state of digital skills

The National Development Plan (NDP) 2016–2020 gives the education sector a major role in its second strategic axis, “accelerating the development of human capital and social welfare.” Côte d'Ivoire has made improving education outcomes a top priority. Years of conflict damaged the education system, and in recent years, the country has embarked on a series of ambitious education reforms. In 2015, school attendance was made compulsory for children ages 6–16. Education spending has increased substantially, reaching 18.3 percent of government spending in 2018. But the quality of education and of learning outcomes remains a serious challenge, especially in rural areas.⁴¹

The net enrollment rate in preprimary education (ages 3–5) is 7.56 percent, with little difference between boys and girls. The net enrollment rate in primary education is 91 percent, with a difference of 1 percentage point between boys and girls. In lower secondary education, the net enrollment rate falls to 40 percent, with a difference of 10 percentage points between girls and boys. For upper secondary, the ratio is 15 percent for males and 12 percent for females). Thus, a high proportion of students drop out of secondary school. Only 58 percent of people ages 15–24 are literate (53 percent of females). But that combined figure shows major improvement from 2014, when the rate was 53 percent.

The latest Programme for the Analysis of Education Systems (PASEC) surveys,⁴² conducted in 2016, place Côte d'Ivoire's average score for French near the French-speaking African country average (517 for Côte d'Ivoire, compared with 584 for Senegal), while its results in mathematics are among the lowest (476 for Côte d'Ivoire, compared with 594 for Burundi).⁴³

Many students do not acquire basic skills. The success rate in the end-of-cycle examinations is low: in 2017, only 60 percent passed the first-cycle certificate,⁴⁴ and 45 percent succeeded at the baccalaureate.⁴⁵

Educational quality is low, with considerable disparities between the public and the private sectors, and between rural areas and cities. Nearly 43 percent of public education resources go to the top 10 percent of income earners. Boys consume 20 percent more resources than girls, and urban people 2.3 times more than rural people.⁴⁶ Almost all public teachers have theoretical and pedagogical training, unlike those in the private sector. In primary schools in 2016/17, eight in 100 teachers were employed without any pedagogical training, but the proportion was 7.5 times higher in the private sector (28.2 percent) than the public sector (3.8 percent). Teachers without the needed educational and sometimes academic skills are employed in all teaching cycles, especially in private and community institutions. Since a teacher's qualifications and knowledge can have a strong influence on student achievement, these lapses create a real problem.

Digital skills are poorly represented in primary and lower secondary courses due to a lack of training and suitable equipment. The low skill level appears in international rankings: Côte d'Ivoire ranks 113th of 129 economies in the Global Innovation Index human capital category, with a score of 33.7 in education and 7.2 in tertiary education, far behind countries at the same level of development, such as Benin, which ranks 92nd. But a new operating mode for the Centers for Animation and Teacher Training, following a pilot phase, allows integrating ICT into teacher training to improve student results.⁴⁷

The low level of human capital, particularly a low level of basic business skills, affects the start-up environment (see below for more detail). Many business founders lack basic knowledge of finance, accounting, and fundraising.⁴⁸

Despite education system deficiencies, the resulting low basic skills, and the youth of the population, no vibrant market has sprung up for educational technology companies offering digital educational solutions. Although Côte d'Ivoire has a number of educational technology companies, a recent survey concluded that no educational technology start-ups have raised sufficient capital or reached considerable scale.⁴⁹

Access to digital infrastructure is an important determinant of digital skills. Mobile internet has been expanding in Côte d'Ivoire, but access is still low in international comparison, especially in rural areas. In schools specifically, the computer room is the main point of access. Computer rooms are available at the college level, but there are few at the public

primary school level. No precise statistics on the number of computers per student are available. The computer rooms operate with a local server. Computers run Windows 7 to 10 with the Microsoft Office suite (Word, Excel, PowerPoint). The need for internet connections, licenses, operating systems upgrades, and local server upgrades creates more problems than unavailable terminals.

3.3.2 Recommendations

The low level of education constrains the adoption of digital technologies and limits the productivity and welfare benefits they could provide. Continuing to pursue improved educational attainment should be a major government priority.

In addition, the government should consider the following:

- ▶ Improving access to affordable mobile internet, which could enable the government to expand various types of e-education projects and encourage new actors to launch e-education and self-training and mobile learning services.
- ▶ Training techno-pedagogues (community assistant educators) to guide people in basic digital activities in training centers or mobile classrooms. Such programs could finish with a digital skills inventory on the model of the European PIX certification.⁵⁰
- ▶ Implementing of a code learning program from kindergarten to high school, with teachers trained in block programming and language.
- ▶ Expanding various e-education projects and encouraging new actors to launch e-education projects and mobile learning services. Strengthening support programs for start-ups that offer adult education programs in the digital environment.
- ▶ Creating new agile training centers in different regions. Examples are digital fabrication laboratories (“fablabs”) and creative rooms making basic digital equipment available. Such spaces enable successful entry into the digital world.⁵¹

3.4 Entrepreneurship

3.4.1 Background

Entrepreneurship is often defined as identifying opportunities and converting ideas into innovative and successful businesses. Successful entrepreneurship is difficult to identify in advance. Projects that venture capitalists invest in or incubators or accelerator programs host are often regarded as having more potential than others to succeed as businesses. And the level of technology a firm uses for production and administration can suggest its potential for expansion. For example, the number of firms receiving venture capital investment or adopting cutting-edge technologies can serve as a proxy for the potential and capabilities of an ecosystem's more innovative firms.

Entrepreneurship is key to develop new forms of digital technology, and adopting digital technologies can enhance new forms of entrepreneurship. Digital entrepreneurship comprises businesses that create or adapt new digital technologies as part of their core products or services for users or customers. Economywide entrepreneurship, by contrast, refers to businesses in downstream user industries across agriculture, mining, manufacturing, and services that adopt digital technologies to perform business functions. Typically, a rich digital entrepreneurship ecosystem involves both the providers and the adopters of digital technologies.

Digital entrepreneurs enable the creation of jobs, facilitate access to basic goods and services, and foster innovation

in financial services (such as mobile money), renewable energy (pay-as-you-go or mobile payment for solar energy), education (dissemination of teaching content and e-learning), agro-industry (streamlined supply chains), and health (mobile health and remote diagnosis). Start-ups' innovative solutions respond to specific problems leveraging digital technology in a way that is adapted to the local context.

The Ivorian government's NDP notes the immaturity of the digital economy in Côte d'Ivoire and so envisions boosting the ICT industry. The plan also contains measures to develop entrepreneurship by improving the technical and managerial capacities of small and medium-size enterprises (SMEs), including supporting incubators, easing access to finance, opening access to public procurement, and increasing research and development and technology transfer through technology extension and related services. The plan's general goal is a business environment that promotes both entrepreneurship in general and digital entrepreneurship.

3.4.2 The digital entrepreneurship ecosystem

General assessment

Côte d'Ivoire offers an ecosystem that is increasingly favorable to digital entrepreneurship. The population is young (78 percent under age 35) and increasingly urban (growing by

3.38 percent a year). Economic growth is strong. Investment is attractive, with 17 percent in technology. Technology sees increasing use, with a mobile internet penetration rate of 45.3 percent—in contrast to Sub-Saharan Africa’s 21 percent average—and growing by double digits annually. The French language is used throughout the country. And a nascent innovation ecosystem includes incubators, co-working spaces, and so on.

But Côte d’Ivoire’s start-up ecosystem lags those of comparable emerging economies, such as Anglophone Africa and Senegal. In the latest cycle of the World Bank L’Afrique Excelle acceleration program, 51 of 450 applicants were from Côte d’Ivoire, but only two were selected as finalists. Senegal, in contrast, had 47 applicants and nine finalists, despite having 10 million fewer people than Côte d’Ivoire. In the same vein, Partech Ventures found that in 2018, Ivorian start-ups mobilized only \$1 million (CFAF 590 million) in venture capital funding, in comparison with Kenya’s \$348 million (CFAF 205 billion), Senegal’s \$22 million (CFAF 13 billion), and Rwanda’s \$19 million (CFAF 11.3 billion).

The Seedstars Index (SSI) is another important source of information in assessing an entrepreneurship ecosystem. It measures the quality, maturity, and future potential of 54 emerging ecosystems around the world, including Côte d’Ivoire (where Seedstars has a presence) and other African countries. The SSI consists of three pillars, measured across 15 underlying factors, to determine the success of the ecosystem. The SSI pillars are

- ▶ *Culture.* How prevalent is the entrepreneurial mindset? How much are entrepreneurship and risk taking celebrated and promoted?
- ▶ *Environment.* How conducive is the legal, political, and infrastructure environment to building and growing companies?
- ▶ *Opportunity.* How big is the opportunity to grow and scale within and outside the home market? How easy is access to talented team members, expert mentoring, and funding?

A country’s score is calculated on a scale of 0–100 (0 worst, 100 best), with Silicon Valley as the benchmark at 100 points. Last, the index score is correlated with the country’s gross domestic product (GDP) per capita, to indicate how much the country’s entrepreneurship ecosystem is overperforming or underperforming its general economy.

In 2018, Côte d’Ivoire (Abidjan) scored below the world average and below the Sub-Saharan Africa average on the SSI. Côte d’Ivoire scored 43.9 points, while the Sub-Saharan African front runners, South Africa (Cape Town) and Kenya (Nairobi), scored 74.4 and 68.4 points, respectively. And Côte d’Ivoire performed worse than its GDP per capita would predict.

Skills

One major constraint in Côte d’Ivoire’s digital ecosystem is lack of skills—firms cannot find enough qualified staff, and firm founders do not have enough business skills. Except for the Institut National Polytechnique Félix Houphouët-Boigny, which intends to launch an entrepreneurship track in partnership with HEC Paris, and l’Ecole Supérieure Africaine des Technologies de l’Information et de la Communication, which plans to set up entrepreneurship-related content, most Ivorian education institutions emphasize theory and lecture courses and critically neglect hands-on project work and exposure to recognized executives and entrepreneurs. So, the only opportunity to learn such skills is work experience in the private sector with on-the-job training. But many companies, fearing employee turnover, do not want to provide training. Most Ivorian start-up founders lack the business skills that are expected of someone who wants to start and run a high-potential digital business.

Support organizations

Entrepreneurship support organizations (ESOs), which could partially offset these difficulties, have emerged in the past five years. Côte d’Ivoire currently has more than 22 ESOs, and the number is increasing. ESOs can strengthen entrepreneurs’ technical and managerial capacities and help them take their first few steps, such as identifying market needs and relevant products or services. They are also forums for networking and promoting a positive culture around digital entrepreneurship. ESOs take various forms, including incubators, accelerators, co-working spaces, mentorship networks, and others.

Two public initiatives, Fondation Jeunesse Numérique and Dream Factory, demonstrate government support for entrepreneurship. Some initiatives are not-for-profit organizations, such as Akendewa. Corporate involvement in the tech space is led by telecommunications companies, as shown by the Orange Fab and Y’ello Start (MTN) incubation programs. One incubator, Incub’Ivoire, which targets repatriated Ivorians (“re-pats”) was set up by diaspora members. In 2018, new support initiatives that were launched or announced included iHub, Orange Corners, Seedstars Academy, and Meltwater Entrepreneurial School of Technology—foreign programs replicated in Côte d’Ivoire.

But in terms of offering rigorous support, ESOs in Côte d’Ivoire are viewed as lagging behind those of other ecosystems in the region.⁵² And since research has shown that support structures run by people with no entrepreneurial experience can hurt the community, the lack of experienced staff and mentors is especially problematic. Given the weak pipeline of start-ups, most digital entrepreneurs who apply to participate in ESOs need several rounds of support before they qualify for private investments, additionally burdening the ESOs. There are currently no ESOs outside Abidjan.

And there are no university-based support systems, although they have provided crucial launchpads for start-ups in other places.

Markets

Access to markets is an important component of the entrepreneurship ecosystem. Côte d'Ivoire's business-to-consumers (B2C) market can be a springboard for digital start-ups, since it is larger than those in neighboring countries, is increasingly digitized, and has growing purchasing power. A consuming middle class—the primary market of any digital start-up—has emerged in the past 10 years, with 9 percent of Ivorian households having an income of more than \$1,000 (CFAF 590,000) a month, and 26 percent having an income between \$500 and \$1,000 (CFAF 295,000–CAF 590,000).

Located especially in urban areas, the middle class creates good opportunities for entertainment—Abidjan is one of Francophone Africa's hubs of fashion, music, media, and digital creation—and financial technology start-ups. But the volume or value of this market is limited for ambitious start-ups. The still low connectivity of households is a major constraint. And such enabling factors as digital payment, digital identity, and open publicly available application programming interfaces are not yet operationalized on a larger scale. Most consumers' low digital skills and literacy make advertising and marketing costlier.

Logistics is another critical constraint. A good example is Jumia, Côte d'Ivoire's leading online marketplace, with more than 300 employees, more than 650,000 unique visitors a month, and more than 3,500 Ivorian merchants making sales every month. But logistical issues mean that 40 percent of Jumia's orders in Côte d'Ivoire end up not being delivered.⁵³

Although the Ivorian market is large, it may not provide the required scale to reach profitability, reinforcing the need for start-ups to access the regional market, which is not yet easy. The WAEMU's common market, single currency, common language, and common regulations provide a strong basis for a B2C market beyond Côte d'Ivoire, and ECOWAS is also an attractive regional market. But in practice, regional integration is not yet deep enough for businesses to operate seamlessly across borders. For example, although the common market has made substantial progress over the past decade, both ECOWAS and WAEMU still struggle with nontariff barriers such as quantitative restrictions and import and export prohibitions.⁵⁴ And import/export procedures at the borders put Côte d'Ivoire at 163rd of 190 countries on the Doing Business classification for trading across borders.

Another potential market for start-ups is established businesses (the business-to-business market). In Côte d'Ivoire, links between start-ups and established businesses seem extremely weak. Ivorian firms in major employment-

generating sectors, such as agribusiness, have not absorbed many products or services from the emerging tech scene, nor have digital firms created many solutions for the specific needs of those sectors.

Smile Côte d'Ivoire is an exception. It has been selling integrated open source software (software as a service), especially to banks, insurance companies, and multinational telecommunications companies. It also sees potential markets in agribusiness. Mainstreaming closer links with larger firms would help digital start-ups better target their products and services, become viable more quickly, and attract venture capital funding.

Finally, the business-to-government market could be attractive, but access conditions are prohibitive for start-ups, and payment delays are common. The Council of Ministers adopted a set of measures in May 2019 to ease SME access to public market procurement, including reserving 20 percent of public markets for them—which is not mandatory but is monitored—while limiting the documents requested in calls for tender, decreasing the provisional deposit based on the estimated value of the work, raising the value thresholds at which the Public Procurement Directorate has a priori control and encouraging international and larger firms to partner with Ivorian SMEs. These efforts are positive.

The main hurdle is the limited contact between public administrations and local digital start-ups, which are not seen as credible and are deemed to lack capacity to compete with international start-ups (including some from Morocco). Start-ups complain in interviews that public contracts are awarded more through political connections, which nascent start-ups typically lack, than through fair competition. Digital entrepreneurs risk being limited to public contracts in areas not requiring expertise and with low value added, such as sales of computer equipment. Vendors also need timely payment.

Financing

Poor access to finance is the main factor limiting firm growth, according to 69 percent of Ivorian entrepreneurs.⁵⁵ Financing is especially scarce for start-ups. Commercial banks, due to high risks and transaction costs in financing start-ups, impose strict conditions, such as high interest rates, substantial equity funds, and cash and physical collateral valued at more than the credit amount. At the pre-seed stage corresponding to initial commercialization, start-ups have to obtain financing from friends and family members (who are often financially limited and generally disapprove of the choice to become an entrepreneur), or from rare competitions for prizes, which are time-consuming, sometimes do not deliver on their promises of rewards, and tend to support innovations in communication rather than in production. Because a start-up takes at least 12–24 months to break even, without

dedicated financing for its earlier stages, the entrepreneur is forced to have a full-time job and work on the start-up on the side, which slows growth considerably.

The financing gap is even greater at the seed stage. Comoé Capital is the only local investment fund that invests amounts small enough to meet start-up needs at this stage. Launched in 2018, it invests both in SMEs in traditional sectors and in digital start-ups. Most other international funds focus on projects larger than the needs of start-ups in Côte d'Ivoire.⁵⁶ Crowdfunding is limited by the lack of a legal framework, without which online fundraising could be considered a public offering subject to regulations that are highly cumbersome for start-ups.

Institutional, regulatory, and tax framework

The government's Doing Business reforms in recent years benefit digital start-ups, but challenges remain. In 2019, Côte d'Ivoire moved up 12 places from its 2018 Doing Business rank. The reforms that have helped start-ups the most include digitizing public services for companies and simplifying starting a business (on which the country is ranked 29th in the world).

But Côte d'Ivoire is still in the lower range of the general ranking, 110th of 190 countries. Paying taxes remains a key constraint for businesses, as highlighted in the 2017 Enterprise Survey, where tax rates and tax administration feature among the top 10 business environment constraints. Some 63 percent of firms consider tax rates as major constraints, and 48 percent consider tax administration as a major constraint.

Even so, Côte d'Ivoire recently jumped to 114th from 175th of 190 economies on the paying taxes indicator of the Doing Business report. The current reform momentum must continue streamlining the challenging business environment. According to Transparency International, Côte d'Ivoire ranks 103rd of 180 countries in corruption (an additional pain for start-ups), even though most governance indicators point to progress in recent years.

3.4.3 Recommendations

Expand business skills

Business skills need to be increased through more managerial and tech training programs and more practical educational elements in public and private schooling, along with more internships and shadow programs in industry. At the same time, some focus on soft skills and technical skills demanded by industry would be helpful. And government and private sector initiatives to address limited digital skills need to be strengthened.

Expand entrepreneurship support organization capacity

Intangible innovation infrastructure is more important than tangible infrastructure. Although many countries build technology parks and hubs to attract and encourage private sector innovation, they are only effective when the local innovation system is developed enough to support them. Their benefits are limited if local firms lack the required absorption capacity or the required human capital.

Promoting and supporting the best human capital and leadership within selected start-up programs is critical. Engaging private sector leaders with entrepreneurial experience to teach or helping them to provide mentoring services will bring their networks, as well as their knowledge about financing and business challenges, to the support of new entrepreneurs.

Covering the operating and management training costs of selected start-up programs will strengthen the sector's operations. Many start-ups struggle to achieve sustainable business models and so need multiyear milestone-based funding and strategic technical assistance. Ivorian entrepreneurship support organizations could improve their start-up support with rigorous improvement plans including key performance indicators for developing their teams, strategy, and programming. ESOs should specialize—they should not all target the same kind of tech entrepreneurs and propose the same support, but should design complementary programs, and they will need to communicate with each other to do so. And although most ESOs are active only in Abidjan, the rest of the country needs coverage as well, whether on-site or remote. Engaging universities in entrepreneurship support will be crucial, since they have potential as launchpads for ventures.

Intensive programs to equip high-potential youth with the business and technical skills to launch successful technology companies should be encouraged. One example is the pan-African training program Meltwater Entrepreneurial School of Technology, which has provided one-year intensive software and business development training, as well as follow-on incubation services, to more than 400 rigorously selected African youth over the past 10 years. Many of those youth have successfully developed tech companies and gained admittance to top accelerator programs and access to investment funds.

Use entrepreneurship support organization capacity for public entrepreneurship programs

ESOs can also provide public entrepreneurship programs. For example, the Youth Employment Agency (Agence Emploi Jeune) has delegated a three-month training and coaching

program to Seedstars to help entrepreneurs reach a minimum viable product. Similarly, the Digital Solutions Project for the Opening up of Rural Areas and e-Agriculture (Projet de Solutions Numériques pour le Désenclavement des Zones Rurales et l'e-Agricultur) intends to contract with ESOs to support e-agriculture innovations. Other agencies could contract with ESOs to implement public entrepreneurship programs, including capacity building and access to finance and markets.

Expand regional markets

Given the imperative for most digital firms to scale up quickly, accelerating digital market integration in West Africa and across the continent will be important. Advisory services, international trade fairs and exhibitions, seamless market opportunities and exposure, and access to leading tech ecosystems such as Kenya's can lead to expansion into a regional market as big as the domestic base entrepreneurs in the major continental and global digital hubs enjoy. The common market should be strengthened, and trade across borders should be further eased. Remaining nontariff barriers should be eliminated, and nontariff measures should be harmonized to international standards.

The established private sector and the Government of Côte d'Ivoire can catalyze firm growth by being early customers of entrepreneurs providing useful digital services. A program to pair public administrations and established firms with digital start-ups, for example, could conduct a series of calls for start-ups to take part in open innovation/public procurement for public programs in priority areas such as agriculture, energy, and transport. This procurement would ultimately lead to contracts or to support programs combined with internal product or service development programs.

Increase the availability of finance

Since the Ivorian digital start-up ecosystem is nascent, entrepreneurs need pre-seed financing to create prototypes, test the viability of their business ideas, take the initial steps of commercializing their innovations, and establish their companies. Financing can take the form of soft loans—noncollateralized and interest-free loans that can be repaid in the event of success or transferred to a grant if the start-up fails—of CFAF 5 million to CFAF 15 million (\$8,000–\$25,000). International experience suggests that using start-up support agencies (selected through a competitive call for proposals) would be the most efficient way to disburse the funding. Those agencies should be required to ensure that the pre-seed soft loan processes—application, disbursement, and audit—are rigorous, but also simple and quick. The review should be quick, transparent, and independent of the government and should be conducted by existing entrepreneurs and other private stakeholders who are knowledgeable about entrepreneurship and experienced in various industries.

When digital start-ups reach later stages of development, they will need seed investments to go from initial commercialization to achieving traction and generating revenues. The recommended solution is equity investment from business angels and seed investment funds, taking minority shares of CFAF 30 million to CFAF 150 million (\$50,000–\$250,000).

Prompting these funding sources will require dedicated public intervention. To facilitate the long-lasting emergence of business angel clubs (for example, Ivoire Angels) to build on the nascent interest of some local individuals would require technical assistance, such as awareness-raising and training programs, through exchanges with peers from other regions or countries with similar environments. Angel clubs would also need dedicated tax incentives (for capital gains) and guarantee mechanisms.

Seed investment funds need to be capitalized with public concessional funding. The best approach is a fund of funds, in which the public sector does not substitute for private capital but rather crowds it in. The approach has been vital in some economies fostering a significant number of successful start-ups, such as Israel in the case of the Yozma Fund and France in the case of the Public Investment Bank. The future Ivorian Innovation Fund (Fonds Ivoirien de l'innovation), whose preparation was announced by the Côte d'Ivoire government in 2016, could play this role of capitalizing seed funds. But given the small size of Côte d'Ivoire's start-up market, such public interventions would be better positioned at the regional level, across either the WAEMU or ECOWAS.

Attracting seed investment funds to Côte d'Ivoire, especially private equity and venture capital funds, would require regulatory and taxation reforms.⁵⁷ A new WAEMU-level (or national-level) legal and regulatory framework is required to provide legal certainty for the industry and to properly regulate funds and fund managers in line with international best practice. The framework should clearly set out the licensing conditions and supervision of the state over private equity and venture capital funds. It should be accompanied by a revised tax regime, also in line with international best practice, especially regarding taxation of management fees. Exits through initial public offerings should be subject to a favorable tax regime to encourage listing of companies on the regional stock exchange.⁵⁸

Improve the regulatory and tax environment for start-ups

Despite improvements in recent years, Côte d'Ivoire ranks low on the Doing Business indicators. An improved investment climate would benefit the start-up environment, but the regulatory and tax environment for digital entrepreneurship and start-ups should be directly addressed as well. A consultative approach would be best, with participating stakeholders including the Ministry of Digital Economy and

Post, representatives of the entrepreneurship community—incubators, funds, and start-ups—the Ministry of Economy and Finance, especially the General Directorate of Taxation, and the Ministry of Small and Medium Enterprise Promotion. Formed into a consultative body, they would identify the main

constraints on business creation and growth, benchmark against best practices, construct a reform program, and follow implementation closely. In addition, the continuing digitization of administrative procedures would prove useful.

3.5 Digital financial services

Digital financial services (DFS) refer to the broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances, and insurance. DFS usually employ agents and networks of other third-party intermediaries to improve accessibility and lower the overall service delivery cost. They expand financial inclusion by providing digital access to financial services by excluded and underserved populations, globally and in Côte d'Ivoire. In some economies, DFS—specifically mobile money accounts—have the potential to widen account ownership and reduce the gender gap and the wealth gap in account ownership.⁵⁹ In Sub-Saharan Africa, the share of adults who have a financial account increased from 34 to 43 percent between 2011 and 2017. Some 21 percent of adults in Sub-Saharan Africa now have a mobile money account—nearly twice the share in 2014 and easily the highest of any region in the world.

Owning an account is an important first step toward financial inclusion. To benefit fully from it, people need to be able to use it in safe and convenient ways.⁶⁰ That requires a well-developed payment system, good physical infrastructure, appropriate regulations, robust consumer protections, a secure and reliable telecommunications infrastructure, and the skills—including basic financial literacy—to use such content, services, applications, and infrastructure. Financial services need to be tailored to the needs of disadvantaged populations such as women, poor people, and first-time users of financial services who may have low literacy and numeracy skills.

DFS carry risks, such as overindebtedness and exposure to cybercrimes. Moreover, less literate and illiterate individuals still depend on help from others to use DFS, thereby limiting their use and increasing their risk of being defrauded. To maximize DFS benefits, providers and regulators must build their capacities to address these risks.

Côte d'Ivoire's NDP 2016–2020 has the following axes that DFS can benefit. DFS can contribute to strengthening the quality of institutions and governance (axis 1), accelerating the development of human capital and welfare (axis 2), and accelerating the structural transformation of the economy through industrialization (axis 3). The financial inclusion rate is one of the six key indicators used to measure progress on axis 1.

The Central Bank of West African States (Banque Centrale des États de l'Afrique de l'Ouest, or BCEAO)– WAEMU regional

strategy for financial inclusion emphasizes DFS. The strategy, adopted in 2016 and operationalized in 2018, outlines a vision and priorities aiming to achieve a financial inclusion rate of 75 percent of adults in WAEMU by 2025. One of the strategy's pillars is to promote innovations that ensure the inclusion of excluded populations through providing tailored financial products and supporting and incentivizing DFS.

DFS could play a critical role in the government's National Agricultural Investment Program (the agriculture pillar of the NDP). They could also be pivotal in the government's comprehensive national e-agriculture strategy (updated in 2014), which aims to modernize the country's agriculture sector and enhance its productivity with an increase in the country's exports of cocoa, coffee, and other produce and decrease its food imports. The strategy requires suitable access to information services and data centers as part of an ICT package aiming to make real-time market information systems available via mobile phones and tablets. In Côte d'Ivoire, digital financial services consist primarily of electronic (or mobile) money and mobile money accounts, which can be used to store money and make and receive transfers.

3.5.1 The current state of digital financial services in Côte d'Ivoire

Regulatory framework

A major portion of the regulatory framework for the DFS market in Côte d'Ivoire is designed at the regional level. The BCEAO, which regulates financial sector activities in Côte d'Ivoire and the WAEMU region, updated its guidelines for DFS in 2015. E-money instruction 008-05-2015 regulates the terms and conditions of issuing and managing electronic money and allows nonbank entities to provide e-money services under a specific prudential regime. In addition, the BCEAO has released additional regulations for payment systems, agent networks, consumer protection, and know-your-customer and anti-money laundering/combating the financing of terrorism regulations.

The BCEAO's updated guidelines opened the DFS market to mobile network operators (MNOs) to compete independently of banks (until then, MNOs provided e-money services in partnership with banks). The guidelines allow e-money issuers to include banks, payment financial companies,

microfinance institutions (MFIs), and e-money institutions. All are permitted to issue e-money, under a few conditions, though separate microfinance regulations severely limit MFI involvement in issuing e-money (see below). Nonfinancial companies must create an electronic money institution (EME) as a separate company and apply for an EME license (this is what the MNOs have done). The EMEs must be solely dedicated to e-money issuance—providing payments, transfers, and cash-in/cash out services. They cannot provide savings or credit services. EMEs can own shares only in other entities involved in e-money issuance. To offer digital saving and loan products, nonbanks must continue to partner with financial institutions.

Access to financial accounts

Access to financial accounts and the use of formal financial services have increased over the past few years from about 34 percent of the population age 15 and above in 2014 to 41 percent in 2017 (figure 3.2). The increase is completely due to the increased share of the population from 24 to 34 percent holding a mobile money account, while the share of population holding a financial institution account remained constant at 15 percent—much lower than the Sub-Saharan African average of 33 percent. Clearly, the availability of

mobile money services has compensated, though in a limited manner, for the very low penetration of financial institutions.

Côte d'Ivoire leads the WAEMU countries in electronic money activities. In 2018 it had 23.6 million accounts, 37 percent of the total in WAEMU. A total of 569 million operations were carried out, for a value of CFAF 9,703 billion. According to Findex (2017), the financial inclusion rate is 41 percent, slightly below the Sub-Saharan African average of 43 percent, and much lower than its neighbor Ghana's 58 percent (figure 3.3). Despite the overall increase, a gender gap and a rural-urban gap persist. Only 36 percent of females have an account, and the shares of account ownership in rural areas and among the poor are lower than average. The gender gap for mobile money accounts has been falling over the years, while the gender gap for financial institution accounts has been increasing.⁶¹ A 2018 survey also showed that more educated and numerate people have much higher rates of use.⁶²

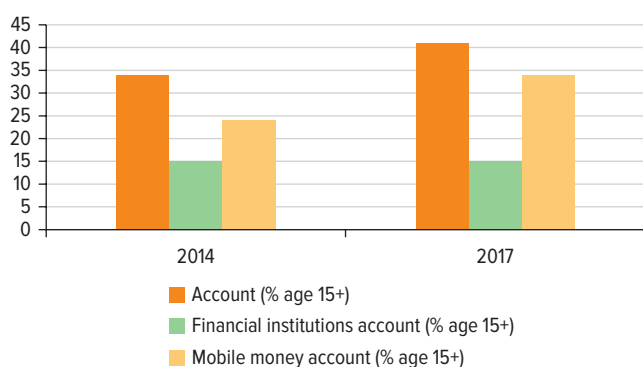
Market developments

Eight institutions are authorized to issue electronic money. The EMEs associated with MNOs are by far the market leaders. In the second quarter of 2019, Orange Money CI led with a 48 percent share of the market, MTN MFS had 29 percent, and Moov had 23 percent.

Banks have started launching their own DFS products to compete with MNOs. Recent examples include the mobile banking Xpress account launched by Ecobank and the mobile money solution YUP of Société Générale. In addition, Orange and NSIA bank group created Orange Bank to provide retail banking, microcredit, and insurance services.

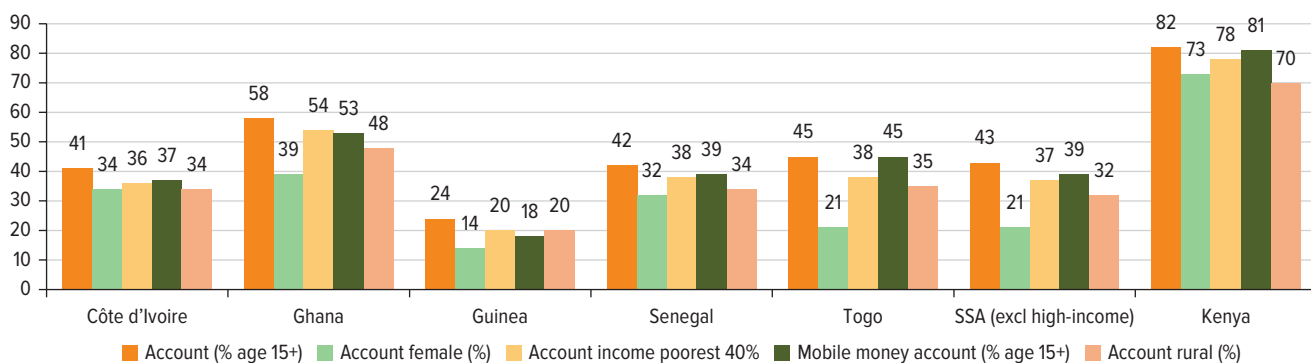
Microfinance institutions have been slower to launch DFS. Although many have partnerships with such money transfer operators as Western Union, Money Gram, and Ria, they have been slow to create partnerships with MNOs. They often lack the investment capacity (both financial and human resources), claim to be discouraged by the MFI regulations (under which revenues from non-savings-related

Figure 3.2. Access to financial accounts in Côte d'Ivoire



Source: World Bank 2017b.

Figure 3.3. Account ownership, selected countries, 2017



and non-credit-related services cannot exceed 5 percent of their total revenues), and have difficulty becoming EMEs themselves (since they have smaller customer bases and transaction volumes than MNOs and less ability to meet requirements of regulations.⁶³

Although the overall use of DFS grew considerably between 2014 and 2017, most transactions are still for basic services such as cash-in/cash-out, paying bills, person-to-person transfers, a few government-to-person payments, safe money keeping, and airtime purchases. Rates of debit and credit card ownership are still very low (figure 3.4).

DFS have several potential areas for growth in Côte d'Ivoire. One is international remittances. Orange, MTN, and Moov offer international remittance services to Côte d'Ivoire's mobile money users, connecting them to several markets across the region. In 2018, international remittances via mobile money entailed 7.5 million cumulative transactions (both sending and receiving), with a total value of CFAF 388 billion in Côte d'Ivoire. A second area is payments and savings in agriculture. And a third is general applications to improve productivity through digitizing information.

Digitization of government revenue collection and payments is another potential area for growth. School fee payments are already digitized, but many taxes and most pension, health, and social security contributions are not. Salaries and pensions of civil servants are being digitized, as are student scholarships and certain social security benefits. The potential for digitized flows is especially high in health and social security contributions and benefits.

Infrastructure

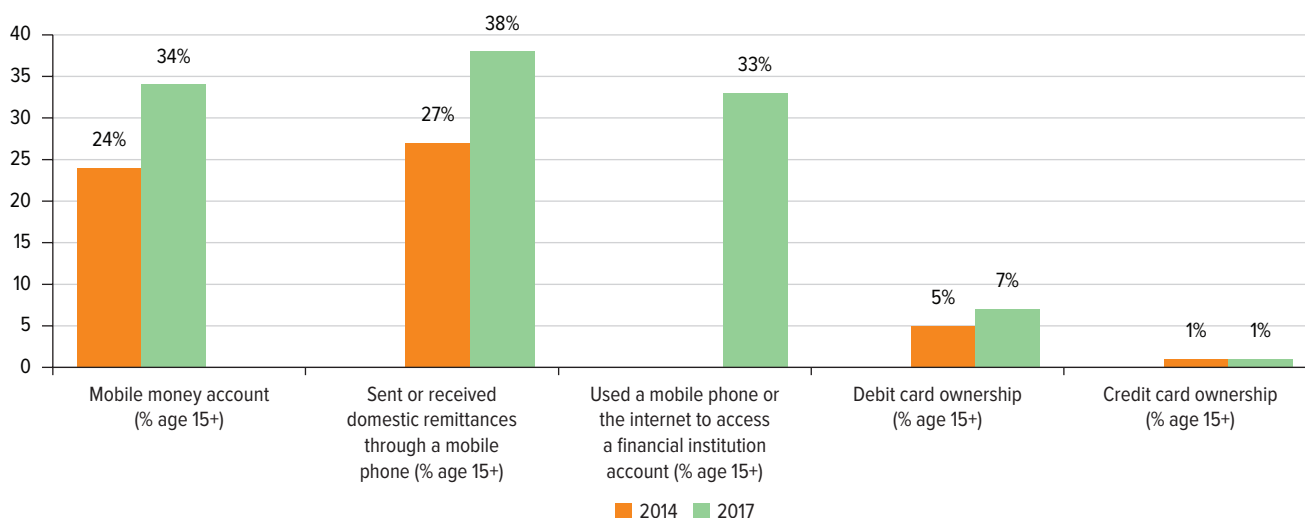
Côte d'Ivoire's financial sector benefits from WAEMU's robust payment systems and infrastructure, managed by BCEAO. The interoperability project launched in 2016 extends interoperability to e-money transactions and promotes the integration of all types of digital payments in WAEMU. The project aims to establish a multilateral payment solution for efficient exchanges between all players and networks, and for all types of accounts (such as banks and e-wallets) and channels (including card, mobile, internet, and wire transfer). Eventually, the project will see MNOs, MFIs, and financial technology companies (fintechs) become part of the payments ecosystem in WAEMU's eight countries and will support micropayments over mobile phones on the shared system.

Regulatory constraints

The MFI Law of March 2010 limits MFI involvement in noncore activities such as issuing e-money, by stating that MFI revenues from non-savings-related and non-credit-related services cannot exceed 5 percent of their revenues. Although MFIs can provide credit and saving services, they are not yet permitted to contract with agents, offer services through them, or be positioned to market second-generation digital financial services such as savings, credit, and insurance.

The WAEMU regulatory framework enables financial services providers to use agents for e-money and rapid fund transfers, but it is more restrictive about agent banking. Clear guidelines for EMEs managing agent networks in the 2015 revised e-money instructions have enabled EMEs to grow the number of agents. But the instructions restricted MNOs,

Figure 3.4. Digital financial service use in Côte d'Ivoire



Source: World Bank 2017b.

unlike banks, to using their retail agents (subagents) for cash-in/cash-out transactions. The instructions for MFIs require them to establish actual branches to offer agency banking. The Banking Law 2010 permits banks to conduct agency banking, but the market deems the conditions too stringent, and agency banking has not developed in Côte d'Ivoire.⁶⁴ There is no specific regulatory framework for fintechs, and although they are not prohibited, the lack of guidance slows their emergence.

Access to the USSD channel, which hosts a real-time session between a mobile handset and the application handling the service, is critical to developing DFS. Mobile money transfers and even value-added services such as digital credit can be carried out using the USSD short code menu with a basic mobile handset over just a 2G telecommunication network—that is, without an internet connection. Telecommunications legislation states that network access, interconnection, and sharing of essential infrastructure should be provided on an equal, nondiscriminatory basis. Dominant providers (those with at least a 25 percent market share) are required to offer interconnection, and refusal to share essential infrastructure can be deemed anticompetitive. ARTCI, the telecoms regulator, is now requiring MNOs to open the USSD channel to external service providers. Although the regulations promote access, they do not promote timely response by operators. To date, more than 50 requests for USSD codes have been submitted, but only four have been granted access.

Infrastructure constraints

Interoperability is not complete, but the BCEAO shows commitment to securing it. Although interoperability is not mandated by regulation, the 2015 e-money instruction requires issuers to facilitate interoperability with other payment systems by taking the necessary technical and operational steps. There are plans to secure full interoperability through the regional payments switch (GIM-UEMOA). In the meantime, partial interoperability between different payment instruments hinders the uptake of e-payments. Various payment instruments (such as bank cards and mobile) are not yet fully interoperable, preventing the transfer of funds between users belonging to different networks.

Other constraints

Digitizing all government payment flows can drive DFS adoption. Digitization of government payments is not yet fully realized. The Côte d'Ivoire government has developed several initiatives to digitize financial flows, both government-to-people and people-to-government, including payments of school fees, registrations and payments for certain national competitions, and company payments of taxes and customs tariffs. The government also has an agreement with Visa to digitize the payments of civil servant salaries, scholarships, transport services, and farmer subsidies.

Low financial and digital literacy rates prevent new users from adopting DFS. The literacy rate is 47 percent for adults ages 15 and older. It is even lower for women, at 41 percent. Even among young people ages 15–24, it is only 58 percent. Illiteracy creates a risk that consumers, many previously unbanked, will not have the knowledge, skills, or confidence to become discerning, regular users of DFS. For example, in the Advans pilot to work with 7,000 cocoa farmers and 58 cooperatives, many found it challenging, due to illiteracy, to adopt the USSD channel and digital savings.

Not having a national identification card prevents many consumers from opening a transactional account. Although the Global Findex reports that 68 percent of adults had an identity card in 2017, another report records only a 45 percent registration rate for the national identity card.⁶⁵

3.5.2 Recommendations

Creating a level playing field

Regulations for agency banking should be reviewed. Agency banking can reach the unbanked, especially the majority of the population living in rural areas, with an affordable distribution network that incorporates digital solutions. While regulations on e-money agents have greatly expanded the reach of mobile money, those on agent banking appear too restrictive for banks and do not exist for the microfinance sector. The WAEMU regulations on agency banking need revision to enable financial service providers to expand their own agent networks and offer a full range of products and services.

A partnership framework between the Central Bank and the National Telecommunications Regulatory Authority should be established. The two are responsible for many areas, including taxation, electronic commerce, USSD code access, and electronic signature and consumer data protection. So, to stimulate innovation and also to protect consumers, they must reach a partnership agreement.

Infrastructure

Financial infrastructure should be modernized in several ways, including the full interoperability of the regional payment system and third-party access to USSD codes.

Sectoral focus

Agricultural value chains should be digitized in Côte d'Ivoire, the world's largest cocoa and cola nuts producer, supported by vast improvements in the integrated digital value chains of banks, MFIs, EMEs, and fintechs. That development would contribute directly to reducing poverty and increasing people's resilience.⁶⁶ And the digitization of agricultural value chains could increase farmers' access to credit, because the transaction transparency it would provide could serve as a proxy for a farmer's credit history and creditworthiness.

Digitizing government payments

Digitizing government services, especially payments, could have a major impact. It should be embedded in national strategies, and advocates should be designated to drive the initiatives. In addition, the development and use of electronic signatures should be encouraged.

Financial literacy and education

Improving financial literacy is crucial for developing DFS. One possibility is to engage the Côte d'Ivoire postal service, which has a network of 200 branches throughout the country

and enjoys a certain amount of public trust, to facilitate the population's financial and technological education. The government could partner with the postal service for payments from the government to people and from people to the government (for example, nontax revenues or fees).

Some of these measures, such as full interoperability of payment systems, and a changed regulatory framework, fall within the remit of the BCEAO. But many, such as digitizing government payments, liberalizing USSD codes, and improving financial literacy, are under national jurisdiction—for these, Côte d'Ivoire could play a leading role in the region, encouraging its neighbors to follow suit.

3.6 Digital platforms

Over the past 10 years, Côte d'Ivoire has expanded the use of public digital platforms that allow citizens and government to connect and exchange information: citizen-to-government, government-to-citizen, and government-to-government. And as noted, digitizing public financial flows, both from government to person and person to government, has made progress.

Ongoing initiatives to expand access, innovation, and user-centric digital public services and infrastructure include the following:

- ▶ Digital identification, supported by the World Bank West Africa Unique Identification for Regional Integration and Inclusion project. The lack of a national identity scheme is one of the most important barriers to effective deployment of public

services. As indicated in section 3.5, many people lack a national identity, let alone a digital identity.

- ▶ Digitized public administration procedures and services, such as *miliê*—a website for collecting citizen complaints—and *e-Demarche*—a portal for several public services.
- ▶ Digitized tax and treasury services, such as *e-impots* for customs, and *Tresor-Pay* for payments to public agencies.

But no institutional coordination gathers these various initiatives. Existing digital platforms are not interoperable. The government should coordinate them in a national strategy for developing the digital economy, giving high priority to providing universal digital identity.

3.7 Cybersecurity

As economies depend more on information and communications technology, they become more vulnerable to network attacks—threats to the internet and to other public and private networks. The most serious cybersecurity risks threaten critical information infrastructures supporting financial services; logistics systems; government services; airport and air traffic control systems; and control systems for gas, power, drinking water, and other utilities. The safety and integrity of data networks is critical for developing the digital economy. Basic public trust in modern economies and the electronic networks they depend on erodes when electronic data are stolen, become corrupted, or can no longer be authenticated. Establishing and maintaining adequate cybersecurity systems is crucial to combat online fraud,

protect sensitive data, maintain consumer confidence in data-driven services, and facilitate data sharing of governmental records.

The Côte d'Ivoire government has adopted several cybersecurity-related measures based on a national assessment completed in 2015 and multistakeholder consultations during such events as the West Africa Internet Governance Forum, of which Côte d'Ivoire is a member, and the Initiatives for Internet Governance in Côte d'Ivoire. As part of this national cybersecurity drive, the government introduced many laws: Decree Number 2011-476 identifying subscribers of telecommunications services; Order (ordonnance) Number 2013-293 on telecommunications and ICTs, the law on electronic transactions, the law on

data protection, the law on the information society, and the order on e-services. The Cybercrime Law, Number 2013-451, criminalizes cybercrime offenses. On the Global Cybersecurity Index (2018) prepared by the ITU, Côte d'Ivoire ranks 86th globally and ninth of 42 in the Africa region.

3.7.1 Current state of cybersecurity in Côte d'Ivoire

The World Bank has been using the Global Cyber Security Capacity Centre's (GCSCC) Cybersecurity Capacity Maturity Model to assess countries. Recently, in collaboration with the GCSCC, the World Bank reviewed Côte d'Ivoire's cybersecurity capacity at the invitation of the Ministry of Digital Economy and Post. This section summarizes their main findings and recommendations.⁶⁷

The model identifies five critical dimensions of cybersecurity capacity. The maturity of each dimension is evaluated on a scale of five stages, ranging from start-up to dynamic. The start-up stage employs an improvised approach, whereas the dynamic stage uses a strategic approach and the ability to adapt dynamically in response to environmental considerations. The main findings are as follows.

Cybersecurity policy and strategy

This dimension measures capacity to develop and deliver cybersecurity policy and strategy and to enhance cybersecurity resilience through improvements in incident response, crisis management, redundancy, and critical infrastructure protection capacity. The dimension also considers early warning, deterrence, defense, and recovery. Côte d'Ivoire currently has no official national cybersecurity strategy nor a formal national cybersecurity program. Even though a strategy was drafted in 2015, it was never adopted. On most elements of this dimension, Côte d'Ivoire's maturity is at the start-up stage (stage 1).

Cybersecurity culture and society

Digital system security not only relies on administrative authorities but requires users' understanding and support. This dimension underscores the centrality of users. It reviews important elements of a responsible cybersecurity culture and society, such as all actors understanding cyber-related risks; a learned level of trust in internet services, e-government, and e-commerce services; and users understanding how to protect personal information online. The review found that in Côte d'Ivoire, users' knowledge of safe online practices is limited, leading to an environment where users too often either blindly trust the internet or are discouraged by general distrust from using online services. In

addition, the recognition of privacy as an essential component of cybersecurity was generally low. The maturity of Côte d'Ivoire's cybersecurity culture was rated as between start-up (stage 1) and formative (stage 2).

Cybersecurity education, training, and skills

This dimension reviews the availability, quality, and uptake of cybersecurity awareness-raising programs and educational and training offerings for various government stakeholders, the private sector, and the general population. Awareness-raising programs were rated as formative (stage 2). The availability and quality of educational and training offerings and the quality of educators and training for cybersecurity professionals was rated as start-up to formative (stages 1-2).

Legal and regulatory frameworks

This dimension examines the government's capacity to design and enact national legislation directly and indirectly relating to cybersecurity, particularly for ICT security, privacy and data protection, and other cybercrime-related issues, as well as the capacity to enforce such laws through law enforcement, prosecution, and courts. The review rated Côte d'Ivoire's legal and collaboration frameworks to combat cybercrime as formative to established (stages 2-3). It rated the capacity of the criminal justice system and law enforcement to investigate cybercrime and the prosecution's capacity to present cybercrime and electronic evidence cases as formative (stage 2).

Standards, organizations, and technologies

This dimension addresses the effective and widespread use of cybersecurity technology to protect individuals, organizations, and national infrastructure. It specifically examines the implementation of cybersecurity standards and practices, the deployment of processes and controls, and the development of technologies and products to reduce cybersecurity risks. The review rated elements of this dimension in Côte d'Ivoire (such as adherence to standards, internet infrastructure resilience, software quality, technical security, and cryptographic controls) as stage 1 or 2 or in between. It rated the country's overall maturity on this dimension as start-up (stage 1).

Overall, Côte d'Ivoire has progressed further on adopting the legal framework for cybersecurity and less far on building the necessary technical, cultural, social, and administrative environment to implement it effectively.

The European Union (EU) supports the project Organised Crime: West African Response on Cyber Security and Fight against Cybercrime. The project aims at improving the resilience and robustness of information infrastructure and improving the capacities of relevant stakeholders.

ECOWAS has been working on an ECOWAS Regional Cyber Security and Cybercrime Strategy, which has been developed by Expertise France in close cooperation with representatives of member states on the Regional Technical Committee. A workshop was convened on January 30, 2020 and the regional strategy document was expected to be finalized for submission to the ECOWAS Commission, EU Delegation in Nigeria, and the ECOWAS Council of Ministers for adoption.

3.7.2 Recommendations

The following are recommendations to improve cybersecurity in Côte d'Ivoire⁶⁸:

National strategy

A national cybersecurity strategy should be developed through an inclusive and consultative process, with feedback provided by all stakeholders included before formal approval. The size of the allocated budget should be reassessed. A national crisis management plan, describing how the country would respond to a cybersecurity-related crisis should be considered.

3.8 Summary of key recommendations

Expanding the digital economy in Côte d'Ivoire will require coordinated and complementary actions on many fronts. The best way to approach these cross-cutting tasks is to design and implement a national digital strategy. Such a strategy, developed in a consultative manner, should specify targets and identify policy actions and their sequence. The strategy would clarify the complementarities across policy areas and coordinate the actions of domestic and regional public agencies and other stakeholders. Its implementation should be supported by periodic impact evaluation reports used to revise and improve it. It should be designed to generate the data necessary for such impact evaluation.

The strategy should include policies and initiatives in the following areas:

Culture and mindset

The design and oversight of cybersecurity awareness programs consolidated across sectors at the national level within a single agency such as ARTCI should be considered. The agency would also be responsible for coordinating all national cybersecurity awareness efforts and initiatives, especially for academia, civil society, and cybersecurity professionals.

Education and training

The forthcoming National Cybersecurity Strategy can advance the development and implementation of a national cybersecurity awareness-raising program, informed by international examples.

Legal framework

A review of legal and regulatory mechanisms for ICT security should identify gaps and overlaps and amend or enact new laws accordingly.

Standards

A new program should identify and adopt or adapt international information risk management standards, frameworks, and solutions applicable to government agencies and ICT infrastructure. The adoption of relevant standards in software development, in coordination with professional communities such as information technology professionals, academia, and the private sector should be promoted.

Digital infrastructure

- ▶ Expand infrastructure, especially to unserved, underserved, and rural areas through a combination of coverage obligations placed on operators, tax incentives, subsidy mechanisms, and infrastructure-sharing arrangements. The use of digital infrastructure by poorer people is a condition of the digital economy expanding and digital entrepreneurs profitably designing and scaling up inclusive apps.
- ▶ Rely increasingly on auctions to allocate spectrum while preventing collusion.
- ▶ Allow spectrum trading after allocation, subject to an assessment by ARTCI or the competition agency.

- ▶ Develop a more regional approach to developing digital infrastructure, by initially emphasizing the development of a regional market of wholesale bandwidth with interconnected fiber backbones, and accelerate the development and effective implementation of relevant regional regulations.

Digital skills

- ▶ Continue to improve educational attainment and reduce illiteracy. Expand e-education projects and encourage new actors to launch e-education projects and mobile learning services.

Entrepreneurship

- ▶ Improve business skills, including by mobilizing universities and mentors, and boost entrepreneurship by supporting institutions to develop sustainable business plans and strategies to help start-ups.
- ▶ Actively support the production and dissemination of useful apps, especially in agricultural value chains and in education.
- ▶ Develop a soft loan program for pre-seed financing for start-ups. Improve the regulatory environment

for private equity and venture capital to promote seed financing for start-ups.

Digital financial services

- ▶ Encourage the further expansion of digital financial services by leveling the playing field among various types of financial institutions, modernizing several types of financial infrastructure (including the regional payment system and USSD codes) and opening them to more kinds of service providers, and educating consumers on digital financial services.

Digital public platforms

- ▶ Ensure that all citizens have national identity, including digital identity.
- ▶ Expand digital government services and payments.

Cybersecurity

- ▶ Develop a national strategy for cybersecurity through an inclusive and consultative process, supported by a national awareness program.

Notes

1. This chapter relies heavily on the World Bank (2019a, 2020a, 2020b).
2. <https://www.worldbank.org/en/country/cotedivoire/overview>.
3. Stratégies de développement du secteur des TICs, 2016.
4. Some 75 percent of OCI's equity is owned by the French international operator Orange Group, which is active in more than 10 African countries. The Côte d'Ivoire government owns 15 percent of OCI, and local industrial group Sifcom owns the remaining 10 percent. MTN Côte d'Ivoire is majority-owned (66.83 percent) by the South African international MTN Group. Moov is 84.99 percent owned by Maroc Telecom, itself majority-owned by United Arab Emirates-based Etisalat Group. All three operators are also active in other parts of Africa.
5. Telegeography 2020, 16.
6. Telegeography 2019.
7. Telegeography report Côte d'Ivoire 2019Q2. "Aircom had already ceased offering services by that date, while the other two firms had fewer than one million customers between them, accounting for less than 4 percent of the market. The watchdog had previously urged the three cellcos to merge their operations to create a stronger challenge to the trio of larger players, but its suggestion went unheeded." (p. 16)
8. ARTCI (2019a) reports the penetration rate for mobile telephones at 141.6 percent as of September 30, 2019.
9. Among the most well-known are the OECD Telecoms Price Baskets. <https://www.oecd.org/sti/broadband/price-baskets.htm>.
10. ITU provides price data for standardized packages, largely based on the OECD approach. The mobile cellular basket consists only of voice services.
11. Other sources provide similar estimates. Since 2017, prices for voice products seem to have increased. Research ICT Africa reports \$10.60 for the "cheapest mobile prepaid voice product" in the fourth quarter of 2017, corresponding to a rank of 39th of 51 African countries. The figure for 2019 is higher, \$11.50 with a rank of 38th. GSMA data also show an increase as percentage of per capita GDP in both voice and data between 2014 and 2018.
12. A widely accepted benchmark for affordability is that the cost of mobile services, including the cost of the handset, should be below 5 percent of income. If mobile services are to be affordable for the poor sections of the population, then on average the ratio of the cost of services to income should be below this benchmark. The target adopted by the United Nations Broadband Commission in 2018 states that "By 2025, entry-level broadband services should be made affordable in developing countries, at less than 2 percent of monthly gross national income per capita" (ITU 2018a).
13. For the last quarter of 2019, Research ICT Africa reports a lower tariff for the "cheapest price for 1GB basket," namely \$4.35, ranking 20th of 51 countries in Africa.
14. GSMA 2017.
15. For example, see Genakos and Valletti (2015) for the experience in the European Union and Harbord and Hoernig (2015) for an application to the United Kingdom.
16. See Telegeography data on MTRs. The ITU ICT Indicator data base has a variable "Mobile cellular—price of a one-minute local call" for peak versus off-peak and on-net versus off-net calls. For Côte d'Ivoire, the data set only provides data for 2018, and it reports the same value for peak versus off-peak, on-net versus off-net.
17. ARTCI 2019b <?>.
18. Telegeography file on mobile termination rates.
19. Telegeography 2020.
20. CE Pro 2019.
21. The World Bank has provided extensive support to Benin and Guinea through the West Africa Regional Communications Infrastructure program, which has supported connection of the two countries to the ACE submarine cable. Côte d'Ivoire's access to ACE was funded by the private sector.
22. Telegeography, Global Bandwidth Research Service, MainOne, 2020.
23. APC and Deloitte 2015.
24. Telegeography, Côte d'Ivoire, 2020.

25. Passive sharing is defined as sharing the passive elements of network infrastructure: mast, sites, cabinet, power, and air-conditioning. Active sharing is defined as sharing active elements in the radio access network, such as antennas and radio network controllers.
26. ARTCI 2013.
27. VipNet and Yoomee are internet service providers.
28. World Development Indicators database.
29. ARTCI 2015.
30. Telegeography, Côte d'Ivoire, 2016.
31. Agence EcoFin 2014.
32. Balancing Act 2014.
33. PriceWaterhouseCoopers 2016.
34. GSMA and Deloitte 2015.
35. Abidjan.net 2015.
36. World Bank 2019b.
37. World Bank 2019b.
38. World Bank 2019b.
39. See World Bank (2020c) for details.
40. Dégroupage de la boucle locale.
41. Curtiss and Robinson 2019.
42. Programme d'analyse des systèmes éducatifs de la CONFEMEN.
43. PASEC 2016.
44. BEPC, Le brevet d'études du premier cycle.
45. OECD 2018.
46. Seedstars and TRECC 2018.
47. Government of Côte d'Ivoire 2020.
48. Seedstars and TRECC 2018, p. 39.
49. Seedstars and TRECC 2018, p. 39.
50. PIX is an online public service for evaluating, developing, and certifying digital skills. See <https://pix.fr/>.
51. ITU 2018b.
52. World Bank 2020a.
53. World Bank 2020b.
54. UNCTAD 2018.
55. World Bank 2017a.
56. World Bank 2020c.
57. World Bank 2018.
58. World Bank 2018.
59. World Bank 2017b.
60. World Bank 2017b.
61. CGAP 2018.
62. CGAP 2018.

63. The only MFI to obtain a license is CELPAID. The MFI Advans and MTN have developed a partnership that allows clients to deposit into their Advans savings accounts via MTN mobile money. In partnership with MTN, Advans also piloted in the cocoa sector a service to enable their clients to link their accounts to e-wallets and receive payments directly from cocoa cooperatives.
64. In Kenya, bank accounts have caught up with mobile money accounts. It has been reported that alongside partnerships with mobile money providers, a rise in agent banking has contributed to this increase. In 2016, 17 commercial banks developed agent banking and contracted over 40,000 agents. Kenya's regulators enabled this kind of growth by adopting a risk-based approach when defining the country's agency banking regulatory framework. See Riquet (2017).
65. World Bank 2017c.
66. There are a few initiatives. For example, in 2018, the agency responsible for SMEs (Agence CI-PME) launched an application for fintechs to accelerate their deployment of rural solutions. The government has signed a partnership with VISA for digitizing payments in agriculture and transport. But much more can be done.
67. World Bank 2019b.
68. See World Bank (2019b) for details.

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CHAPTER 4

Nurture private investment

Recovering from prolonged civil strife, Côte d'Ivoire has experienced strong growth since 2012, as government infrastructure investments and favorable export performance laid the groundwork for buoyant economic activity. From independence to the 1990s, Côte d'Ivoire was one of the most developed countries in Sub-Saharan Africa. But a crisis beginning in 1999 culminated in civil war in late 2010 and early 2011, which led to growing poverty and largely undid earlier progress on human development indicators.¹ Afterward, effective government efforts to rebuild critical infrastructure and strengthen the business environment turned the country's performance around.

The growth strategy needs a reset, though, given limited fiscal space relative to the financing needed to reduce poverty further, aggravated by the COVID-19 crisis. This chapter will argue that private sector investment opportunities corresponding to Côte d'Ivoire's factor endowments in agriculture, agribusiness, and manufacturing, as well as in services (including education), are substantial and can remain promising sources of growth following the crisis. Yet, a difficult business environment and other sector-specific constraints keep these opportunities from being realized.

The first section of the chapter discusses recent growth, highlighting features that distinguish it from previous episodes. The second section identifies key strategic sectors for Côte d'Ivoire based on several criteria of the country's

competitiveness in each sector. To assess which constraints particularly thwart the realization of these opportunities, the report compares Côte d'Ivoire's business environment with those of its aspirational peers with a strong market position in these sectors. The report then details each of the gaps and key recommendations and reviews specific opportunities in the agribusiness and related sectors.

In addition to sector policies, improving overall economic governance is critical for investment. In Côte d'Ivoire since 2012, important governance reforms have taken place. They include the establishment of a High Authority for Good Governance and the implementation of a series of anticorruption measures—for example, an asset declaration regime for senior officials and a National Action Plan 2018–2020 as part of the Open Government Partnership. Yet there is still room for improvement in at least two directions:

Competition in key sectors, such as transport and telecommunications, remains limited, increasing prices. Measures to liberalize and better regulate these sectors will be essential to reduce transaction costs.

Perceptions of corruption and business dishonesty remain major concerns for businesses operating in Côte d'Ivoire, despite some improvement in the country's ranking on Transparency International's Corruption Perceptions Index (from 130 in 2012 to 105 in 2018).

4.1 Fast-changing economy

Strong growth in recent years

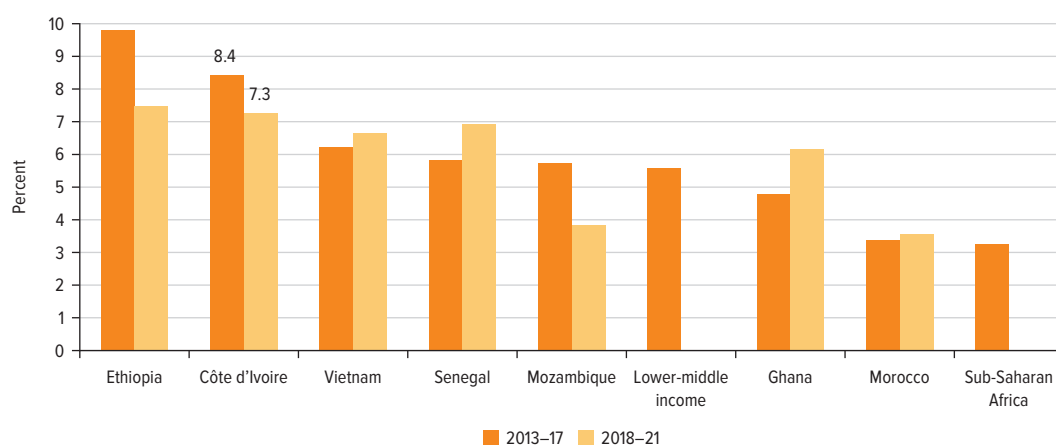
Since the end of the crisis in 2011, the Ivorian economy has grown at an average rate of about 8 percent a year (figure 4.1), among the fastest in the world. Gross domestic product (GDP) growth accelerated in the context of a stable political and macroeconomic framework and an improving business environment. As a result, Côte d'Ivoire's per capita income increased from \$2,496 in 2011 to \$3,733 in 2018, above Sub-Saharan Africa's average (at purchasing power parity in constant international 2011 dollars). In 2018, growth slightly slowed to 7.4 percent and, before the COVID-19 crisis, was expected to remain above 7 percent for 2019–21.

While services and industry mostly drove growth, agricultural production also increased. Service sector growth has been propelled by the expansion of financial services and telecommunications, as well as the growth of transport and retail trade. The construction sector benefited from public and private investment in infrastructure projects (for example, the new bridge and the rehabilitation of industrial zones in Abidjan and infrastructure work in secondary cities). And the

energy sector saw large investments—some under pioneering public-private partnership (PPP) arrangements—to support increased production, including commissioning of the Soubre hydroelectric dam and the modernization of several thermal power plants.²

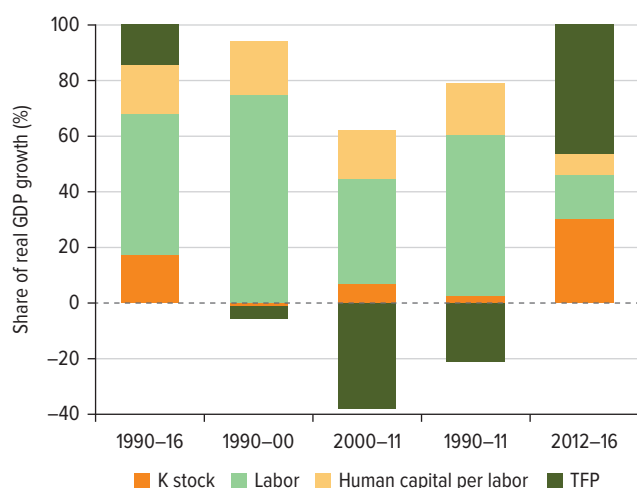
Agricultural production grew by 50 percent, from 15.8 million tons in 2011 to 23.7 million tons in 2017—almost 30 percentage points faster than average in Sub-Saharan Africa and 20 percentage points faster than in West Africa. New price-setting policies for cash crops (particularly cocoa, coffee, cotton, and cashew nuts) increased the share of global value going back to individual farmers—thus transferring large income flows to the production zones. Agriculture, accounting for about 22 percent of GDP and more than 75 percent of exports, is the primary source of employment and income for two-thirds of the nation's households.³ It is closely linked with other sectors of the economy, particularly manufacturing. Cocoa and coffee processing, textiles, cottonseed oil, and oil-based soaps and cosmetics are all critical components of the industrial sector.

Figure 4.1. Average real GDP growth



Sources: World Development Indicators; World Economic Outlook, International Monetary Fund.

Figure 4.2. Growth drivers



Source: Staff computations.
Note: K = capital; TFP = total factor productivity.

Côte d'Ivoire's recent performance has differed from previous episodes by a sharp increase in productivity, which accounted for almost half the growth (figure 4.2). This mainly represents continued productivity growth in agriculture, the backbone of the Ivorian economy, including results from providing high-yielding varieties, introducing innovative equipment, and distributing fertilizers more effectively. In contrast, productivity growth was negative from 1990 to 2011, reflecting the political crisis and lack of reforms. Further, the current public investment program has reduced infrastructure gaps in the country and stimulated the country's aggregate demand. Capital formation has been growing at double digit rates since 2015 and is forecast to grow around 14 percent in 2019-21. An important part of infrastructure improvement was success in developing a PPP program in the road, railway, and energy sectors.

Nascent export crop diversification

The past decade has seen some limited diversification of export crops. The outputs of raw cashew nuts, groundnuts, rubber, cotton, and mangoes have all grown much faster than agricultural output. This situation is different from 10 years ago, when agriculture was almost exclusively focused on cocoa, coffee, and bananas. Côte d'Ivoire's agricultural production is now more diversified than that of other countries in the region (figures 4A.1 and 4A.2 and table 4A.1, in annex 4.A). For instance, the output of rubber increased sharply from 235,000 tons in 2010 to 580,000 tons in 2017.⁴ Moreover, Côte d'Ivoire has emerged as the world's largest producer of raw cashew nuts since 2015, with 711,000 tons in 2017—23 percent of global production.⁵ Cashews are the country's third most important export commodity (in volume) after cocoa and refined petroleum products, well ahead of rubber, cotton, and coffee. Gross farmer receipts in 2018 for cashews were estimated at \$1.167 billion, far surpassing cotton, the traditional cash crop in northern areas, at \$312 million. And cashew production is more lucrative for farmers—the net farmer receipts are higher because input usage is lower.

Improving infrastructure

Access to electricity has improved, and tariffs have been competitive by regional standards (figure 4.3). The electrification rate increased from 83 to 89.5 percent between 2010 and 2018, and urban areas are almost fully electrified (versus 79 percent for Sub-Saharan Africa). Electricity coverage in the country, defined as the number of electrified localities compared with the total number of census localities, stands today at around 65 percent (against 33 percent in 2011) and is expected to reach 80 percent by 2020. Energy prices are among the lowest in West Africa, partly because thermal energy is powered by domestic natural gas and hydro.

A notable sectoral reform, the “Electricity for All” program (*“Programme Electricite pour Tous”*), launched in October 2014, has greatly improved access to electricity by easing connection formalities and electricity tariff payments. Côte d’Ivoire has a strong track record of private investment in thermal generation since its first independent power producer in 1998 (Azito). At the same time, a debt crisis caused by the buildup of arrears—about \$550 million by November 2017—was resolved through a comprehensive arrears settlement process.

Energy and transport infrastructure benefited from several successful PPPs facilitated by a conducive regulatory framework. Yet, for future progress, a comprehensive review of the legal framework will be essential to ascertain the consistency of the procurement code, sector laws, and PPP decrees.

Côte d’Ivoire’s information and communications technology (ICT) institutions and overall enabling environment drastically improved during the past five years. The ICT Environment subindex of the Network Readiness Index from

the World Economic Forum measures both the political and regulatory environment and the business and innovation environment. In 2012, Côte d’Ivoire ranked as one of the lowest countries in the world on that subindex, 130 of 142 countries. But in less than five years, by 2016, Côte d’Ivoire rose to 72 of 139 (and on the overall Network Readiness Index, Côte d’Ivoire rose from 122 to 106). No other country monitored by the World Economic Forum enjoyed such a drastic rank improvement on the ICT Environment subindex in 2012–16.

But weaknesses persist

Despite the favorable developments, private sector investment, including foreign direct investment (FDI), remains below that in aspirational peers. Export diversification, while happening, is still below that of comparators, and processing of agricultural products with higher value added is still limited. Fiscal vulnerabilities are under control yet require close monitoring.

Figure 4.3. Key positive features of Côte d’Ivoire’s growth



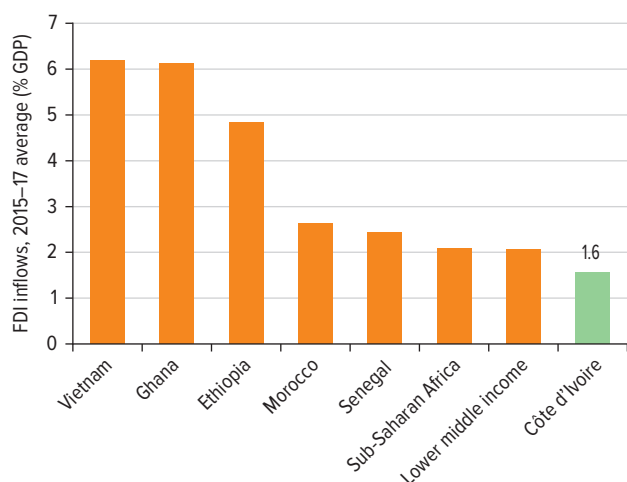
Sources: World Development Indicators; World Bank Doing Business; International Finance Corporation staff calculations.

Private investment and FDI remain below Sub-Saharan African and lower-middle-income country peers (figures 4.4 and 4.5). FDI as a share of GDP grew from 1.2 percent in 2011 to 2.1 percent in 2018 and averaged 1.6 percent over 2015–17. But FDI was much higher in aspirational peers such as Vietnam (6.2 percent of GDP) and Morocco (2.6 percent of GDP). FDI was concentrated mainly in the telecommunications, agroprocessing, and extractive (hydrocarbon) sectors. And enterprise survey data indicate very low labor productivity among Ivorian firms, which may reflect both lower investment than in comparators and a skill gap due to education system shortcomings. The median firm produces output per worker of about \$2,331, which is lower than in any of the comparator countries. It is about a third the level in Senegal and less than a quarter the level in Togo or Benin.⁶

Current export diversification is still limited compared with that in other middle-income countries (figure 4.6). While diversification has begun in recent years, the share of commodities in Côte d'Ivoire's exports (81 percent in 2017) is among the highest among its structural peers, and far higher than in aspirational peers such as Vietnam and Morocco. Moreover, unlike in Vietnam, the share of manufactured products in Côte d'Ivoire's exports has remained fairly constant at around 15–20 percent over the past two decades.

Domestic value addition in agricultural products remains low. Côte d'Ivoire processes only a fraction of its crops locally and sells the majority to international markets. The cocoa sector, processing 30 percent of domestic production, has the highest share. Yet, primary processing of cocoa is very capital intensive. For other crops, such as raw cashews, for which processing is much more labor intensive, only about 8 percent of domestic production was processed locally in 2018—a much increased share, yet below production growth. Recently, the government took measures to encourage the local transformation of cashew

Figure 4.4. Despite an increase in FDI, it remains much lower than in aspirational peers



Sources: World Development Indicators; National Institute of Statistics; Human Capital Index; International Finance Corporation staff calculations.

nuts into almonds, such as introducing a tax on the export of raw nuts and requiring exporters to reserve 15 percent of export volumes for local processors—however, as a corollary, the smuggling of cashew nuts has increased.⁷

While high growth has been accompanied by macroeconomic stability, fiscal vulnerabilities still require continued close monitoring due to weak tax collection and high capital expenditure. Despite extensive reforms since 2012, tax revenue as a share of GDP has stagnated, since some sectors driving growth, such as agriculture and services, are not fully captured in the tax net. Moreover, tax exemptions, such as for small and medium-size enterprises (SMEs), are pervasive.

Following eurobond issuances in 2017 and 2018, Côte d'Ivoire's public debt increased to 53.2 percent of GDP⁸ (end-2018)—

Figure 4.5. Private investment is also much lower than in peers

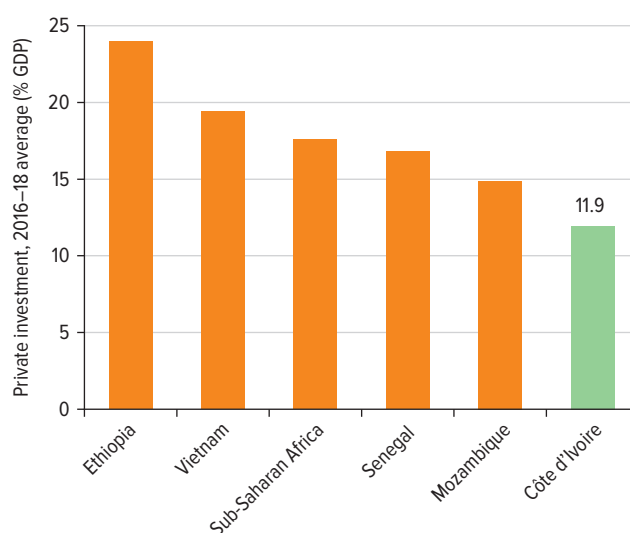
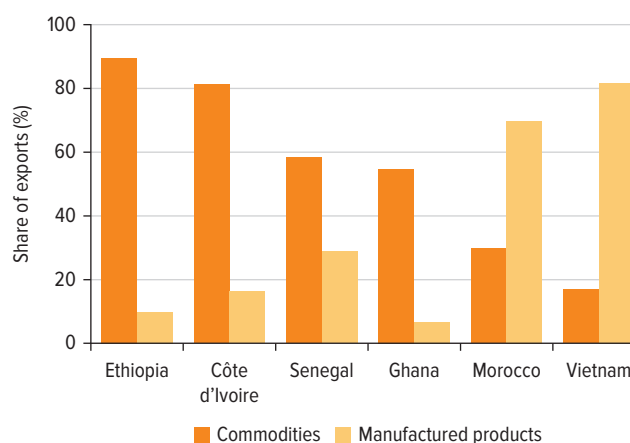


Figure 4.6. Composition of exports, 2017



Source: World Trade Organization.

with external debt accounting for 60 percent of total debt. The fiscal position is strained because of large investment expenditure and many tax exemptions, with interest payments as a share of total revenue at a fairly high 10 percent. Because of these fiscal vulnerabilities, Côte d'Ivoire's risk of debt distress was assessed in 2019 as "moderate," with limited space to absorb commodity price or exchange rate shocks. And the government faces contingent risks due to debt contracted by state-owned enterprises and public guarantees. Service of external debt accounts for about 15 percent of government revenues, creating concern.

Against the background of limited fiscal space and the need to accelerate poverty reduction, Côte d'Ivoire's growth strategy needs to be adjusted to better harness private sector opportunities in sectors where the country has a comparative advantage that could generate significant employment.

Private sector: The backbone of growth

Firms in Côte d'Ivoire operate in a dynamic context of progress in implementing structural reforms. Côte d'Ivoire's World Bank Group Country Policy and Institutional Assessment (CPIA) score, which measures policies and institutions, has steadily increased from 2.7 in 2010 to 3.5 in 2018. The rise reflects key regulatory improvements in the issuance of construction permits, starting a new business, and alternative dispute resolution mechanisms. The Doing Business reports recognize Côte d'Ivoire as a good performer with a Distance to Frontier (DTF) best score of 58. Driven by the improvements, firm registration rose over 2013–18 from 13,387 registered firms to 57,574, according to the latest census from the Tax Inspectorate. The growth is led by new firms in services (47 percent), trade

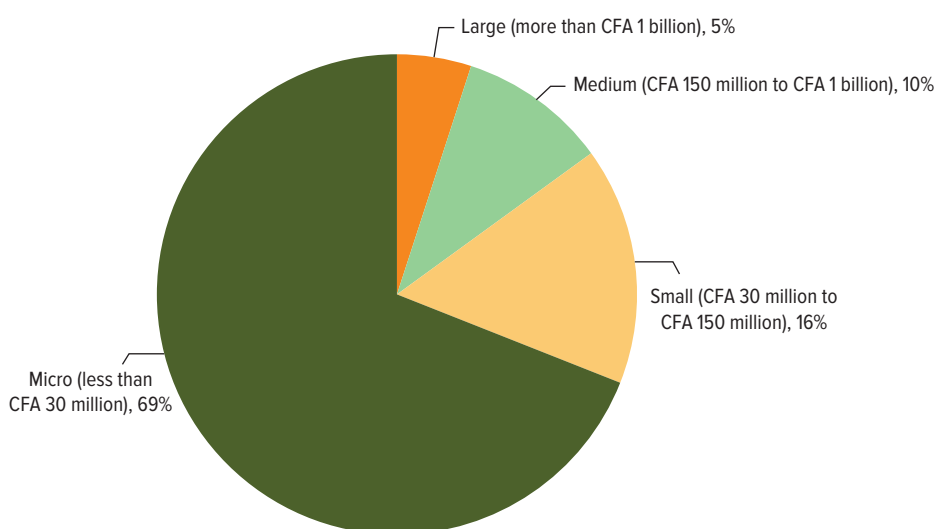
(28 percent), construction (13 percent), and transport and communications (10 percent).

Structurally, the Ivorian private sector consists mostly of agriculture, with some manufacturing and service firms. While most firms are micro or small, large firms dominate value addition in the agribusiness, agro-industry, manufacturing, and service sectors (figures 4.7 and 4.8).

National Institute of Statistics (INS) data suggest that compared with other countries in West Africa, Côte d'Ivoire has a relatively large number of big firms—about 500 of them. They account for a third of the manufacturing sector's value added and one in seven formal jobs. The formal industrial sector has very few labor-intensive firms. It consists mostly of subsidiaries of multinationals, involved largely in the commodity sector (cocoa, oil and gas, cashew, and rubber). Agribusiness accounts for about 30 percent of the manufacturing sector (predominantly cocoa products, oilseeds, and dairy products). Oil extraction accounts for approximately another 15 percent but employs a negligible share of workers. On average, manufacturing companies are larger and employ more workers than service sector companies.

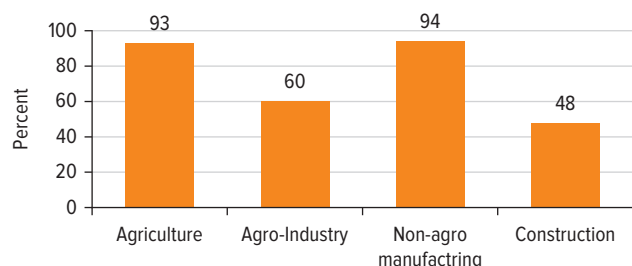
Formal employment is concentrated in three main sectors: agriculture, retail trade, and other services, with food processing being the most important contributor to value added and the second largest contributor to employment. With low employment in the formal productive sectors, large parts of the labor force operate in informal or semi-informal activities in trade/retail and distribution. The Chamber of Commerce estimates that the informal sector accounts for 70–75 percent of the economy and 80–90 percent of total employment, shares that are comparable to those in other West African countries. Côte d'Ivoire's labor challenges are associated with the quality and productivity of its

Figure 4.7. Distribution of formal enterprises, 2016



Sources: National Institute of Statistics; International Finance Corporation staff calculations.

Figure 4.8. Revenue share of the top 20 formal enterprises in selected sectors, 2016



Sources: National Institute of Statistics; International Finance Corporation staff calculations.

workers. Unemployment is low (6.7 percent), but much higher among urban youth (13.9 percent).

Formal private firms operate in an environment where competition policy appears to be better enforced since the adoption of the 2013 antitrust law. There is still evidence of monopolies and rent seeking in several sectors, notably the transport and telecommunications sectors and the import of refined products, and anecdotal evidence points to monopolies and collusion in real estate, as well as retail. But available indicators show that market-based competition and the enforcement of antimonopoly policy have improved in recent years.⁹

4.2 Investment opportunities and constraints

This section identifies key strategic sectors for Côte d'Ivoire based on several criteria that evaluate the country's competitiveness. The sectors of interest are defined in a five-part framework to identify opportunities: revealed comparative advantage, global demand prospects, employment elasticity, prospects for value addition, and prospects for private sector involvement. The methodology and computation are described in detail in the Côte d'Ivoire Private Sector Diagnostic.¹⁰

4.2.1 Agriculture and agribusiness

Agriculture accounts for about 23 percent of Côte d'Ivoire's GDP and over two-thirds of its exports. In addition, a considerable share of the manufacturing and transport sectors depends on it. Agribusiness represents about 7 percent of GDP and 50 percent of the manufacturing sector. The agriculture sector employs around 45 percent of the labor force, including 73 percent of the employed residents in rural areas.¹¹

Agriculture is key to Côte d'Ivoire's development strategy, given its potential for diversification and value addition. Countries that succeed at structural transformation (the share of agriculture in the economy declines as they develop) and at agricultural transformation (the share of staples in agricultural value added declines) typically experience the fastest declines in poverty.¹² Agriculture can thus be a source of high-quality employment for the growing youth bulge.

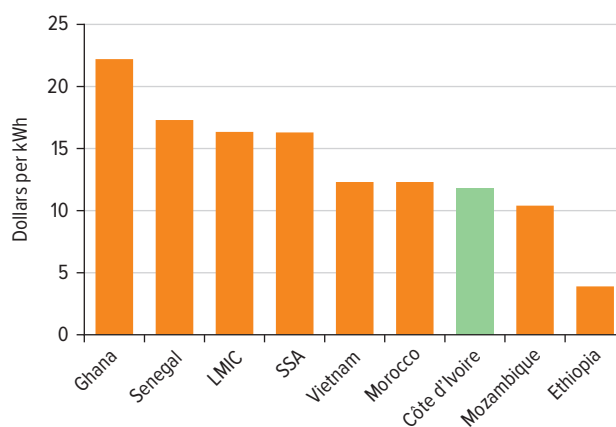
Côte d'Ivoire's natural resource endowment and infrastructure can support a wide variety of crops. Freshwater is abundant, and 75 percent of the territory is arable with about 7.5 million hectares currently cultivated.¹³ Although rural electricity access is lagging, urban areas have almost universal cheap electricity access—critical for processing agriculture production. Given its low-cost gas-based power

plants and hydropower capacity, Côte d'Ivoire is among the lowest cost producers of electricity in West Africa (figure 4.9).

The persistent dominance of cocoa in the country's exports increases its vulnerability to climate change, underscoring the need to continue diversifying agricultural output. Rising temperatures would reduce soil fertility in the southeast's producing regions.¹⁴ Costly efforts to promote cocoa processing through subsidies did not yield major sustainable job creation, though the volume of processed cocoa increased from 474,000 tons (in the 2015/16 crop year) to 577,000 tons (in 2016/17). Cocoa is a major cause of deforestation in Côte d'Ivoire, where 60 percent of forests disappeared between 1990 and 2015.

Cashew, cotton, rubber, palm oil, and horticulture—unlike cocoa—are labor-intensive, so growth in these sectors will increase rural jobs and exports (processing 150,000 tons of

Figure 4.9. Energy prices in Côte d'Ivoire and comparators, 2018



Source: World Bank 2020b.

Note: kWh = kilowatt-hours; LMIC = low- and middle-income countries; SSA = Sub-Saharan Africa.

cashew nuts creates an estimated 50,000 jobs, but processing 150,000 tons of cocoa creates only about 400 jobs¹⁵). These other products also have a real potential to drive further diversification in making derivative products. And some processed agricultural goods that serve as manufacturing inputs offer Côte d'Ivoire a comparative advantage, given factor endowments and the favorable development of first movers in these sectors (box 4.1).

Priority sectors for diversification and greater domestic value addition thus include cashers, cotton, rubber, palm oil, and horticulture.

Cashews

Côte d'Ivoire's cashew subsector has growth potential. The country is the leading global exporter of raw cashew nut, with a market share around 40 percent in recent years. Global demand has been growing at about 7 percent annually, and growth is expected to continue (though more slowly). Prices are expected to remain high, since production has not kept pace with robust demand. Since harvesting and processing cashews is very labor intensive, growth in the cashew subsector will boost job creation and economic growth.

Primary processing of cashews is currently limited. Côte d'Ivoire exports an estimated 95 percent of its raw cashew

nuts in-shell to Asia, while the rest is processed locally. Increasing local processing would capture more value added, substantially reduce transportation costs for end consumers in the United States and Europe, and create shorter, more traceable value chains. Further, cashew processing byproducts such as cashew nutshell liquid, cashew apple, and kernel skins provide additional profit to processors. Cashew nutshell liquid, which is globally traded, can be used in a wide variety of products, such as surface coatings, paints and varnishes, and polymers. Cashew apples can be used to produce alcohol, which can be used in alcoholic beverages, pharmacy supplies, and ethanol fuel. Kernel skins can also be processed into tanning agents for the leather industry. The main constraints to creating a competitive cashew value chain in Côte d'Ivoire are the unavailability of technical skills and finance (figure 4.10). Processing plants have low capacity since finance to upgrade or build modern facilities is unavailable. The low access to finance also reflects the absence of local currency financing.

Cotton

Raw cotton is one of Côte d'Ivoire's major exports, has increased since 2015, and is forecast to reach 925,000 bales for the 2019/20 growing season. The quality of cotton crops has continued to improve, and yields have improved significantly from 2015. Most Ivorian cotton is hand-picked,

Box 4.1. Use of processed agricultural goods as inputs for manufacturing

Côte d'Ivoire's National Development Plan (NDP) 2016–2020 focuses on industry as an essential pillar of the structural transformation of the economy. Several sectors have been identified as potential drivers of manufacturing growth both in the NDP and in a recent U.S. Agency for International Development/World Bank study, based on competitiveness, export potential, global market demand prospects, and product complexity.

Cosmetics. Côte d'Ivoire supplies a major part of raw materials, such as cocoa butter, used in manufacturing cosmetics. Given the availability of cocoa butter, Côte d'Ivoire has a strong comparative advantage in skincare and haircare products that cater to the needs of the regional market (85 percent of Ivorian cosmetics exports go to Economic Community of West African States countries). Ivorian cosmetics have a market reputation as a good quality yet affordable product. Rising demand from a growing regional middle class for mid- to high-range products presents growth opportunities for the industry, but further research and development, as well as strong marketing and branding, is necessary to compete against established global brands. The industry can also seek to expand its market share among the African diasporas in the United States and Europe.

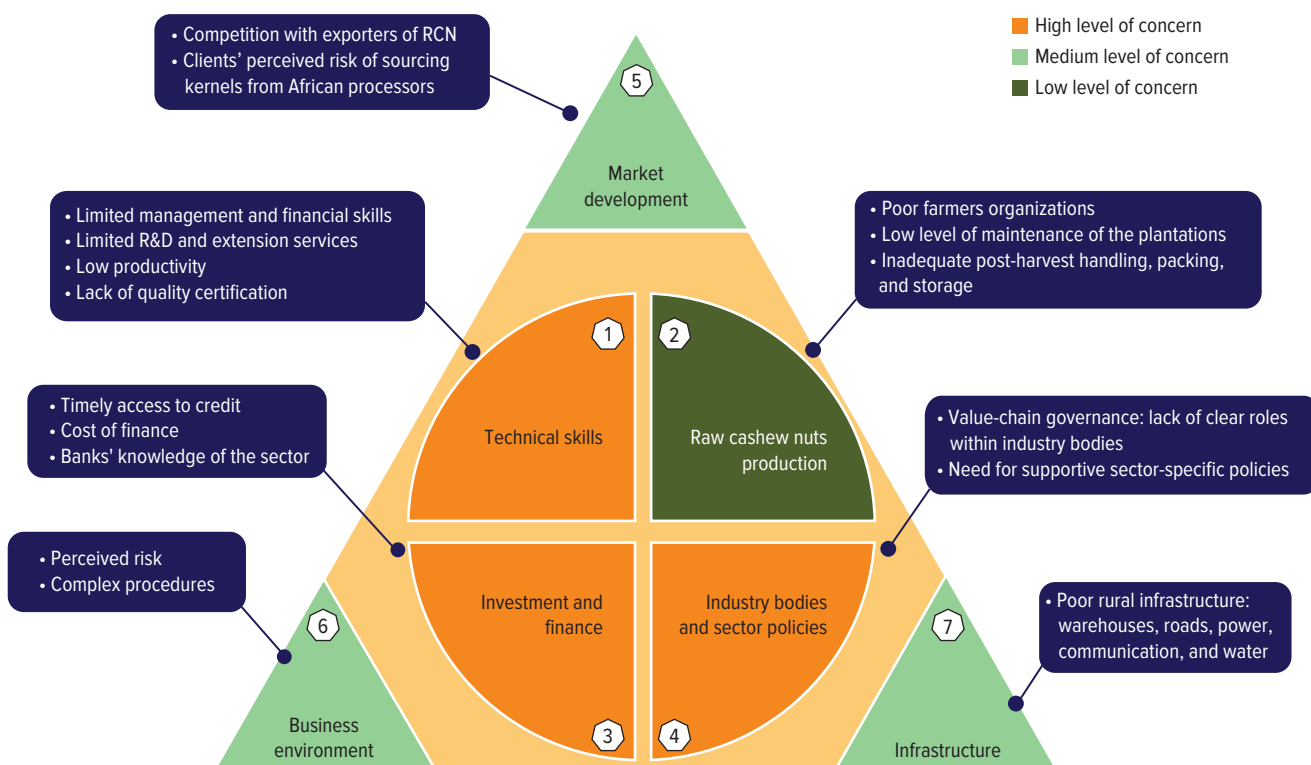
Rubber. Côte d'Ivoire is the leading natural rubber producer in Africa, with yields competitive with those of top rubber producers in Asia. Four companies manufacture a range of rubber products,

such as gloves, gaskets, and wheels, which are sold primarily in the regional markets. To grow the rubber goods manufacturing industry, technology upgrading will be essential so that the local industry can increase productivity. Scarce skilled labor is a major constraint to rubber processing.

Pharmaceuticals. Côte d'Ivoire's nascent pharmaceutical manufacturing sector experienced a recent surge in foreign direct investment and is well-positioned for growth, since many firms meet Good Manufacturing Practices standards. The local and regional markets are growing at the notable pace of 7 percent a year, a trend expected to continue. The sector exports around 30 percent of its products. Côte d'Ivoire's fairly low rate of generic drug usage presents an opportunity for sector growth, when coupled with increased awareness.

Textiles. Côte d'Ivoire is one of only two African countries that produce printed wax, a type of fabric widely worn in the region. Ivorian wax fabric is sold in the domestic market and exported regionally. Since African-made wax fabric is considered of higher quality, it has kept its market share despite China's increasing market penetration. Increasing purchasing power and a rising middle class could increase the demand for quality African wax fabric. The industry can increase its competitiveness by strengthening brand recognition, improving quality, and increasing the number of designs to prevent counterfeiting by firms from China.

Figure 4.10. Main constraints on the cashew value chain in Côte d'Ivoire

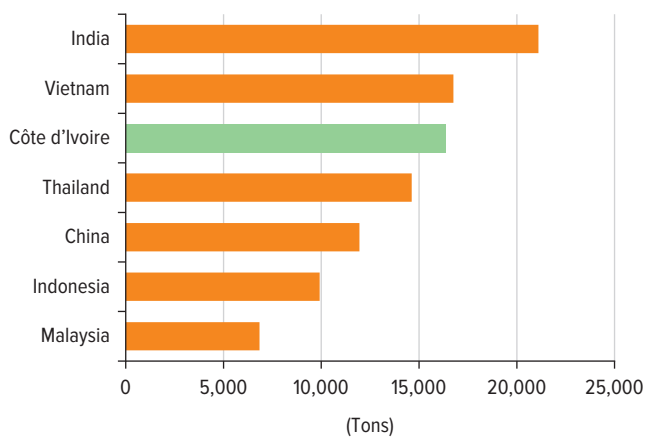


Note: RCN = raw cashew nut; R&D = research and development.

making the industry labor intensive. Hand-picked cotton produces longer strands (for more luxurious cotton) and is more sustainable since it does not require chemical defoliants prior to harvesting and is cleaner, requires less processing time, and is less energy intensive than industrial cotton. Ivorian cotton fields do not require irrigation, relying solely on rainwater. Côte d'Ivoire can continue to grow the industry by leveraging the growing demand for sustainable products by marketing and capitalizing on the sustainable aspects of hand-picked over machine-harvested cotton.

Although Côte d'Ivoire, with favorable natural resource endowments, could be competitive in the global textile industry, it has struggled. Cotton processing facilities need major updates, and investing to upgrade existing facilities or to open new ones would boost job creation in this value-added sector while leveraging the ample domestic cotton supply. Cotton processing also creates byproducts, such as cottonseed oil, which is used in cosmetics, soap, and food products, and linters, which are used in medical supplies. And Côte d'Ivoire is the only African country besides Ghana to produce wax print fabric, with Ivorian wax fabric enjoying a reputation for quality. Investments to improve cost competitiveness, including measures to bring down the cost of logistics, could bring more wax fabric producers into Côte d'Ivoire.

Figure 4.11. Rubber yields of top producers, 2017



Source: FAOSTAT.

Rubber

Côte d'Ivoire is the world's seventh largest producer of natural rubber, with yields that are competitive with the world's leading producers (figure 4.11). Rubber output, which has increased substantially since 2012, is projected to reach 750,000 tons in 2020, but processing capacity stands at 460,000 tons. Since rubber output has surpassed processing capacity, most exporters must export raw unprocessed

rubber, resulting in uncaptured gains from the value added of processing. Furthermore, Côte d'Ivoire's rubber processing facilities only typically produce technically specified rubber (TSR) for export.

Côte d'Ivoire could benefit from diversifying its production to include ribbed smoked sheets, which are higher in quality, more labor intensive to produce, and sold at a 10 percent premium over TSR. Rubber is primarily used to manufacture tires and is also used in the automotive, construction, apparel, and pharmaceutical industries. In Côte d'Ivoire, four companies manufacture a range of rubber products such as gaskets and gloves for the local market. The rubber products industry has potential to expand and benefit from the direct supply of local rubber. Constraints on the rubber industry include dependency on imported raw materials such as polymers and intermediates, which are subject to price fluctuations. The high cost of machinery, unavailability of finance, and shortage of skilled labor are also challenges.

Palm oil

Palm oil is one of the most versatile and widely used agricultural commodities. Côte d'Ivoire's palm oil is consumed both locally (45 percent of production) and in the subregion (55 percent). Neighboring West African countries face oilseed shortages, creating a market opportunity for Ivorian palm oil. As demand for palm oil increases and land in top palm oil exporting countries such as Malaysia and Indonesia runs out, palm oil companies are expanding their plantations to Africa—activity that raises concerns about deforestation.

The industry is largely dominated by low-yielding, small-scale farmers, with some large-scale plantations. Investments in the oil palm industry can increase plantation areas, increase productivity on existing farms, and improve and ensure the quality of produce. Processing facilities could expand to meet the high demand of exporters and increase the value added from processing. Since many industries, especially cosmetics and household products manufacturing, use palm oil as an input, they would benefit from a domestic supply chain.

Fruit and vegetable production

This is also highly labor intensive, a potential that has so far not been fully exploited. Côte d'Ivoire's horticulture sector is a major exporter of fruits, particularly bananas, mangoes, and pineapples. The country's market share in fruit and nut exports has doubled since 2013 to about 1.3 percent in 2017. Demand for higher-value horticultural items is expected to rise with increasing global population and income, and as diets diversify from grains to healthier fruits and vegetables. In addition, Côte d'Ivoire's proximity to Europe, compared with Latin America, gives it an advantage in the European market. Currently, Côte d'Ivoire lacks temperature-controlled

logistics and cold storage facilities for fruit exports, which reduces shelf life and increases post-harvest losses.

- ▶ *Pineapple.* Production and exports of pineapple peaked in 2000 but dropped significantly after the introduction of the double sweet variety, MD2, in Latin America. Côte d'Ivoire has potential to increase its pineapple export market share by using the MD2 variety. Processing facilities for the pineapple sector are also a growth opportunity, especially for second- and third-grade pineapples.
- ▶ *Mango.* Processing is done at a small scale and focuses primarily on drying. Processing can be improved to an industrial scale, resulting in increased production, more jobs, and better quality. Processed mango products can also be expanded to include frozen chunks, juices, and concentrates. In addition, mangoes can be processed as an input for cosmetics, pharmaceuticals, and biofuels. Processing pineapple into smaller cut pieces for export to France has begun in Grand Bassam and could be expanded with greater support.
- ▶ *Banana.* Increasing the production of organically certified bananas, which command a higher price, offers potential for Côte d'Ivoire's main fruit export sector as demand for organic products rises. The market for banana powder and banana chips is also growing in Europe and the United States.

Overall, the horticulture sector needs better varieties to make progress and to be more competitive internationally. The seeds in use are mostly of the open pollinated varieties that are weak, often infected with diseases, and with low potential.¹⁶ But some companies are succeeding (box 4.2).

4.2.2 Manufacturing

For Côte d'Ivoire, the share of manufacturing in GDP was about 16 percent in 2017, the second largest in West Africa after Senegal (figure 4.12). From 2008 to 2018, manufacturing value added grew from \$3.5 billion to \$5.5 billion. Yet, Côte d'Ivoire's manufactured exports have remained low. Between 2010 and 2017, the share of manufacturing exports in total merchandise exports averaged 14 percent—far below the average for lower-middle-income countries or the share for Senegal or Malaysia (figure 4.13). About three-fourths of manufactured exports are destined for the Economic Community of West African States (ECOWAS) region.

Low-technology industries dominate the sector's value added (figure 4.14). They include agro-industry (57 percent); wood, paper, and printing (8 percent); cement (8 percent); plastics (7 percent); metals (6 percent); and oil refinery (1 percent). Medium- and high-technology industries largely consist of chemicals (9 percent) and machinery (2 percent).

Box 4.2. ATOU/Ivorio: A successful company in the fruit and vegetable processing sector

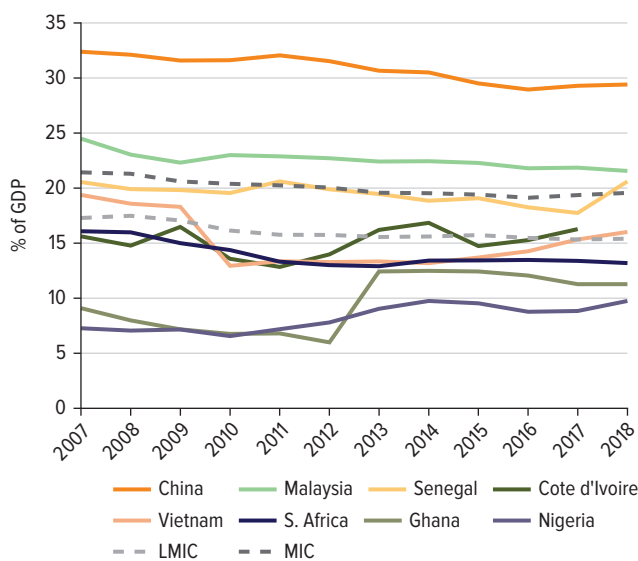
ATOU is an Ivorian agri-food company specializing in processing fruits from Côte d'Ivoire. Production increased from one million cans in 2012 to 10 million in 2018, with a target of 15 million in 2020. In addition to supplying the local market, the company exports to Burkina Faso, Cameroon, Mali, Niger, and Senegal. The products also reach the European market via African wholesalers.

The company directly or indirectly employs 1,000 people, of whom 100 are in the factory and the rest are farmers. While pineapple juice is the flagship product, the company produces 12 other flavors of juice. The juices have no coloring, artificial flavoring, or preservatives. Ivorio has entered a partnership with 4,000 pineapple growers, in which it provides technical assistance so

that they can comply with the norms and standards of the factory and provides financing for 14 months. Fruit waste is sold to Green Countries (a company that specializes in recycling), which transforms it into organic compost used as fertilizer on various plantations. To continue its expansion, the company has acquired a 1.8-hectare plot of land in the new industrial zone PK24 of Bonoua (pineapple production area), 50 kilometers from Abidjan. The development of a local pineapple value chain is a factor in the company's success.

Even with strong growth, Ivorio faces challenges due to packaging (45 percent of the production cost) and major transport costs for its raw material.

Figure 4.12. Manufacturing value added, Côte d'Ivoire and comparators, 2007–18

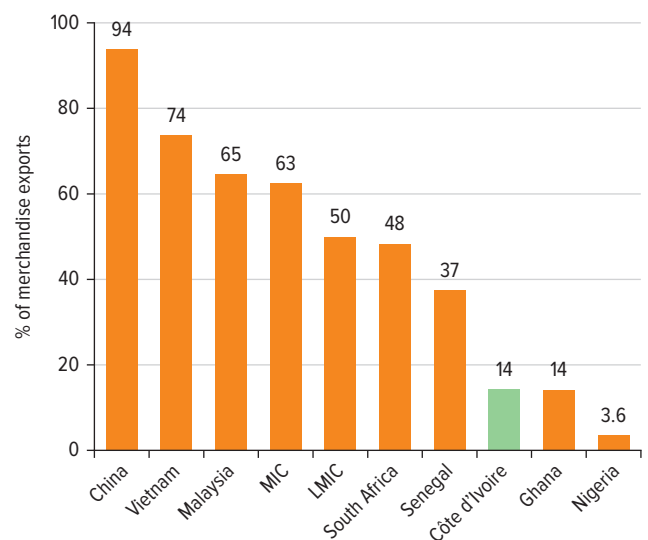


Source: National Statistical Offices; World Development Indicators (aggregates).
 Note: GDP = gross domestic product; LMIC = low- and middle-income countries; MIC = middle-income countries.

In line with the importance of large firms in Côte d'Ivoire's private sector, its manufacturing sector is concentrated compared with those of its regional peers. Ranked by competition data from the Enterprise Survey data set, the country ranks among the top eight African countries for manufacturing sector concentration.

Côte d'Ivoire's manufacturing industry (except the agro-industry) has not yet taken proper advantage of regional and global markets. The bulk of manufactures are still destined for the domestic market, especially in the cement, metals, machinery, and apparel industries (figure 4.15). Plastics and

Figure 4.13. Manufactured exports, Côte d'Ivoire and comparators, 2010–17 average

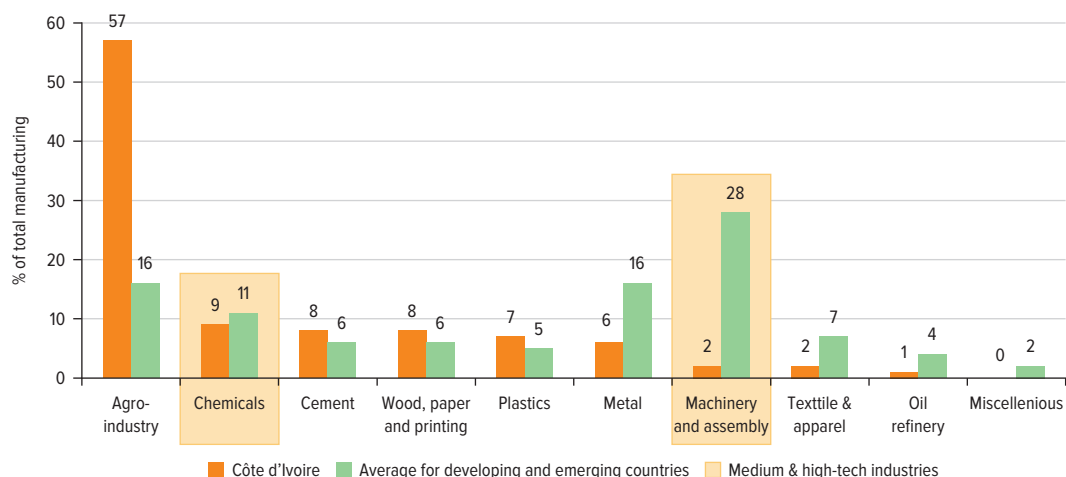


Source: World Development Indicators.
 Note: LMIC = low- and middle-income countries; MIC = middle-income countries.

cosmetics are the largest exporting industries, and the textile sector exports half its output. Although the bulk of Côte d'Ivoire's exported manufactures are destined for ECOWAS, they form only a very small share—just 1.5 percent in 2015—of ECOWAS's imports. This partly reflects the low value of the country's major exports to the region.¹⁷

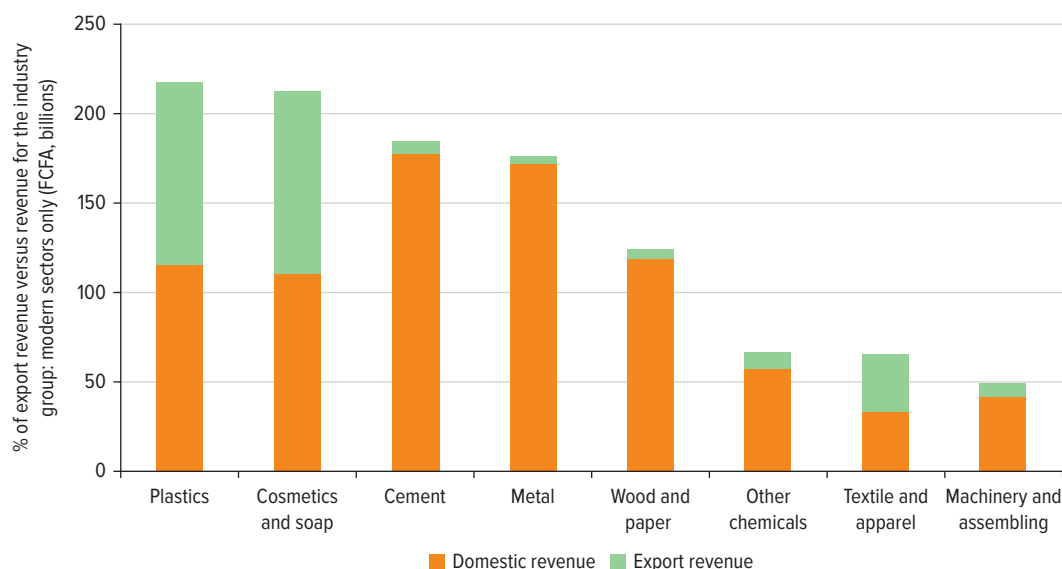
Côte d'Ivoire could expand manufacturing exports by better exploiting the regional market, especially in view of the African Continental Free Trade Area (AfCFTA) agreement. If the AfCFTA is effectively implemented, it is projected to raise intra-African trade by up to \$70 billion a year compared with a scenario without the AfCFTA.¹⁸ Its benefits are

Figure 4.14. Manufacturing value added by industry group, 2017



Source: World Development Indicators.

Figure 4.15. Domestic versus export destinations for manufactured products, 2013



Source: World Development Indicators.

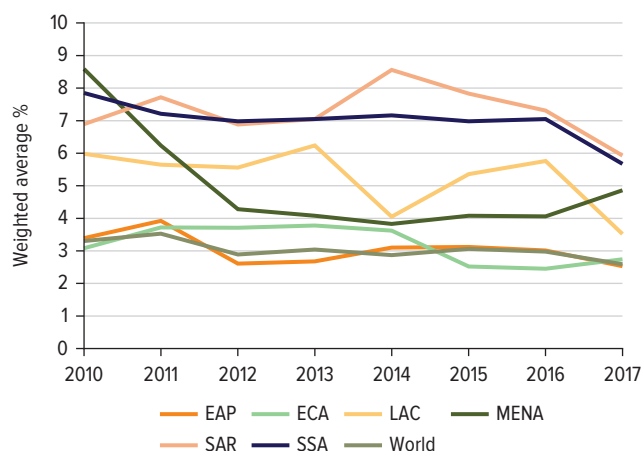
expected to be concentrated in manufacturing and industrial development and tourism.¹⁹ Business-to-business spending in manufacturing in Africa is projected to reach \$666.3 billion by 2030, up from \$201.3 billion in 2015.²⁰

AfCFTA is expected to generate manufacturing sector opportunities through reduced tariff and nontariff barriers to trade. Despite declining in recent years, Sub-Saharan Africa's tariffs remain high, lower only than those for South Asia (figure 4.16). Sub-Saharan Africa's tariffs also vary substantially across countries. AfCFTA, by aiming for tariff reductions for 80 percent of all regional goods and

implementing other measures to reduce nontariff barriers, will create opportunities.

An analysis of the strengths, weaknesses, opportunities, and threats (SWOT) for Côte d'Ivoire's product industries finds plastic, cosmetics, and rubber to have high potential.²¹ For example, AfCFTA could allow the Ivorian cosmetics industry to benefit from access to the large markets beyond ECOWAS. Côte d'Ivoire could potentially benefit from accessing markets such as Angola, Ethiopia, Kenya, and South Africa. The benefit could be enhanced if Côte d'Ivoire's cosmetics industries promote research and development to develop new products, invest in

Figure 4.16. Tariffs on all goods



Source: World Development Indicators.

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa.

improved marketing, and enhance quality while improving the country’s branding labels and strengthening the institutional framework to combat counterfeit and unsafe products.

Although trade liberalization (through AfCFTA) is necessary, it is not sufficient to develop the manufacturing sector. To yield greater dividends, it should be accompanied by measures to improve the business environment—particularly by reducing the infrastructure gap and implementing reforms to improve cross-border trade. Improving Africa’s transport infrastructure, especially the roads, railroads, ports, and air connections that link countries to their markets, would be important (see the discussion of logistics below).

4.3 Five gaps

Côte d’Ivoire aims to support growth and investment to create quality jobs for its growing population and to reduce spatial inequalities. As in other Sub-Saharan African countries, demographic growth in Côte d’Ivoire will create a significant youth bulge, adding 350,000–400,000 young people to the working-age population each year over the next two decades. And Côte d’Ivoire faces the challenge of reducing regional disparities to ensure that the benefits of growth are evenly distributed.

The most promising path to this goal lies in agriculture, agroprocessing, and related manufacturing industries. This section discusses several shortcomings that hamper Côte d’Ivoire in realizing its potential, focusing on those most constraining agriculture, agribusiness, and related manufacturing.

Binding constraints compared with those of aspirational peers

Cross-cutting constraints can be identified and prioritized by comparing Côte d’Ivoire’s business environment with those of countries that lead in industries in which Côte d’Ivoire is competitive. The key aspirational peers identified are Vietnam and Morocco.

Vietnam, with per capita income of almost \$6,233 in 2017, against \$3,564 for Côte d’Ivoire (all in purchasing power parity constant 2011 international dollars), and an average growth of almost 7 percent a year over the past two decades, has been a development success story. Vietnam and Côte d’Ivoire share resource endowments that suit them for agribusiness, such as ample water, fertile soil, and diverse agroclimatic conditions. In addition to its manufacturing success, Vietnam has had great success in diversifying agricultural exports and upgrading to higher value-added agroprocessing. Vietnam’s agricultural and agroprocessing product exports grew by 180 percent, from \$10.7 billion in 2007 to \$30.3 billion in 2017, led by textile yarns and threads (+756 percent), rubber products (+740 percent), and fruits and nuts (+687 percent)—far outperforming Côte d’Ivoire’s 110 percent growth in the same period. Morocco, while much richer than Côte d’Ivoire, with per capita income of \$7,508 in 2017 (in purchasing power parity 2011 constant international dollars), successfully diversified into manufacturing, particularly autos, auto ancillaries, and aerospace, as well as higher value-added agriculture and agroprocessing. Morocco’s vehicle exports grew by a factor of 20 over 10 years to \$3.4 billion in 2017. Vietnam, Morocco, and Côte d’Ivoire each face a particular set of constraints (figure 4.17).

Overall, comparing Côte d’Ivoire with its aspirational peers highlights gaps in several areas: the business and regulatory environment, access to finance, logistics, digital connectivity, and skills. These five gaps affect agriculture, agribusiness, and manufacturing (figure 4.18).

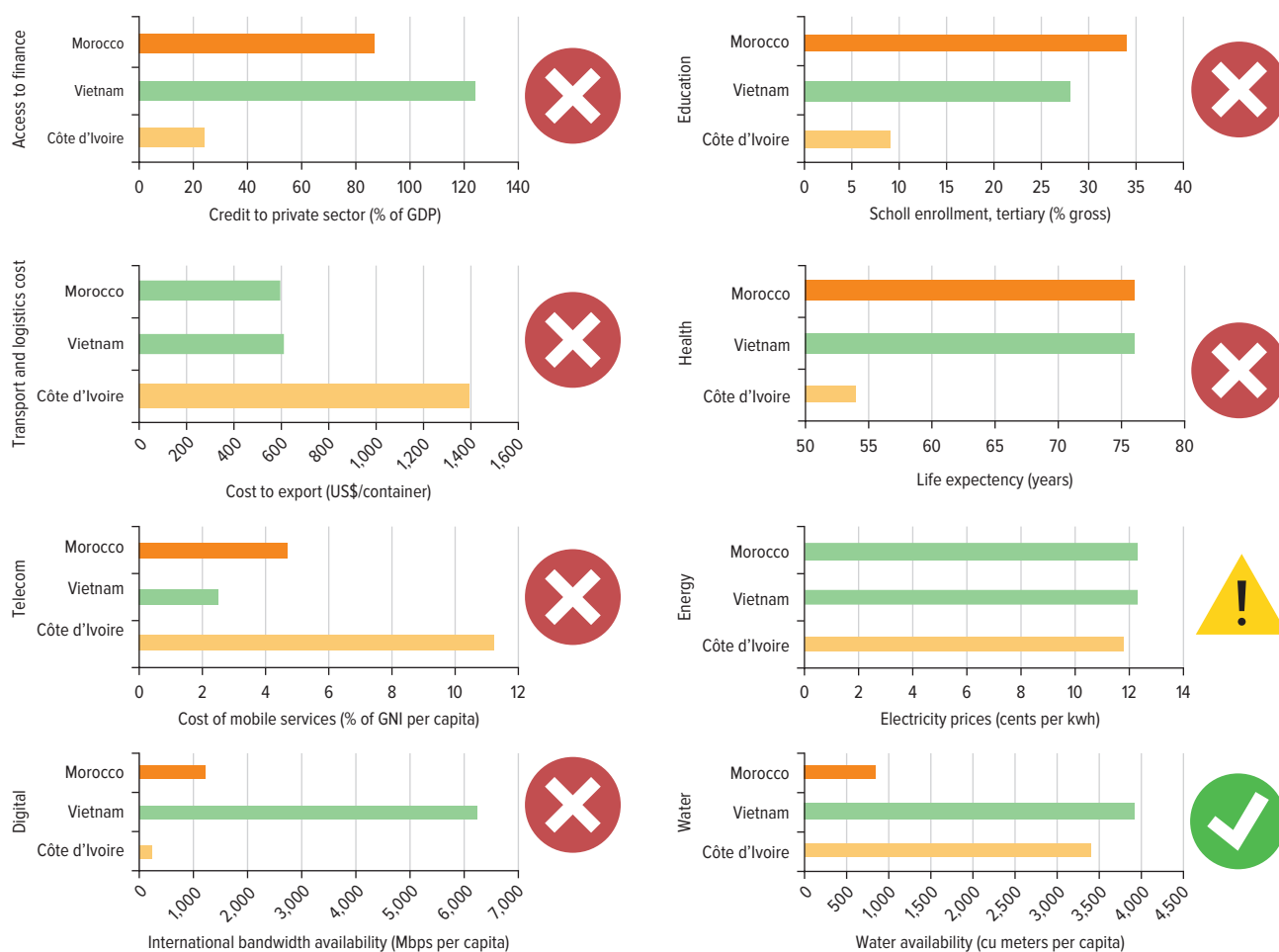
4.3.1 Business environment

Côte d’Ivoire’s economy is characterized by high levels of informality and limited competition in several sectors.

Informality

According to the 2016 Enterprise Survey for Côte d’Ivoire, 75.6 percent of firms reported competing against informal or unregistered firms, a higher proportion than the figure of 66.7

Figure 4.17. Constraints on the business environments of Morocco, Vietnam, and Côte d'Ivoire

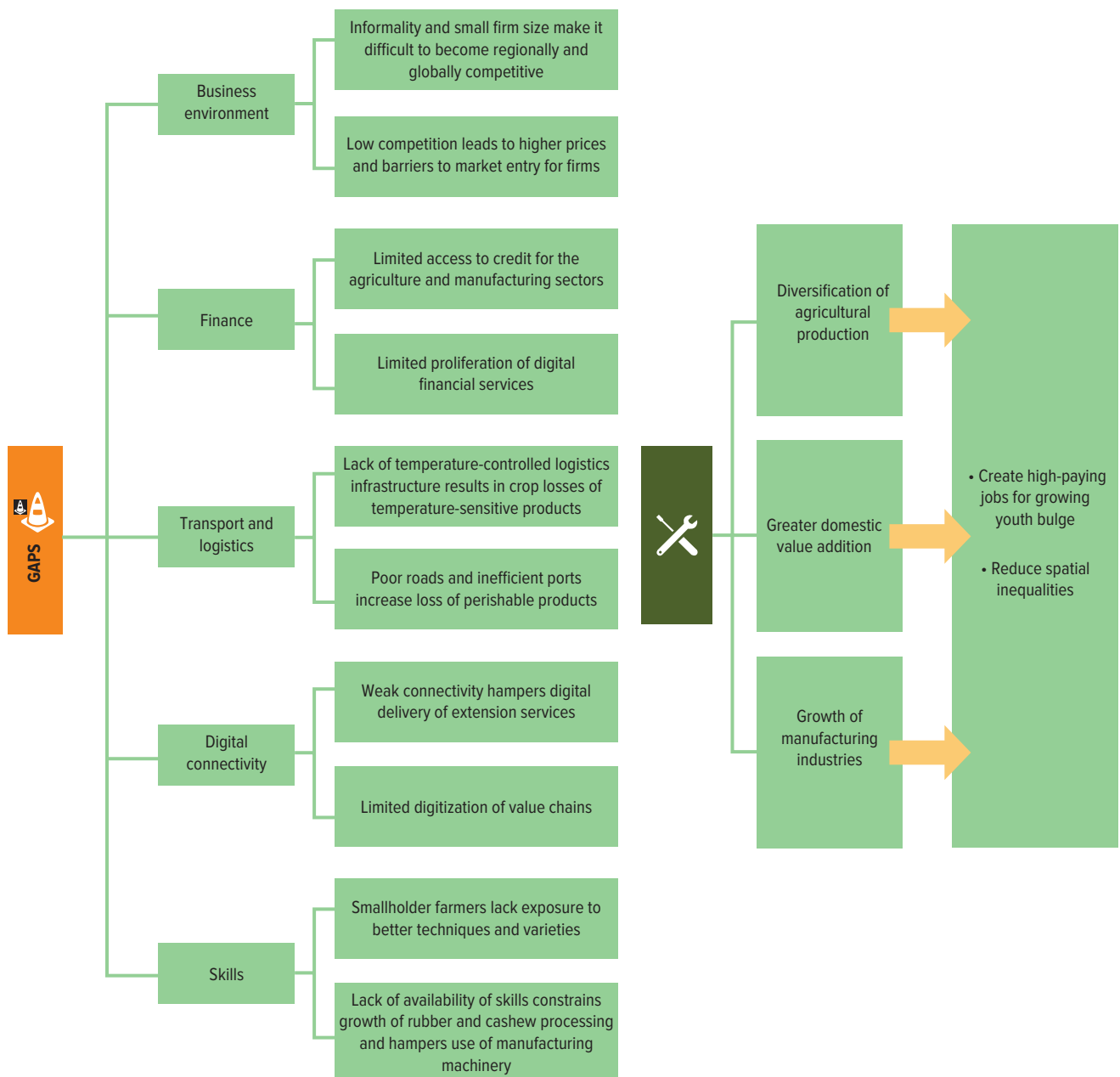


percent for Sub-Saharan Africa. And 66.9 percent of the firms identified practices of informal sector competitors as a major constraint, compared with the average of 39.1 percent for Sub-Saharan Africa. Although informal output as a percentage of GDP declined across all regions over 1990–2017, Côte d'Ivoire remains similar to most countries in Sub-Saharan Africa (and Latin America). It has a high share of informal output in GDP that averaged around 34 percent over 2010–17 (Medina and Schneider 2019). The importance of the informal sector can be explained by a combination of factors directly controlled by the government, including business license and tax procedures and the other four gaps detailed below—in finance, logistics, the digital economy, and finding skilled labor—which larger formal firms have greater opportunities to overcome. The informal sector expanded during the crisis years, but much informality is structural, and it includes a considerable number of businesses that have been in operation for many years.²² There are several ways to reduce the size of the informal sector, such as reducing the costs of

entering the formal sector (reducing registration and start-up costs...), reducing the costs of formality (for example, taxes), and greater enforcement of regulations. All policies have advantages and costs (notably fiscal), but limiting the cost of formality seems promising based on existing studies (Ulyssea 2020). The cumbersome procedures and costs of obtaining a business license increase the hurdles businesses must cross to formalize. For example, the *impôt synthétique* (synthetic tax), as a result of a threshold effect, creates incentives for firms to stay small and informal.²³

Informality also affects the agribusiness supply chain. Currently, most farmers have not organized in cooperatives or professionalized their operations. The widespread informality harms productivity and the quality of produce. There are ways to overcome this. For example, Cargill supports the Coop Academy for cocoa cooperatives—a private sector-led initiative that helps farmers to formalize—which could be replicated by other interested traders, such as Olam.

Figure 4.18. Gaps constraining Côte d'Ivoire's agriculture, agribusiness, and manufacturing



Competition

Although implementation of the competition law has improved,²⁴ there is still evidence that competition in several sectors is restricted. Many sectors that are relevant to the business environment, such as transport and telecommunications, are characterized by monopolies or oligopolies with high entry barriers.

And as in many countries, the Ivorian government holds substantial interests in numerous firms.²⁵ On paper, no laws or rules offer preferential treatment to state-owned

enterprises (SOEs)—private and public enterprises compete under the same terms and conditions and are subject to the same tax burden and policies (though sometimes SOEs develop large arrears on items such as electricity bills). However, Ivorian SOEs’ corporate governance does not meet the standards of the Organisation for Economic Co-operation and Development, but it has been improved by some government efforts—including the creation of a new category of public enterprises to bring Ivorian legislation into line with West African Economic and Monetary Union (WAEMU) regulations. SOEs can nonetheless distort competition.

Business regulations

In key sectors, such as education, health care, and tourism, complex processes and approvals have discouraged formalization and led businesses to stay informal or small. For instance, the lack of a streamlined approval process has led to informal hotel construction that often does not comply with quality standards. In education, starting a new educational institution requires several redundant and lengthy procedures—unlike, for example, in Senegal where the government has streamlined the process and increased the staff evaluating private applications to ease entry into the market. Thus, many schools in Côte d’Ivoire choose not to formalize and opt to stay small.

Governance and integrity

Perceived corruption can inhibit private investments, while institutional and regulatory deficits provide fertile ground for informal activities (figure 4.19). Corruption undermines confidence in market institutions, and large bribes weaken firms’ operational efficiency by increasing costs. The 2016 Enterprise Survey results indicate that a quarter of Ivorian firms were subject to at least one incidence of corruption, while almost a third were expecting to provide “gifts” to public officials “to get things done.”²⁶

Special economic zones

To alleviate the overall business environment issues, the Ivorian authorities launched an ambitious program in 2012 to develop new, state-of-the-art “special economic zones” that would unclog the existing zones around Abidjan and bolster the country’s manufacturing industries. An Agency for Industrial Land Management and Development (AGEDI) was created to develop and equip industrial areas with basic infrastructure, examine applications for industrial land acquisition by private developers, and monitor the

development of the allocated land. To date, three growth poles have been identified—Bouake, San Pedro, and the Abidjan area’s Yopougon and PK24—to catalyze private investments and job creation.

In 2018, the development of a new cross-border special economic zone spanning the cities of Sikasso (Mali), Bobo Dioulasso (Burkina Faso), and Korhogo (Côte d’Ivoire) was announced. It is the first such regional initiative in Africa, rooted in deep intercommunal relations and institutionally supported by ECOWAS. It will be endowed with a business-friendly legal framework and tax incentives to attract local, regional, and global investors in target sectors such as agribusiness/agro-industry and mining.

The ultimate success of Côte d’Ivoire’s industrial zones and growth poles will depend on many factors.²⁷ Although some may rely on corporate tax holidays and fiscal advantages, general fiscal exemptions are never an optimal solution, since they increase the tax burden on the rest of the private sector. But targeted tax incentives to support the development of targeted, high-growth value chains must be granted case by case and accompanied by robust monitoring and evaluation.

4.3.2 Policy recommendations

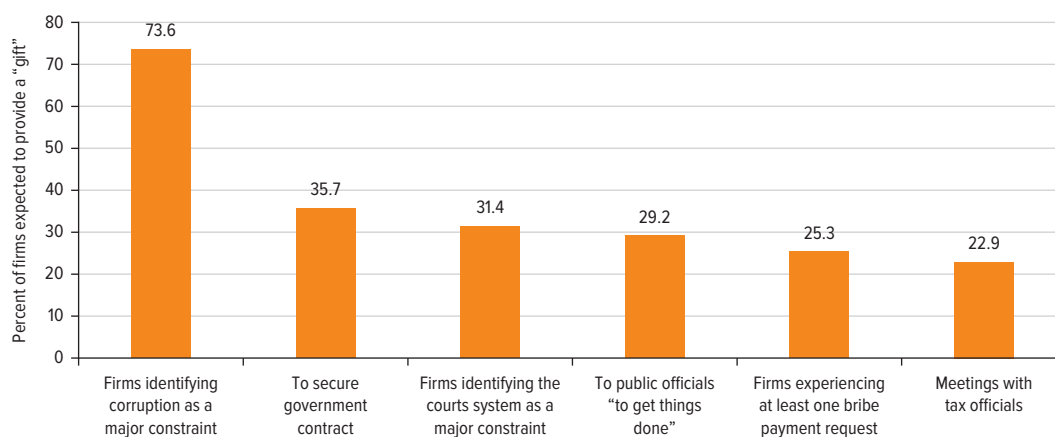
Synthetic tax

- ▶ Adopt a new synthetic tax (*impôt synthétique*) regime that would increase the tax burden on the informal sector and so reduce that disincentive to formalization.

Competition

- ▶ Develop WAEMU efforts to approve legislation empowering national competition authorities to investigate and decide on anticompetitive

Figure 4.19. Public service and corruption



Source: World Bank Enterprise Surveys 2016.

practices on national territory without cross-border effects. And frame rules to regulate and improve cooperation between the WAEMU Commission and national competition authorities for anticompetitive practices with cross-border effects.

- ▶ Enhance resources of the WAEMU Commission and national competition authorities to improve competition enforcement, including inducting technically trained staff and transferring investigation and decision powers in anticompetitive practice matters.
- ▶ Review the role of state-owned companies in sectors where a strong role for the public sector may not be necessary.

Inspections

- ▶ Adopt a risk-based mechanism to select companies for inspection and define a clear protocol that lays out the objectives of inspections and consequent sanctions.

Industrial zones

- ▶ Integrate the new special economic zones into a dynamic vision of territorial and industrial development, including mobilizing sufficient resources to connect them to existing infrastructure networks for transport, energy, and telecommunications.
- ▶ Provide land required for industrial use and ensure the financial sustainability of projects through attractive value propositions—if possible, in PPPs with large anchor investors.

Integrity

- ▶ Continue to strengthen the capacity of the national anticorruption agency and judiciary to identify and prosecute cases of corruption.

4.3.3 Access to finance

As of late 2018, Côte d'Ivoire had one of the most developed financial sectors in the ECOWAS region, with 30 active banks. The sector has expanded rapidly in recent years, driven by an emerging middle class, public investment programs, and the return of private investors. In addition, microfinance institutions and mobile money have increased lending and improved access to banking services.

Credit growth has been strong. Domestic credit provided by the financial sector went from 27.9 percent of GDP in 2012 to 39.1 percent of GDP in 2018.²⁸ Despite the relatively high

proliferation of banks and automated teller machines (ATMs), the penetration of banking services remains low, with only 21.6 percent of adults having an account at a formal financial institution in 2018. Capital market activity remains limited, since the fixed income market is dominated by government bonds and the regional equity market is thin and illiquid.

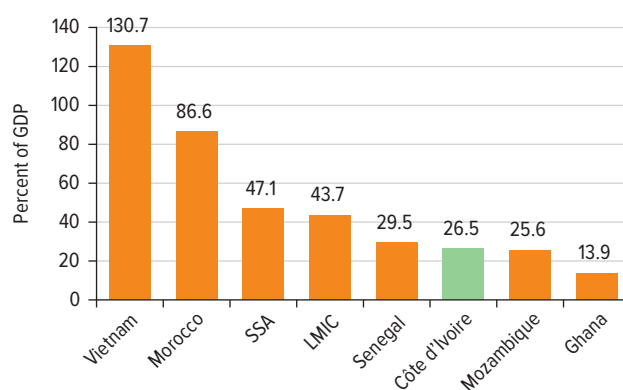
The financial sector remains concentrated. One-third of the institutions hold nearly 80 percent of the credit market. Bank lending is also concentrated in loans to selected large customers, with one-third of all bank credit going to just five borrowers. Overall, 69.1 percent of firms considered the unavailability of credit as a major constraint in the 2016 Enterprise Survey. Côte d'Ivoire stands out among its structural and aspirational peers for its low share of credit to the private sector (figure 4.20). At 26.5 percent of GDP, credit to the private sector in Côte d'Ivoire remains far below the regional average (47.1 percent) and the lower-middle-income country average (43.7 percent).

Access to credit is particularly limited for smaller firms and the agriculture sector. Access to credit by small farmers is limited due to the lack of financing structures such as rural banks and microfinance institutions. Agriculture receives only about 11 percent of bank lending (figure 4.21). Private banks are reluctant to lend to rural small-scale farmers, who are deemed too risky. Credit also continues to be challenging for SMEs, with the finance gap for micro, small, and medium-size enterprises estimated at \$2.4 billion in 2017.²⁹ Available credit often has interest rates higher than the average rate of return on the investments and requires large collateral, and these conditions are prohibitive for most farmers and SMEs.

Constraints on the financial sector

Key constraints to greater development of the financial sector include low deposit mobilization, poor financial inclusion, weak credit information infrastructure, undeveloped capital

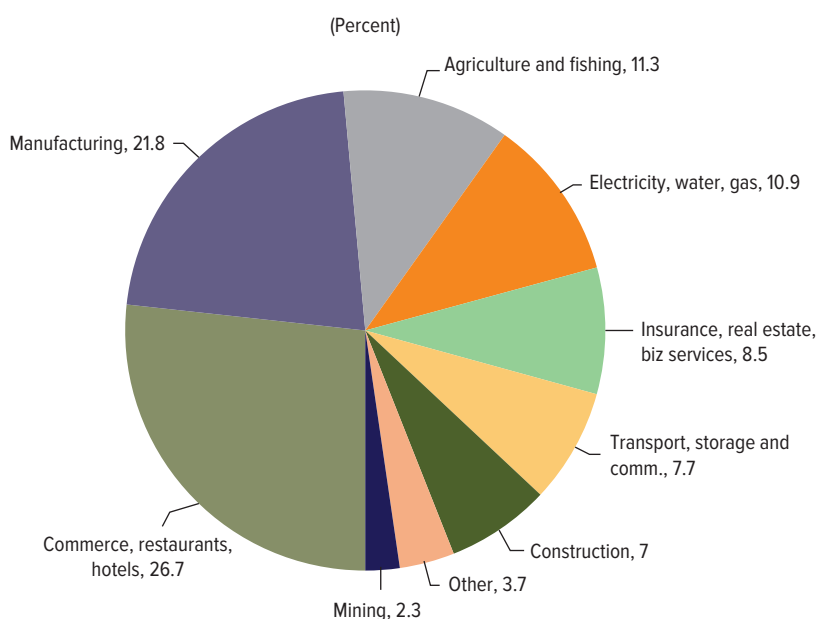
Figure 4.20. Credit to the private sector, 2017



Source: World Development Indicators.

Note: GDP = gross domestic product; LMIC = low- and middle-income countries; SSA = Sub-Saharan Africa.

Figure 4.21. Bank credit by sector, 2017



Source: IMF 2018.

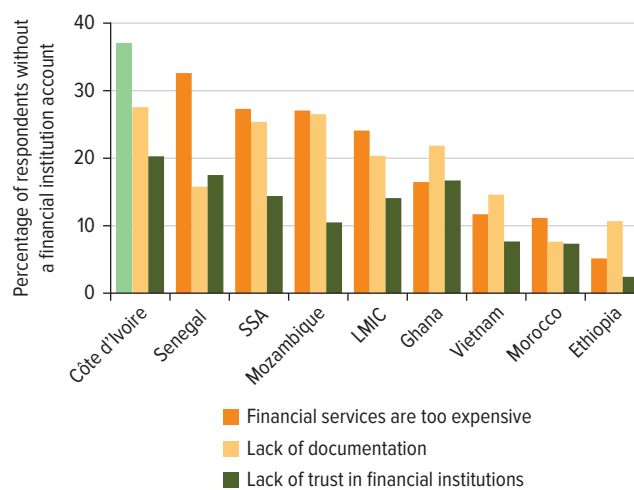
markets leading to a shortage of local currency financing, and limited availability of digital financial services.

Low deposit mobilization: While the savings rate is relatively high (around 19.7 percent of GDP, against the Sub-Saharan Africa average of 17.1 percent), savings do not find their way into the banking system. Deposits as a share of GDP in Côte d’Ivoire (24.8 percent on average over 2014–16) are lower than in many comparators (Senegal, 35.6 percent; Morocco, 87.2 percent). Banks’ inability to mobilize deposits is primarily linked to the high cost of financial services, a lack of documentation, and a lack of public trust. Of those who lack a bank account, 32 percent cited cost as a reason (compared with 19 percent for Sub-Saharan Africa), while 24 percent cited a lack of necessary documentation (compared with 18 percent for Sub-Saharan Africa) (figure 4.22).

Low financial inclusion. Low financial inclusion is linked to banks’ weak capacity to mobilize deposits. The Findex data set for 2016 indicates that in Côte d’Ivoire, despite a denser bank branch network (5.3 per 100,000 adults) and ATM network (6.9) than Sub-Saharan Africa (4.5 branches and 5.6 ATMs per 100,000 adults), a lower share of the population has an account at a financial institution (15 percent) than in Sub-Saharan Africa (33 percent).

Weak credit information infrastructure. Weak credit information infrastructure constrains banks’ ability to fund smaller firms and the agriculture sector. Incomplete or unattractive projects and lack of financial information on borrowers partly explain low credit penetration. Côte d’Ivoire also lacks a collateral

Figure 4.22. Barriers to account ownership



Source: World Bank Findex 2017.

Note: LMIC = low- and middle-income countries; SSA = Sub-Saharan Africa.

registry. Movable assets are the main type of collateral that SMEs in Africa can pledge, but banks are reluctant to accept them due to the inadequate legal and regulatory environment. Collateral registries, which enhance transparency in the credit system, can address the “dead capital” of movable assets. In addition, the insolvency regime remains weak (though a new Insolvency Act was adopted by the Organization for the Harmonization of Corporate Law in Africa Member States in 2015), with high costs and long times to resolve bankruptcies.³⁰

The lack of information and financial infrastructure also affects private banks' reluctant to lend to rural small-scale farmers. They are seen as too risky due to low levels of capitalization, unstable revenue flows, lack of formal credit history, difficulty in evaluating farmers' repayment capacity, the influence of exogenous factors such as weather conditions, and the limited legal avenues for enforcing contracts.³¹ The lack of land that has been titled by the conversion of customary land into private property remains a challenge. Legal ambiguity includes the unclear value of a land certificate as opposed to a land title, and the complexity and cost of land rights procedures are hindrances to the greater availability of land. Notably, village demarcation—an essential prerequisite for securing land rights—has been ineffective due to cumbersome and costly procedures and institutional arrangements.

Undeveloped capital markets and high transaction costs for capital market transactions. Although Côte d'Ivoire boasts some of the most developed financial markets in the WAEMU region and hosts a regional stock exchange in Abidjan (Bourse Régionale des Valeurs Mobilières), capital markets remain illiquid and insufficiently developed.

The regional stock exchange recently created a new compartment for financing SMEs, to offer them better access to finance via capital markets. It has also tried to diversify the investor base. Its efforts to improve the business environment and reduce the cost of financial transactions should continue. The lack of a functional interbank market and the absence of a reliable long segment for the yield curve are further constraints on the development of local capital markets. In this context, further developing the issuance of local currency bonds would be important, building on the anchor investment in 12- and 15-year nonsovereign bonds issued by the *Caisse Régionale de Refinancement Hypothécaire* in December 2017 and February 2019, which allowed banks to offer mortgages with extended tenors.

Capital markets could provide long-term financing, especially since Côte d'Ivoire's pension funds, with a young subscriber base, could be natural buyers of longer-term, fixed-income instruments. Institutional investors in WAEMU currently underinvest in corporate fixed income and equities, holding portfolios dominated by sovereign debt, short-term liquid investments (term bank deposits and short-term paper), and more speculative land and real estate assets. This strategy partly reflects restrictions imposed by regulatory authorities that lack capacity for market surveillance and risk monitoring across the financial system.

Limited availability of digital financial services. Although Côte d'Ivoire has increased financial inclusion through mobile money accounts, it lags its high-performing peers in East Africa such as Ghana, Kenya, and Uganda (figure 4.23). And almost 50 percent of mobile money accounts in Côte d'Ivoire are inactive (against 42 percent in Sub-Saharan Africa).

Mobile money tariffs are much higher in Côte d'Ivoire than other African countries, so partly because of high taxes, two of Côte d'Ivoire's digital financial providers ranked as the fourth most expensive of 15 providers in selected African and Asian markets. The increased proliferation of mobile bank accounts has not yet translated into the use of formal savings, credit, or insurance products. The poor venture capital funding environment has also hampered the emergence of payment companies.

4.3.4 Policy recommendations

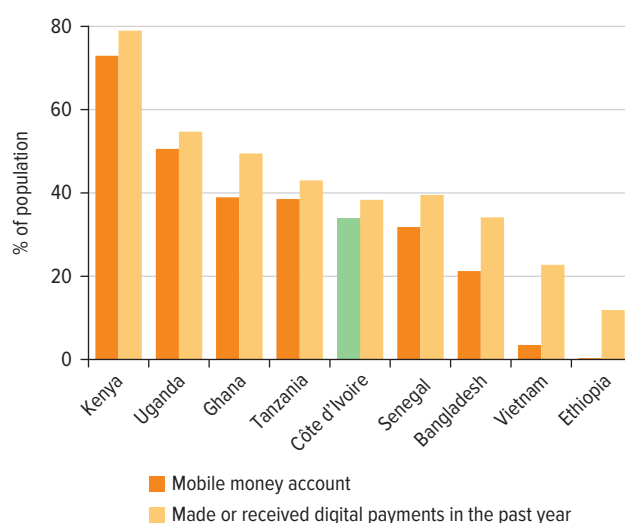
Deposit mobilization

- ▶ Create a regulatory framework for agency banking. Public trust in financial institutions is low (among the lowest compared with Côte d'Ivoire's structural and aspirational peers),³² partly explaining banks' weak ability to mobilize deposits despite a relatively extensive branch infrastructure. The absence of a Central Bank of West African States (BCEAO) regulatory framework for agency banking discourages banks and microfinance institutions from using agents.³³

Digital financial services

- ▶ Digitize government payments. Most government payments remain cash-based, affecting salaries and benefit payments and creating delays for citizens. But donor-funded programs are supporting the digitization of certain payments, such as student bursaries and the mission fees of civil servants. A switch from cash and paper-based payments

Figure 4.23. Mobile money accounts and digital payments in Côte d'Ivoire and comparators, 2017



Source: World Bank Findex 2017.

to electronic payments for most government transactions would increase the number of transaction accounts and deepen the national retail payment systems.

Credit information infrastructure and credit to agribusiness

- ▶ Replace the patchwork of “know your customer” (KYC) with a clear risk-based KYC tier. Almost 50 percent of farmers do not have a regular ID, hampering their access to digital financial services. The 2015 WAEMU directive on anti-money laundering/combating the financing of terrorism does not provide exceptions for clients without official identity documents. So, smaller electronic fund transactions do not receive lighter-touch KYC. New risk-based KYC tiers should back comprehensive financial services coverage, including digital financial services, and should provide exceptions from requirements likely to exclude traditionally unbanked groups, such as poor and rural populations.
- ▶ Digitize agricultural value chains. Poor financial inclusion and cash dominance in agricultural value chains constrain farmers’ access to finance. The lack of banking history also discourages banks from extending credit to smallholder farmers. The International Finance Corporation’s experience in working with agribusiness players such as Cargill and Olam to digitize payments to farmers suggests that digitizing agricultural value chains could increase farmers’ access to credit by increasing transaction transparency, creating a series of records that can be used as a proxy for a credit history to support a farmer’s creditworthiness.
- ▶ Strengthen the legal framework for using land as collateral. To do so, authorities must clarify the value of a land certificate as opposed to a land title, and address the complexity and cost of land rights procedures. Notably, they should facilitate village demarcation—an essential prerequisite for securing land rights—by streamlining cumbersome and costly procedures and institutional arrangements. Furthermore, they should improve the urban land tenure system by assigning unique identifiers to urban land parcels.
- ▶ Educate farmers in financial literacy. This process would teach farmers about loan access, lending products and their costs, and risk management. Farmers with little financial knowledge, who face a diversity of requirements across providers, would gain better access to finance. Farmers’ financial literacy would also enhance their financial inclusion,

since it would encourage them to open a savings account, establish a banking history, and eventually obtain loans from banks. The World Bank Group supports improving adult financial literacy as part of its efforts to strengthen financial inclusion.

Leasing

- ▶ Create a regulatory framework for the equipment leasing market. Leasing equipment can allow SMEs without a long credit history or sufficient collateral to access finance. It could also allow farmer cooperatives to access financing, such as the leasing programs for cocoa cooperatives (including about 75,000 farmers). To support the growth of the equipment leasing market, authorities should consider three steps. First, improve the implementation of the leasing law by educating the judiciary to speed up restitution to around two months. Second, make leasing value added tax-neutral, treating leasing as a credit instrument (similar to a loan) and not as an equipment purchase. And third, bring accounting treatment of leasing into compliance with International Financial Reporting Standard 16, which would improve transparency in the equipment leasing market.

Capital market development

- ▶ Activate the regional interbank market, promote yield curve development, and reduce fragmentation of the sovereign debt market. The development of a benchmark yield curve is paramount, together with mechanisms guaranteeing that WAEMU sovereign debt issuances registered at the central depository of the regional stock exchange are also eligible as guarantees with the central bank. The regional stock exchange should also spur income diversification through new company listings and product placements.
- ▶ Advance structural reforms for local capital markets. Reforms include strengthening disclosure requirements on companies in accordance with international good practice, widening the range of regional financial products available (such as real estate funds, green/social bonds, and private equity funds and risk capital), improving financial education for investors, strengthening investor protection frameworks, strengthening market surveillance, and improving the quality and accessibility of information for listed companies.
- ▶ Encourage policy makers to set adequate asset allocation rules for institutional investors, including pension funds and insurance companies.

Rules are particularly needed in Côte d'Ivoire since pension funds and their young subscriber base could become natural buyers of long-term sovereign and highly rated corporate bonds. The current asset allocation of pension funds is skewed toward local sovereign debt and highly speculative real estate investments. If the pension funds regulator limited real estate investments by the funds, money could be invested in long-term debt. And the Insurance regulator (CIMA) restricts investment options for insurers, but if it increased the share of highly rated tradable securities allowed in reserves, the pool of buyers of long-term debt could expand.

- ▶ Strengthen the expertise and capacities of financial sector regulators and their members. Changes in asset allocation rules should be accompanied by capacity building of both institutional investors and regulators: CREPMF for public savings and financial markets, CIMA for insurance markets, CIPRES for social security, and the West Africa central bank BCEAO.
- ▶ Strengthen transparency and efficiency in managing offshore accounts. Currently there is no transparent framework governing the authorization granted by the BCEAO to hold an offshore account. This generates considerable uncertainty on the implementation of infrastructure projects, and more generally on the business environment.

4.3.5 Transport and logistics

The transport sector in Côte d'Ivoire is one of the most developed in West Africa. Its assets comprise an 82,000-kilometer road network, 1,238 kilometers of meter-gauge railway between Abidjan and Ouagadougou, two international airports (at Abidjan and Bouake) and five domestic airports, and two international ports (at Abidjan and San Pedro). Roads are critical, handling more than 99 percent of internal freight movement. Côte d'Ivoire was one of the first countries in West Africa to use PPPs effectively in transport for railway, airport, and bridge concessions. Over the past five years, the government and the private sector have invested more than US\$2 billion to upgrade/rehabilitate the transport infrastructure, following more than a decade of underinvestment caused by the prolonged political crisis. Côte d'Ivoire could emerge as a key transport and trade hub for West Africa. Its transport infrastructure is crucial for neighboring landlocked countries, such as Mali and Burkina Faso, which channel their imports and exports through it. The Abidjan-Ouagadougou corridor has become an essential transport route, connecting Burkina Faso with the African Atlantic coast. The market share of the Abidjan-Ouagadougou corridor will likely increase as Côte d'Ivoire regains its dominant role as a transit corridor for Burkina Faso and, to

a less extent, Mali and Niger. The nearly 1,000-kilometer Abidjan-Lagos coastal corridor links some of the largest and most economically vibrant cities in Africa—Accra, Abidjan, and Lagos—and serves as a catchment area of more than 35 million people.

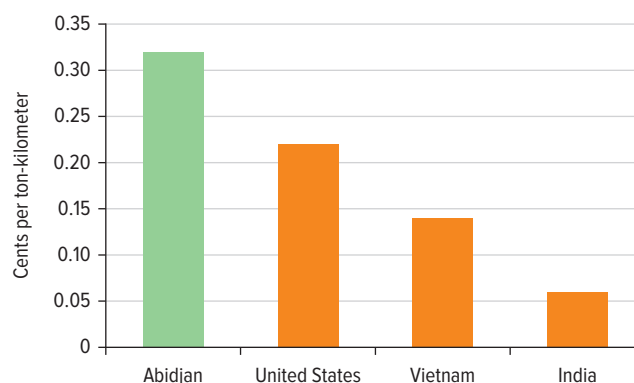
Enhancing connectivity is critical for integrating into global value chains and moving toward making higher value-added products, particularly the agricultural products for which Côte d'Ivoire has a comparative advantage. But the cost and quality of logistics in Côte d'Ivoire rank considerably below Vietnam's (figures 4.24 and 4.25). Vietnam has steadily improved its logistics performance score—its Logistics Performance Index rank improved 14 spots, from 53 in 2007 to 39 in 2017. Vietnam's agricultural exports have grown sharply, and its manufactured exports have diversified into higher value-added ones, including agri-linked products such as textile yarn, rubber products, and sugar.

Transport costs in Côte d'Ivoire are far higher than in regional peers. The cost of transporting a container from the center of the country to the port for export is \$1,390 in Côte d'Ivoire, compared with \$875 in its neighbor, Ghana. Inefficiencies in the transport sector hamper exports of agricultural products, and compliance with procedures at Côte d'Ivoire's borders takes much more time than at the borders of its regional and aspirational peers.³⁴

Roads

Although Côte d'Ivoire's road network deteriorated considerably due to insufficient maintenance and accumulating costs, ongoing rehabilitation is starting to bear fruit. The road network is old and was, until 2011, dilapidated. It has been damaged by widespread overloading of trucks. Upgrading it has been a priority under the 2016–2020 National Development Plan, and 4,000 kilometers of interurban roads have already been rehabilitated and new motorways developed around Abidjan.

Figure 4.24. Container transport cost, Abidjan and comparators



Source: World Bank 2018c.

Figure 4.25. Logistics Performance Index, Côte d'Ivoire, 2018, and Vietnam, 2007 and 2017



Source: World Bank LPI (2018 data for Côte d'Ivoire).

Finally, the structure of the trucking industry, where small informal operators dominate, affects costs. These operators are inefficient transporters and rely on intermediaries and market organizers to find freight, raising costs.

Ports

Côte d'Ivoire is well endowed with ports. The Abidjan Autonomous Port (PAA), Côte d'Ivoire's largest, handles 80 percent of the maritime traffic. With direct routes to Europe, Asia, and the Americas, it is both a transshipment hub and a maritime gateway serving neighboring and landlocked countries. As PAA has become overused, a second terminal is being constructed to boost its capacity. Côte d'Ivoire's second largest port, the Autonomous Port of San Pedro (*Port Autonome de San Pedro*), is strategically placed to serve the markets of neighboring Guinea, Liberia, and Mali.

Given the port's location in Abidjan, road congestion in and around it are a major factor slowing the clearance of freight, which is on average five times slower than leading ports in Asia.³⁵ PAA's current throughput of 650,000 20 foot equivalent units a year is about half its capacity, due to operational inefficiencies at the port. Operations at the port are further slowed by inefficient customs procedures and a lack of related infrastructure such as storage warehouses, bringing the average processing time for export goods to 10 days, compared with two days in Vietnam,³⁶ an aspirational peer. Although PAA's overall port score³⁷ is better than its neighbors, its container throughput is below those of its neighbors, specifically Ghana and Nigeria.

Airport

Since the end of the political crisis in 2011, passenger traffic through Abidjan's Felix Houphouët-Boigny Airport has been growing by almost 16 percent a year, making it the third largest in West Africa, with 1.8 million passengers in 2016. Some of its infrastructure is inadequate, and the airport is saturated at peak periods. All the regions in Africa except West Africa have developed aviation hubs and air corridors, benefiting the economic growth of the hub region. Although all West African countries have granted "fifth freedom rights"³⁸ to airlines from outside, the connectivity between West African countries is poor.

Constraints

Key constraints to greater private sector investment in transport and logistics include the following:

- ▶ Operational inefficiencies at the Port of Abidjan. They increase costs. Due to delays and unpredictability in loading and unloading ships as well as lengthy procedures at the port, containers take an average of 10 days to leave the port. The uncertainty about the time required affects transporters in turn, partly reflecting a shortage of storage areas in the port, so that the port's main handling areas are being used for stacking and storage.³⁹ The high volume of trucks on the port's main access roads and the lack of parking space increase congestion and make travel times uncertain (particularly during peak seasons).⁴⁰

- ▶ Market distortions in the trucking industry and a lack of formalization. These increase costs and discourage containerization. Syndicates of truck drivers and *coxeurs*—intermediaries between the trucker and the shipper—collect a considerable rent when allocating freight to truckers, most of whom operate at a small scale in the informal sector. Consequently, truckers resort to short-term profit-maximizing behavior by overloading beyond the axle load. Overloading discourages containerization because containers typically take more space than the stripped cargo: two or more containers can be unpacked and loaded onto a single truck. Thus, the containerization rate on the Abidjan–Ouagadougou corridor is about 20 percent for transit goods moving inland, among the lowest rates in the world. The high-cost, low-quality equilibrium discourages the formalization of the industry, since most truckers are not profitable enough under the current system to meet professional standards.
- ▶ Frequent roadblocks by law enforcement—officially to enforce axle loading rules. These also increase transit time and costs. Roadblocks create opportunities to extract bribes from truckers,⁴¹ generating additional transport delays and increased rotation time.

The following transport sector deficiencies in particular lower agribusiness competitiveness:

- ▶ Lack of temperature-controlled logistics. Crop losses result. Adequate temperature-controlled logistics to preserve the quality of crops before export or before reaching local consumers are unavailable, aggravating the inefficiencies in transportation and frequent delays at ports. On average, about 40–50 percent of crops are wasted. Expanded dry storage and humidity-controlled warehouses are needed for commodities such as cashews, cocoa, and coffee.
- ▶ Inefficiencies and high costs in transport and logistics. These keep agricultural produce from reaching markets in a timely manner. The lack of accessible roads increases travel times and transport costs and contributes to the loss of perishables. And transportation costs are raised by delays in clearing goods at the port, cumbersome customs and transit procedures, and difficulties in finding backhaul cargo from the port.

4.3.6 Policy recommendations

Formalization of the trucking industry

- ▶ Regulate entry and exit in the trucking sector. To increase formalization of the trucking industry,

the entry of road transport operators should be regulated and the training system for them strengthened. Truckers who are unable to meet such professional standards should be compensated. Weight and axle load should be regulated using weighing equipment, and penalties levied for noncompliance. The World Bank's Transport Sector Modernization and Corridor Trade Facilitation project (PAMOSET) supports capacity building for transport sector professional associations through training.

Trucking fleet renewal

- ▶ Renew the trucking fleet through scrappage schemes and financing mechanisms for new truck purchases. Reflecting the poor profitability of small informal truckers—partly because of slow rotation times—85 percent of trucks are more than 10 years old, leading to short-term profit-maximizing behavior, such as stripping goods from containers to load onto trucks and overloading. Policy makers should consider a scrappage scheme for old trucks. The World Bank's PAMOSET project supports a fleet renewal financing facility for long-haul heavy cargo trucks. The World Bank's Abidjan Urban Mobility Project is supporting the fleet renewal of small-scale urban transport vehicles, including through scrappage payments and a risk-sharing facility. Institutions such as the International Finance Corporation can set up a risk-sharing mechanism with financial institutions to finance transporters' purchase of new trucks. Fleet renewal would be another help in the formalization of the trucking industry. And it would reduce the road damage caused by old vehicles.
- ▶ Liberalize the delivery of containers in Abidjan. Stevedoring companies in the port have a monopoly on road deliveries in the Abidjan metropolitan area. As a result, the largest trucking companies in Côte d'Ivoire are also the port cargo handling companies, leading to high transport costs in Abidjan. Liberalizing the market for delivery of containers, including through accreditation, will be key.
- ▶ Create a freight exchange. Freight exchanges (*bourses de fret*) based on supply and demand would bypass unnecessary intermediaries and brokers, which increase costs and create uncertainty. A transparent freight market eliminating middlepersons would reduce transport costs by \$0.13 per kilometer on the Ivorian section of the Abidjan–Ouagadougou corridor. The Kobo freight exchange recently put in place in Kenya offers an example.⁴²

Port operational efficiency

- ▶ Totally automate customs cargo releases for rail and road transit goods. This will reduce the uncertainties in the time cargo takes to leave the port. Authorities should implement a random checking mechanism for customs cargo—like those prevalent in Europe and the United States. Customs reforms could also reduce the need for road checkpoints—the Abidjan–Ouagadougou corridor has 31 mobile and fixed checkpoints—and reduce the rotation time for trucks. Greater port efficiency will also reduce the high dwell times for ships. Improving customs clearance procedures requires implementing single windows and trade information portals. The Greater Abidjan Port–City Integration project is facilitating the buildout of infrastructure—access roads and parking bays—to ease physical constraints. Through policy actions to speed customs clearance, authorities can further reduce the time and uncertainty of goods transport.

4.3.7 Digital connectivity

The ICT sector in Côte d'Ivoire is fairly developed, and indicators suggest that conditions are improving. It has consistently expanded during the past few years, contributing 8 percent of GDP (compared with 3.3 percent in Senegal) and creating around 5,400 direct jobs. The sector is growing at 9 percent per year, spurred by an estimated \$200 million in combined public and private investments over the past five years. With three main mobile operators (Orange, MTN, and Moov),⁴³ mobile penetration (the number of SIM cards divided by the population) reached 139.1 percent in June 2019, growing at a quarterly rate of 4.4 percent.⁴⁴ The number of subscribers to mobile money services reached 14.7 million in June 2019, growing at a quarterly rate of 5 percent.

Private stakeholders increasingly promote the digital economy. The Chamber of Commerce and Industry pursues advocacy campaigns and promotes networking events to support the uptake and development of digital solutions by its members. The digital ecosystem hosts 300 high-tech firms, including 50 startups, operating mainly in web agencies and application development. There are several host coworking spaces and incubators, including Abobo (Babi Lab), Cocody (Orange Fab, Akendewa), Plateau (DNA Factory), Marcory (O'Village), and the city of Grand Bassam, which is 30 kilometers from Abidjan and houses the headquarters of VITIB, the Ivorian Free Zone dedicated to ICT and biotechnology.

Côte d'Ivoire still has a digital connectivity gap in mobile and fixed internet access. The penetration rate of mobile telephony is partly driven by individual users subscribing to several SIM cards, often to take advantage of periodic promotional offers from the main mobile network operators.

GSMA estimates suggest that the unique subscriber penetration rate in 2018 was about 50 percent for mobile telephony and 25 percent for mobile internet, behind regional peers Senegal (28 percent), Nigeria (29 percent), and Ghana (33 percent). The fixed broadband penetration rate (the number of fixed broadband subscribers divided by the number of households) reached 4 percent in 2018, below the rates of aspirational peers Sri Lanka (26 percent) and Vietnam (48 percent), as well as regional peer Senegal (7 percent). The connectivity gap is more pronounced in rural areas. Internet use—mostly through mobile broadband, since fixed broadband connectivity is marginal—is concentrated in the most affluent and educated urban population centers. In urban areas, 16 percent of households have internet access, compared with only 2 percent in rural areas.

Increased access to digital connectivity is key for the economy. It would support productivity improvements, including in agriculture, as well as farmers' access to finance.⁴⁵ Improved digital access would also help overcome the limited coverage of national ID systems. In Côte d'Ivoire, only 55 percent of the population over age five is registered, though birth certificates are required annually for school enrollment.⁴⁶

Key constraints to increased access to digital connectivity are lack of service affordability and limited service quality and limited level of digital literacy.

Lack of service affordability

Despite significant progress over the years, digital connectivity is still expensive. According to data from the Telecommunications Regulatory Agency of Côte d'Ivoire, between the first quarter of 2017 and the first quarter of 2019, unit prices declined by 23 percent for mobile calls, 32 percent for mobile internet, and 49 percent for fixed broadband. But these positive trends are not representative of the cost borne by a new subscriber. The least expensive “representative plan” for mobile telephony represented 11 percent of per capita income and the least expensive plan for fixed broadband represented 25 percent.⁴⁷ The cost of mobile telephony is above that in aspirational peers such as Cambodia (6.7 percent) and Vietnam (2.5 percent), as well as regional peers such as Nigeria (4.9 percent) and Ghana (2 percent) (figure 4.A.3). The unaffordability stems from factors including limited retail market price competition for mobile or fixed connectivity, significant wholesale costs, and sector-specific taxation.

Reflecting limited price competition, the retail markets for fixed or mobile connectivity remain concentrated and exhibit “consumer stickiness.” The two largest mobile network operators have 75 percent of mobile telephony subscribers and 82 percent of mobile internet subscribers, while the largest fixed broadband provider has a 99 percent market share. Despite the implementation of mobile number portability since September 2018, the market share of

the largest operators has slightly declined, probably due to asymmetric pricing whereby subscribers pay higher termination prices to complete calls or text messages on competitors' networks (off-net price).⁴⁸ Another source of consumer stickiness is the bundling of digital connectivity services with mobile money services. Finally, there is still no active pure retail mobile operator (mobile virtual network operator) in the market.

Reflecting significant upstream costs, the regulated cost of network interconnection remains high, the market for mobile infrastructure is led by a large incumbent, and the wholesale market for transmission capacity remains underdeveloped. The wholesale price of call termination on the mobile network in Côte d'Ivoire is almost three times larger than in Senegal.⁴⁹ In addition, the symmetric termination price—it is the same for all networks—disadvantages operators with low market share. Some operators share towers through a single independent company. While the tower sector is regulated, peer markets such as Ghana and Kenya have at least two tower companies, enabling competition with lower leasing price and creating demand for mobile infrastructure.

Taxes on financial services are unequally applied between telecom operators and banks, creating an uneven playing field. For example, banks are currently exempt from the 0.72 percent digital services tax, but electronic money issuers are obliged to pay it.

Limited service quality

Despite investment by the private sector and the government, service quality remains limited. Telecom operators invest large amounts every year to upgrade and maintain their networks, and the government is deploying 7,000 kilometers of fiber optic to further support the national backbone. But the average download speed experienced by users lags that in peer markets such as Ghana, Kenya, and Vietnam (figure 4.A.4).

The mobile network appears to be congested. Fixed broadband is mainly provided using an older technology. Côte d'Ivoire has 8,000 customers per tower, compared with an average of 5,403 in Sub-Saharan Africa, 4,101 in lower-middle-income countries, and 1,500–2,000 in Ghana. This gap in network infrastructure mirrors investment, when the market size is taken into consideration. A major densification of the mobile network through a large increase in tower infrastructure would be needed to catch up—with Ghana, for example.

Reflecting substantial license fees, the conditions of the latest 4G license were more stringent. During the last award, the price of license fees more than doubled, and the duration of the concessions was cut by five years. These conditions might discourage vigorous investment in network quality.

Education and internet use seem to have an inverse relationship. Only 1 percent of those with at most primary education use the internet weekly, compared with 19 percent of those with at least a secondary education. In Côte d'Ivoire, women are 9 percent less likely than men to own a mobile phone and 48 percent less likely to use the internet.⁵⁰ Addressing these shortcomings is part of the broader education agenda.

4.3.8 Policy recommendations

The following policy options could be explored to increase private sector participation in the digital sector.

Promoting competition in the retail market for mobile broadband internet access

- ▶ Set aside spectrum for a potential new entrant, or actively encourage the entry of mobile virtual network operators through a decree specifying the license conditions, including the fees.
- ▶ Gradually remove price differentiation between off-net and on-net calls.
- ▶ Support the interoperability of ancillary services such as mobile money.
- ▶ Provide financial support to new tower companies to enable mobile infrastructure sharing at more competitive prices.

Promoting competition in the retail fixed broadband market

- ▶ Prioritize the implementation of the network-sharing provisions in the 2013 decree on network mutualization. Currently, most operators deploy their own network, potentially creating unnecessary duplication.
- ▶ Enforce wholesale remedies such as local loop unbundling and bitstream.
- ▶ Implement new remedies on Next Generation Access such as Virtual Unbundling Local Access for fiber.

Reducing upstream costs while ensuring territorial coverage

- ▶ Align mobile termination rates with the regional level by revising the approach to cost modeling.
- ▶ Consider aerial deployment of last-mile fiber optic broadband network, where appropriate.
- ▶ Gradually align taxation in the telecom sector with that in other sectors of the economy.

- ▶ Strike a balance between future licensing conditions and operators’ incentive to invest in network quality.
- ▶ Consider enforcing territorial coverage obligations with coverage targets designed at the regional and subregional levels rather than only the national level.

Strengthening the digital ecosystem

- ▶ Improve the venture capital ecosystem. With just around \$2 million of funding received by local tech startups in 2018, Côte d’Ivoire’s ecosystem is incipient, especially compared with East Africa’s. The lack of a robust venture capital ecosystem has prevented the emergence of local companies, such as independent payment operators, that could solve local challenges.
- ▶ Strengthen the acquisition of digital skills, especially by women.

4.3.9 Skills

The education sector has yet to recover fully from the political crisis between 2002 and 2011, when education was disrupted nationwide, and many children and youth could not attend school. Enrollment rates remain low past the lower secondary level (figure 4.26).

Today, children who start school at age four can expect to complete only seven years of school by their 18th birthday, below the Sub-Saharan Africa average. While the primary gross enrollment rate was 99 percent in 2017—up from a low of 68 percent in 2006, low transition rates led to an overall secondary gross enrollment rate of 50 percent, plus a sharp drop in upper secondary enrollments.⁵¹ The university sector was particularly affected by the crisis—the tertiary gross enrollment rate declined from 9.3 percent in 2005 to 8.3 percent in 2016, compared with an average of 24.4 percent for lower-middle-income countries.

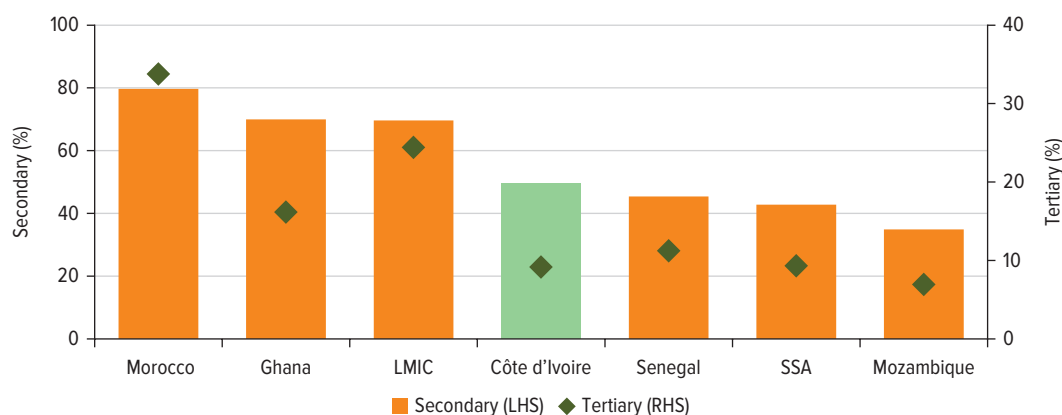
Learning outcomes are insufficient across all levels. Overall literacy among the youth has remained unchanged for decades, hovering at around 50 percent. A 2016 national evaluation for third grade revealed that 77 percent had a low or very low proficiency in French and 81 percent had a low or very low proficiency in mathematics. On the 2014 Programme for the Analysis of Education Systems (PASEC), Ivorian sixth graders not only scored below average in French and among the lowest in mathematics, they also performed worse than the 1996 Ivorian cohort.

The government has invested heavily in rehabilitating the basic education sector since 2012 by building new classrooms and hiring teachers. It has made improving educational outcomes a strategic priority. School was made mandatory in 2015 for all children ages 6–16. Starting in 2011, the government increased its total education budget by 7.5 percent a year. In 2015, in line with international norms, the government spent a quarter of its budget, or nearly 5 percent of GDP, on education. As a result, education outcomes are improving quickly—enrollment rates have grown since 2015 at all levels. But it will take several years for the K–12 “flow” to be near that of comparator countries.

Despite recent improvements, the education system remains poorly equipped to prepare youth currently in school or out of school for work. Beyond basic competencies, youth often lack the specific soft and hard skills needed to be more productive in the workplace or in self-employment.⁵² Growth in the agroprocessing and manufacturing sectors faces obstacles due to the lack of skilled labor.

University and technical/vocational education and training (TVET) are the weakest links in the Ivorian education system. While access remains an issue with the number of high school graduates expected to triple by 2030, most of whom will qualify for free tertiary education, the quality and relevance of programs are even bigger challenges. College graduates have considerable difficulty finding jobs, with employers

Figure 4.26. Gross enrollment ratio, secondary and tertiary education



Source: World Development Indicators.

Note: LMIC = low- and middle-income countries; SSA = Sub-Saharan Africa.

questioning the quality of many tertiary diplomas—especially BTS programs (*Brevet de Technicien Supérieur*, a two-year professional program). There is a higher percentage of BTS holders than other graduates among unemployed graduates. In addition, an overwhelming majority of students steer away from science, technology, engineering, and math tracks starting at the secondary level.

Private providers play an increasingly important role in the education sector (figure 4.27). In 2016, private providers educated 30 percent of all students from pre-primary to secondary. In secondary TVET, 65,000 students (61 percent) were enrolled in private programs. While private schools perform better on some indicators, including the PASEC results, quality varies greatly. The government subsidizes students in private establishments, showing openness to the private sector to alleviate overcrowding at the secondary and tertiary levels and to offer entry into a tertiary program to all baccalaureate graduates, as the law requires, though better students are guaranteed enrollment in a public institution. Private providers, once certified to receive government students, receive a flat fee per enrolled student. In 2017, nearly 600,000 students were placed in private establishments at the secondary level, 35,000 in the TVET sector, and nearly 70,000 students in a two-year BTS program (the only type of program eligible for subsidy). In 2018, 75 percent of all high school graduates were placed in private establishments.

In practice, there are four overlapping markets for private education programs in Côte d'Ivoire, each with its own set of constraints and peculiarities:

- ▶ The premium general education market caters to the wealthier segments of society. This sector offers potentially high returns to investors, but also carries higher costs, explaining why most private higher education programs are business schools, and none is a medical or engineering school. With growth expected to remain around 7 percent for the next few years, continued opportunities are likely

for expansion of premium services at all levels. Showing market potential, Côte d'Ivoire has already attracted the interest of several funds focused on the education sector, including Comoé Capital and Oasis Capital.

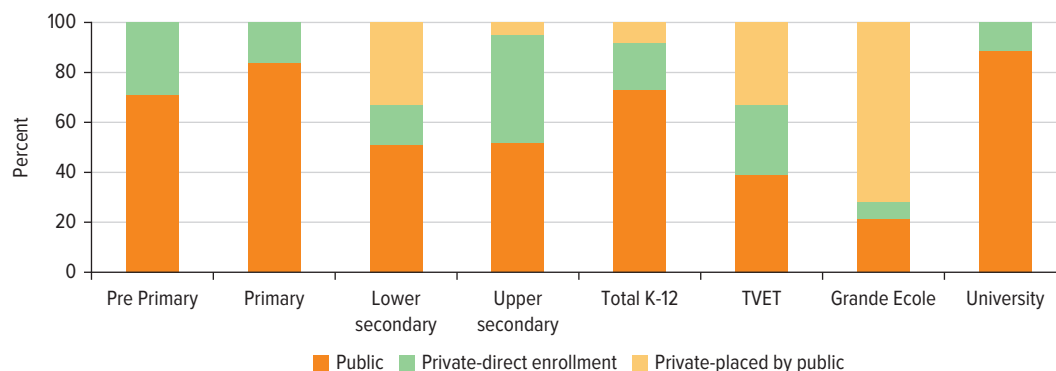
- ▶ The skills upgrading market is comprised mostly of short-term certification training in languages, software, culinary skills, skills for licensed contractors, administrative skills upgrading, and so on provided by “*cabinets*.” These unofficial professional programs are on the rise.
- ▶ The subsidized market is concentrated in the lower secondary and higher education BTS programs, where the government subsidizes students in private establishments due to growing demand. The subsidy system's current design offers little transparency and gives parents no choice. It often ends up biased toward wealthier households.⁵³ It is also marred by many accounts of corruption in obtaining licenses, numbers of students enrolled, and so on and does not incentivize higher quality institutions to take subsidized students.
- ▶ The out-of-school youth market includes a vast array of training by nongovernmental organizations, youth employment projects, and traditional apprenticeships. These mainly target undereducated adults—mostly youth—to help them enter a particular informal sector field or set up their own business. Interventions targeting girls and young women have been particularly successful.

Constraints on private sector education

Key constraints for greater private sector activity in the education sector include the following.

The lack of a clear strategic vision for private sector secondary and tertiary education as a complement to the public sector.

Figure 4.27. Enrollment in public and private education institutions



Source: World Bank 2017b.

The government views its subsidy program as a temporary measure, and no public-private partnership framework encourages private investment in education. Regulations are often inconsistently applied, and private providers cite double standards and a lack of transparency in enforcement, including for quality assurance, as major constraints on their operations.

Major hurdles faced by new entrants to the premium market. Starting a new educational institution requires several redundant and lengthy procedures,⁵⁴ unlike, for example, in Senegal, where the government has streamlined the process and increased staff evaluating private applications to ease entry into the market.

Negative effects of the subsidy program on competition between market players and on the quality of services. Although public funds have increased enrollments and provided much of the private sector's revenue at secondary and tertiary level, the subsidies are centrally controlled, independent of program performance, and often paid late. So, private establishments have little incentive to invest to improve learning outcomes.

A shortage of qualified teachers faced by private providers. Since the government has a monopoly on teacher training and certification, private secondary-level providers are left to hire and train their own teachers with limited quality oversight. At the tertiary level in particular, qualified trainers often split their time between private and public establishments, with weak quality assurance mechanisms in place to ensure minimum teaching standards.

4.3.10 Policy recommendations

Articulating a clear framework accompanied by incentives is necessary to foster a dynamic education market and improve learning outcomes. A clear private sector partnership framework focused on quality is needed. It can include PPPs focused on the skills needed in the job market. The procedures for establishing a new educational institution should be streamlined at all levels and made more transparent to facilitate market entry and the formalization of smaller providers. At the tertiary level, establishing an independent quality assurance agency for public and private providers alike, as in Senegal, would level the playing field by making degree validation and recognition more transparent.

Improving the administration of subsidy and financial incentives to encourage investment in private education while ensuring equity and pertinence.

- ▶ Improving efficiency in the subsidy system would help incentivize quality in the private sector. The government is now improving learning outcomes by incorporating private school performance as a criterion for receiving state financial assistance

and by publishing each school's results. Other interventions can also foster accountability, such as ensuring that teachers meet a minimum professional standard and introducing performance-based contracts or a competitive procurement system for schools receiving subsidized students. At the secondary level, the government's plan to pilot a biometric enforcement system could lead to significant efficiency gains by eliminating payments for "ghost" students. At the tertiary and TVET levels, financial incentives could be linked to students' job placement rates or increased earnings where data can be made available.

- ▶ Prompt payments to schools would incentivize private investments. Currently, payments to private educational institutions are delayed by several months, leaving private schools to bridge the cash flow gap on their own.
- ▶ Financial incentives (whether through risk-sharing or guarantees) in the mid-range institutional finance market are also needed. Banks' exposure to education (student or institutional finance) is limited and unlikely to grow without government incentives, despite what appears to be a sizable market opportunity. Ghana's experience with the IDP Rising Schools Program (an impact fund) and the International Finance Corporation's Ghana Schools Program (risk-sharing) offer useful alternative examples of financing private school expansion while providing capacity-building opportunities.

The financing and management of the technical and vocational education and training system require fundamental reforms with a greater role for the private sector on both the supply and demand sides.

- ▶ The TVET subsidy system should be reformed to increase coverage and include multiple authorities such as the government, industry, and unions, like the systems in many Latin American countries. On the demand side, the private sector—employers, industry associations, and collectives—needs to be more involved in strategy and oversight to ensure the relevance of TVET training.
- ▶ On the supply side, more incentives should be created for private providers to enter this fragmented market. Private-public cooperation mechanisms in key sectors, such as those being piloted by the Ministry of Education and the *Fonds de Développement de la Formation Professionnelle*, should be scaled up to absorb more of the vast number of youths left out of the tertiary sector. Professional training centers, including the *cabinets* that attract youth outside the formal academic

system, should be formalized by allowing them to offer certifications and receive subsidies in exchange for meeting basic quality standards. Finally, the out-of-school youth market could represent a great opportunity for private providers,

considering the high demand. But supporting them would require government mobilization to develop a comprehensive and programmatic strategy with the regulatory and financial incentives necessary to encourage growth.

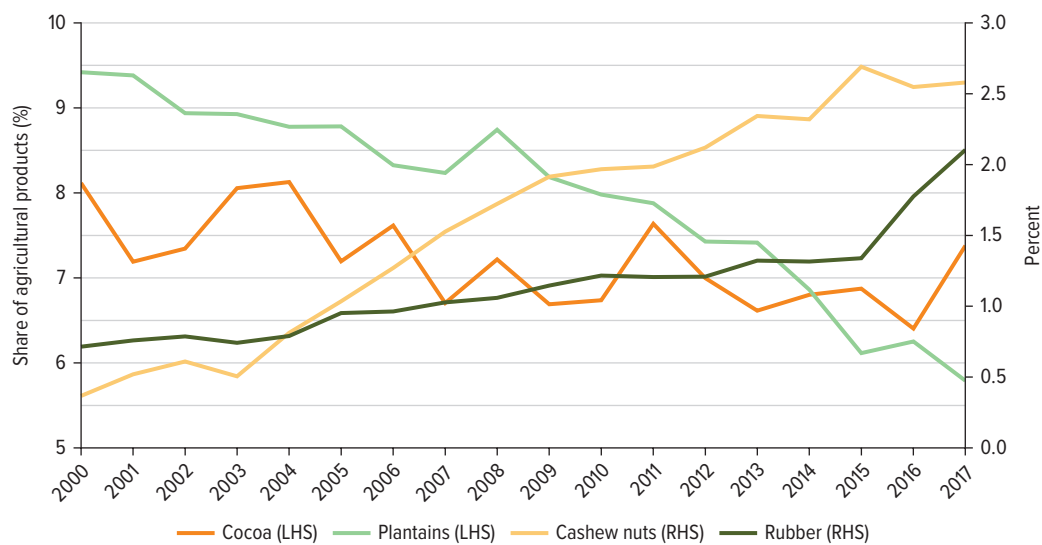
Annex 4.A

Table 4.A.1. Production of export crops, 2011–17

Crop	2011		2017		Change (%)
	Tons	Share of total (%)	Tons	Share of total (%)	
Yams	5,531,865	29.0	7,148,000	25.93	29
Cassava	2,359,015	12.4	5,367,000	19.5	128
Oil palm fruit	1,636,000	8.6	2,227,000	8.1	36
Rice	873,016	4.6	2,120,000	7.7	143
Cocoa	1,511,255	7.9	2,034,000	7.4	35
Maize	621,790	3.3	1,025,000	3.7	65
Cashew nuts	393,000	2.1	711,000	2.6	81
Rubber	238,717	1.3	580,000	2.1	143
Seed cotton	260,306	1.4	328,000	1.2	26
Groundnuts	91,844	0.5	202,000	0.7	120
Okra	129,594	0.7	158,000	0.6	22
Chili and peppers	115,943	0.6	156,743	0.6	35
Coffee	32,291	0.2	103,514	0.4	221
Mangoes	46,960	0.2	100,000	0.4	113
Eggplants	85,729	0.4	99,000	0.4	15
Oranges	36,809	0.2	40,421	0.1	10
Beans, dry	33,612	0.2	40,322	0.1	20
Tomatoes	32,364	0.2	40,000	0.1	24
Avocados	31,713	0.2	37,307	0.1	18

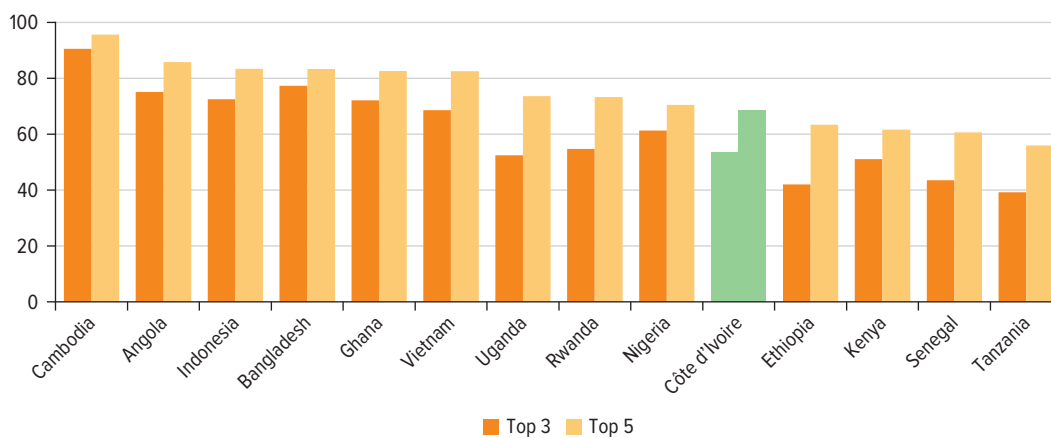
Source: Food and Agriculture Organization.

Figure 4.A.1. Export crops



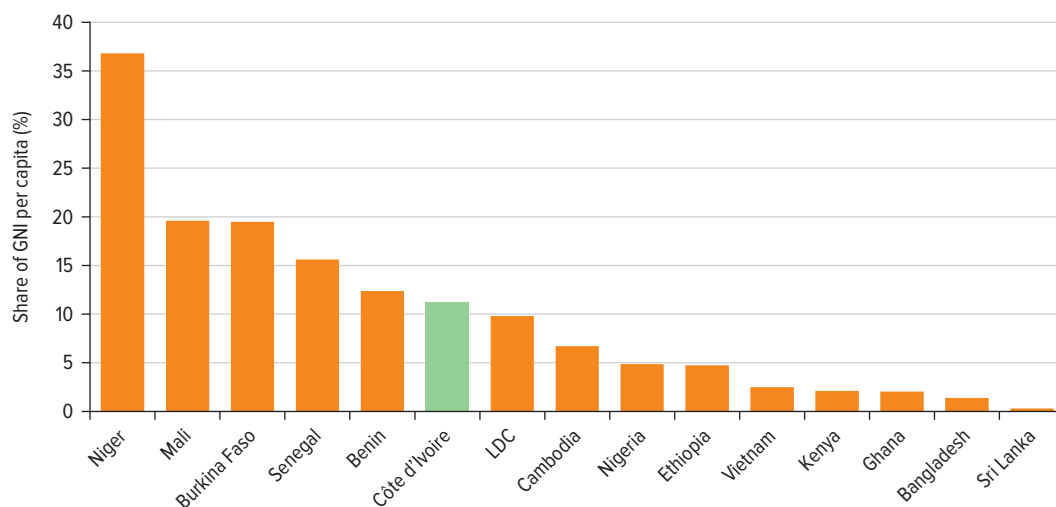
Source: Food and Agriculture Organization.

Figure 4.A.2. Concentration of agricultural production, 2017 (%)



Source: Food and Agriculture Organization.

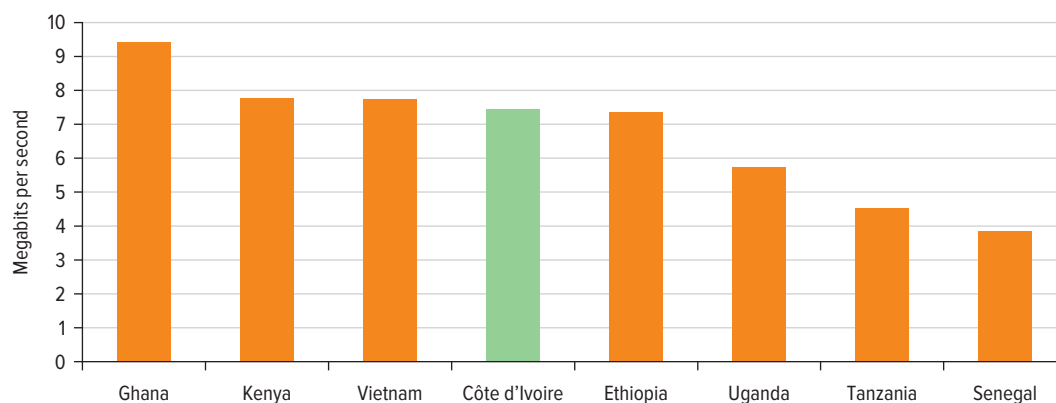
Figure 4.A.3. Cost of mobile telephony services, 2017



Source: International Telecommunications Union.

Note: The mobile telephony basket comprises 30 outgoing calls per month (on-net/off-net to a fixed line and for peak and off-peak times) in predetermined ratios, plus 100 SMS messages. GNI = gross national income; LDC = less developed countries.

Figure 4.A.4. Mobile download speeds



Source: Ookla's Speedtest Intelligence, in GSMA Mobile Connectivity Index.

Notes

1. World Bank 2015a.
2. World Bank 2020a.
3. World Bank 2018a.
4. FAO STAT.
5. World Bank 2018b.
6. World Bank 2017a.
7. In 2019, the Ivorian government signed agreements with eight industrial processors with the aim of increasing cashew processing by 107,000 tons over the next four years (70,000 tons were processed in 2018). In return, the manufacturers would benefit from exemption from customs duties and value-added tax on spare parts or other forms of tax holiday during the operating phase over a period of five years.
8. Based on new revised GDP figures.
9. World Bank 2020a.
10. World Bank 2020a.
11. World Bank 2017a.
12. World Bank 2017a.
13. FAO STAT. Land is still relatively abundant at the national level, although it is becoming scarce in some regions, in particular in the southern part of the country where population density is high.
14. Mitigating the effects of deforestation requires research and development of new, environmentally friendly production techniques amenable to climate change adaptation and mitigation; promotion of export niches; and development of activities that generate domestic value addition.
15. ILO 2018.
16. Nugteren 2018.
17. For example, despite accounting for 36 percent of Ivorian total exports to the region, exports of wood, soaps and detergent and footwear represent less than 4 percent of the region's total imports. Assembly-focused manufactures, which account for 37 percent of exports to ECOWAS, make up just 0.2 percent of the market share.
18. UNECA 2018.
19. Signé and van der Ven 2018.
20. Sun 2017.
21. World Bank and USAID 2018a.
22. World Bank 2017a.
23. The synthetic tax was instituted to bring small informal sector operators into the tax net through a single tax (in place of value-added, patent, and income taxes). But the current regime of "impôt synthétique" creates incentives for companies to remain small, as the tax payments become much higher once companies have been formalized. As a result, many firms choose to split up their operations into multiple smaller entities and remain below the threshold. Firms that are subject to "impôt synthétique" make up half the taxpayers but pay only 1 percent of the taxes. Simplifying the tax bases applicable for small businesses, by defining single rates and thresholds, would encourage them to register as formal businesses (IMF 2018).
24. Competition policy involves two levels regional and national. National Competition Agencies only conduct preliminary investigations and market analyses subject to the WAEMU Commission's instructions. The WAEMU Commission has exclusive competence to investigate state aid, anticompetitive state practices, and anticompetitive practices with a cross-border effect. Before issuing a decision on an anticompetitive practice, the WAEMU Commission must first obtain a nonbinding opinion issued by the Advisory Committee consisting of two members appointed by each Member State. National competition authorities perform a secondary role in the enforcement of WAEMU competition rules. Their role is limited to permanent monitoring of the national markets to identify failures stemming from anticompetitive practices and to cooperate with the WAEMU Commission during the investigation stage.

25. Including the refinery SIR (49 percent), the public transport firm (60 percent), the national television RTI (98 percent), the national lottery (80 percent), the national airline Air Côte d'Ivoire (58 percent), and the land management agency AGEF (35 percent). The Ivorian government also holds significant interests in banking, agribusiness, mining, and the telecom industry.
26. World Bank 2016.
27. World Bank 2020a.
28. World Development Indicators data set.
29. SME Finance Forum 2019.
30. World Bank 2020b.
31. World Bank 2018a.
32. World Bank 2016.
33. Meagher 2017.
34. World Bank 2019.
35. Oxford Business Group.
36. Border compliance, which includes customs clearance and inspection (World Bank 2019).
37. Right to carry passengers from one's own country to a second country and from that country to a third country, and so on.
38. This slows down the berthed ships' loading and unloading operations and causes excessive waiting time at sea to berth (dwell time for ships is often around 20 days).
39. World Bank 2018.
40. The average cost of bribery and harassment on a road trip from Abidjan to Ouagadougou is \$118 (World Bank 2016).
41. The Nigerian trucking logistics startup, Kobo360, has implemented an Uber-like app that connects truckers, cargo owners, and cargo recipients, creating an efficient supply chain framework. The platform has improved access to long-haul road freight services for both large and small companies in various sectors by optimally matching demand and supply of trucks, providing predictability, reliability, price transparency, and increased utilization of otherwise idle trucks in the highly fragmented trucking market. The long-haul e-logistics platform reduces logistics friction through improved information sharing, thus improving efficiency and reducing supply chain costs. Kobo360 has already been launched in Nigeria and Togo—home to West Africa's largest port in Lomé—and is expanding to Ghana and Kenya as well.
42. In 2018, Orange had 48 percent market share, MTN had 30 percent, and Moov had 20 percent.
43. National Regulatory Authority.
44. Ivorian businesses, especially SMEs, could benefit from increased access to fixed broadband through the adoption of cloud services and enterprise resource planning systems. Improved digital connectivity could provide smallholder farmers timely advice on all aspects of the seed-to-market agricultural value chain, which would result in increased efficiency of the use of water, fertilizer, pesticides, soil fertility, timing of harvest, and marketing of products. In addition, agricultural extension and advisory services can be delivered more frequently at a lower cost since extension agents can connect with farmers through a combination of voice, text, videos, and internet instead of the traditional method of traveling to visit a farmer. Similarly, training videos as well as pictures of damaged crops and advice on treatment can be shared in real-time. Proliferation of connectivity would accelerate the digitization of agri-value chains, which could build transaction history for smallholder farmers and SMEs and enhance their credit profile.
45. Establishment of foundational IDs under the International Development Association-funded West Africa Unique Identification for Regional Integration and Inclusion (WURI) project will help in transactions and authentication for digital service delivery. Côte d'Ivoire's national ID covers 45 percent of the citizens, which the WURI project aims to increase to 80 percent by 2020. With data protection legislation and a data protection agency, Côte d'Ivoire has a legal and institutional framework for the deployment of a national ID. The regional interoperability of IDs is particularly valuable in Côte d'Ivoire, which hosts more than 2.3 million non-Ivorians in its territory, primarily from other ECOWAS states.
46. International Telecommunication Union. On the Organisation for Economic Co-operation and Development, Telecom price baskets: to measure and track prices over time, (industrial) economists have built "mobile baskets" made of a predetermined number of calls, SMS, and mobile broadband data consumption, and then find in each country the cheapest plan to satisfy this consumption basket (there are usually several baskets defined with "low," "medium," and "high" consumption).
47. As of June 2019, the off-net price of a call was twice the price to terminate calls on the same network (on-net). This practice, which is no longer implemented in regional peers such as Senegal and Nigeria, may support consumers' stickiness and contribute to maintaining the current level of market concentration.

48. CFAF 13 per minute in Côte d'Ivoire versus CFAF 4.5 per minute in Senegal.
49. GSMA 2016.
50. EdStats.
51. For example, smallholder farmers currently lack exposure and knowledge of better techniques and varieties, usage of technological inputs such as fertilizer and insecticides, and skills to operate machinery, resulting in low productivity. In addition, low digital skills coupled with the lack of internet connectivity prevent farmers from harnessing the internet to increase knowledge and access real-time information on weather, rainfall, and prices. Low digital skills also hinder farmers from improving market access via the digital economy.
52. Subsidies are capped at an amount often below the real cost of provision or tuition, and students are often expected to cover additional costs out-of-pocket, including registration and material fees, an additional deterrent for less affluent families.
53. At the tertiary level, for example, a new provider needs four separate approvals before it can start and have its diploma recognized: (1) to become a legal entity, with another to become a legal academic entity; (2) to launch the university, (3) to validate specific study tracks (limited to four at first); and (4) for its diplomas to be recognized by the government.

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CHAPTER 5

Harness global value chains

Since 2010, Côte d'Ivoire has registered an economic growth rate averaging 8 percent annually. This has markedly contributed to a strong economic recovery in the aftermath of the political crisis that hit the country for years. The recovery is in part due to significant improvements in the investment climate following pro-market policy reforms and expanded institutional capacity. The country is now embarking on a new development strategy to become an upper-middle-income economy and bring in structural change by further accelerating economic growth, consolidating pro-market reforms, and strengthening institutional capacity.

Côte d'Ivoire is less integrated into global value chains (GVCs) than its structural and aspirational peers. Backward integration (the share of foreign value-added content in gross exports) is especially weak. The greater strength of forward integration (the share of domestic value added that is embodied in third-country exports) reflects the predominance of upstream GVC activities, such as extraction and raw materials exports.

Across the economy, GVC linkages are associated with growth in manufacturing employment and productivity. GVC-integrated firms have larger, mostly skilled workforces. They also have higher labor productivity and pay higher wages, particularly to their unskilled workers, than do nonintegrated (domestic-only) firms. However, nonintegrated firms create more jobs for unskilled workers. All these imply the need for an industrial policy framework that focuses on promoting GVC integration and upgrading; facilitating the entry, survival, and growth of firms; boosting productivity; improving productive capacity and strengthening sectoral

linkages; and supporting the creation of inclusive and better jobs.

This chapter explores the prospects of industrialization and structural change through GVCs. Focusing on the manufacturing sector, the chapter highlights the role of integration into GVCs for advancing structural change, as well as for accelerating employment generation and boosting productivity growth. Historically, manufacturing has been a key driver of economic transformation and has brought sustained growth in jobs and productivity, and it has led to the economic take-off of current advanced or emerging market economies. The sector also displays a tendency toward unconditional convergence in which manufacturing industries that start further away from the frontier can experience faster productivity growth irrespective of initial economic conditions. And the sector has the potential to create strong backward and forward linkages with the rest of the economy and is a conduit for international technology transfer and local knowledge spillovers. Because of the higher prevalence of tradable goods in manufacturing, the sector is well-positioned to seize opportunities from international networks of production, which offer the promise of value addition and product quality upgrading along GVCs.

The following sections examine the nature and determinants of GVC integration at the aggregate (country, sector, and industry) and enterprise levels. This is followed by an analysis of the dynamics and drivers of manufacturing job growth in Côte d'Ivoire. The last section concludes by identifying key pillars of industrial policy that can foster the creation of better jobs for more people and raise productivity.

5.1 Structure of the economy

Strong, broad-based economic recovery

Since 2010, Côte d'Ivoire has maintained sound economic growth averaging 8 percent annually. The economic recovery has been broad-based, with comparable contributions from all sectors, especially since 2015. Services, the largest sector of the economy, experienced a sharp decline during the electoral crisis of 2010–11, but the sector has bounced back and stabilized since then, albeit at a lower level (figure 5.1). Industry—which includes manufacturing, construction, mining, and utilities—has overtaken agriculture as the second largest sector since 2012. The contribution of manufacturing to gross domestic product (GDP) has remained stable, although growth has been robust and mirrors the growth in the aggregate economy. Overall, Côte d'Ivoire has not undergone major structural change over the past two decades.

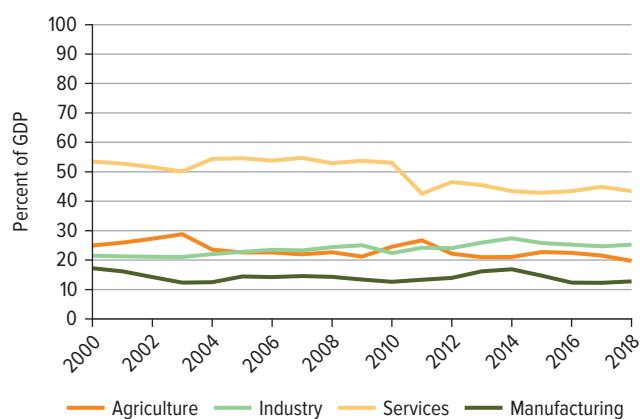
Labor productivity in agriculture is the lowest and has stagnated over time (figure 5.2). Services have also seen no substantial improvement in labor productivity, which has even experienced a slight decline in recent years. By contrast, the industrial sector is the most productive and has registered sustained productivity growth, particularly since 2012.

In terms of trade openness, the shares of exports and imports in GDP remained mostly stable over 2000–12. However, both measures began declining in 2012, especially exports, and was evident in the country's shrinking trade balance. The Trade balance dropped from 6.9 percent of GDP in 2000 to 0.5 percent in 2018 and from \$742 million to \$237 million. This was in part due to faster growth in GDP than in exports and imports.

5.2 Global value chain integration

GVCs incorporate a series of value-creating activities from design through production and distribution and delivery of final products. The functional and spatial fragmentation of these activities necessitates contractual business relationships among economic agents located in multiple countries and involves cross-border trade. Therefore, integration into GVCs entails becoming part of international networks of production and distribution in which business operations use imported inputs and target foreign markets.

Figure 5.1. Sectoral distribution of value added as share of GDP, 2000–18



Source: Based on data from the World Development Indicators database.
 Note: Industry covers industries 10-45 at ISIC-Rev. 3 and corresponds to value added in manufacturing, construction, electricity, water, and gas.

GVC-integrated firms usually possess higher productivity levels and outperform their counterparts that entirely restrict their operations only to the domestic market. There are two main channels. The first one is the selection mechanism where substantial fixed and variable costs of GVC participation lead to sorting in that it is only more productive firms that can absorb these costs and end up successfully integrating. These firms undertake certain investments aimed at joining GVCs. The other is learning-by-doing whereby firms experience productivity gains due to exposure to foreign demand, better technology, and a greater variety of inputs.

Normally, the selection and learning effects reinforce each other. The learning effects from joining GVCs, for example, accelerate the pace of market and resource reallocation toward more productive firms and cause diminished share and eventual exit of less productive firms. GVCs therefore have major implications for productivity growth, employment generation, and structural change through reallocation.

Fragmentation of production activities along GVCs brings in an opportunity to specialize in tasks of comparative advantage, create employment opportunities, and provide a platform for international technology diffusion and local knowledge spillovers. The prospects of more GVC integration are high and likely to stimulate trade and draw investment flows because of growing global demand, less costly transportation, and increasing interconnectedness.

Figure 5.2. Sectoral value added per worker, 2009–18



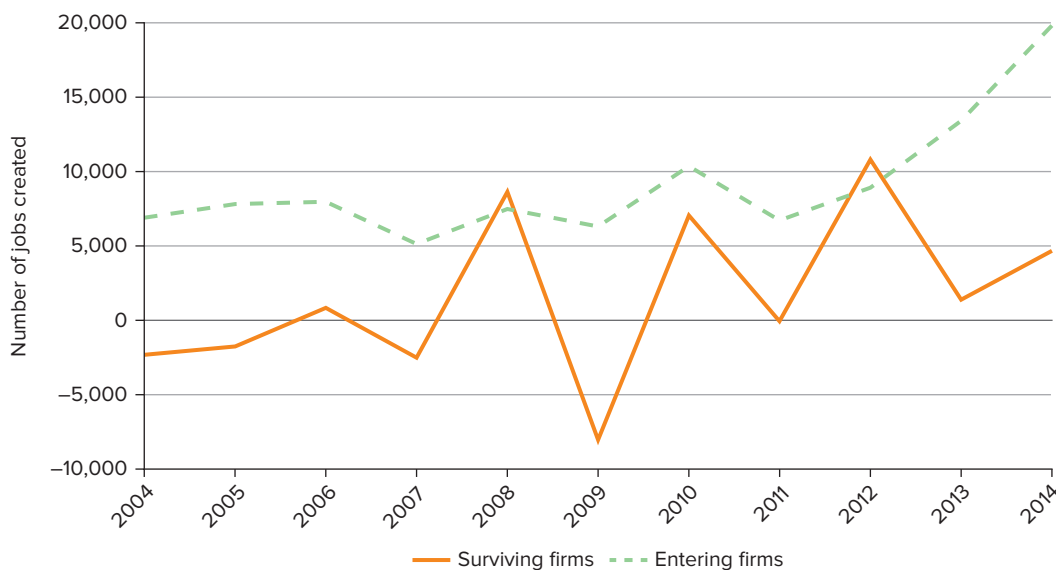
Source: Based on data from the World Development Indicators database.
 Note: Industry covers industries 10-45 at ISIC Rev.3 and corresponds to value added in manufacturing, construction, electricity, water, and gas.

Figure 5.3. Size of the manufacturing workforce, 2003–14



Source: Results are based on data from the Ivorian Registrar of Companies for the Modern Enterprise Sectors.

Figure 5.4. Number of manufacturing jobs created annually, 2004–14



Source: Results are based on data from the Ivorian Registrar of Companies for the Modern Enterprise Sectors.

However, there is a need for precaution. The advent of the Fourth Industrial Revolution is characterized by the rapid development and growing adoption of advanced digital production technologies in manufacturing and other sectors.¹ Because these are skill-biased technologies, there is limited scope for substituting for other production inputs, and this can result in loss of comparative advantage. Offshoring firms in advanced economies may reconsider their decision to offshore for several reasons, such as changes in the cost of offshoring, the length and complexity

of international production networks, and enforcement of intellectual property protection.

Similarly, high and rising wages and unit labor costs may result in loss of comparative advantage. Furthermore, labor- and resource-intensive tasks are being relocated to low-cost locations. However, the ability to attract and retain such jobs may have undesirable consequences in the form of suppressed wages and poor working conditions.

Much more recently, trade wars, growing protectionism in advanced economies, and the fallout from the pandemic have cast risk and uncertainty about the future of GVCs and may result in major restructuring in favor of resilience instead of cost considerations.

5.2.1 Global value chain integration at the aggregate and sectoral levels²

Weak GVC integration relative to structural and aspirational peers

For the purpose at hand, GVC integration is defined by the degree of backward and forward integration. Backward integration measures the foreign value added content in a country's gross exports.³ Forward integration captures the indirect value added in exports and is the share of value-added embodied in a country's exports used as intermediate inputs by other countries in their exports. The overall GVC participation rate is the amalgamation of backward and forward integration.

Côte d'Ivoire is the least integrated compared with its structural and aspirational peers, although the dynamics of linkages in Côte d'Ivoire closely resemble the patterns observed in the comparator countries.⁴ Backward integration is similar to what is observed in the structural peers, but it is substantially lower than that of its aspirational peers and the Republic of Korea. By contrast, forward integration is stronger (only the structural peers have stronger forward linkages), and it has been rising over time despite a small decline in recent years. Between 2012 and 2015, Côte d'Ivoire's GVC participation rate was, on average, 31 percent, and backward integration constitutes 8 percent and forward integration 23 percent (figure 5.5). The corresponding

figures for structural peers are 36, 10, and 26 percent; for aspirational peers, the figures are 45, 25, and 20 percent, and for Korea, 56, 37, and 19 percent.

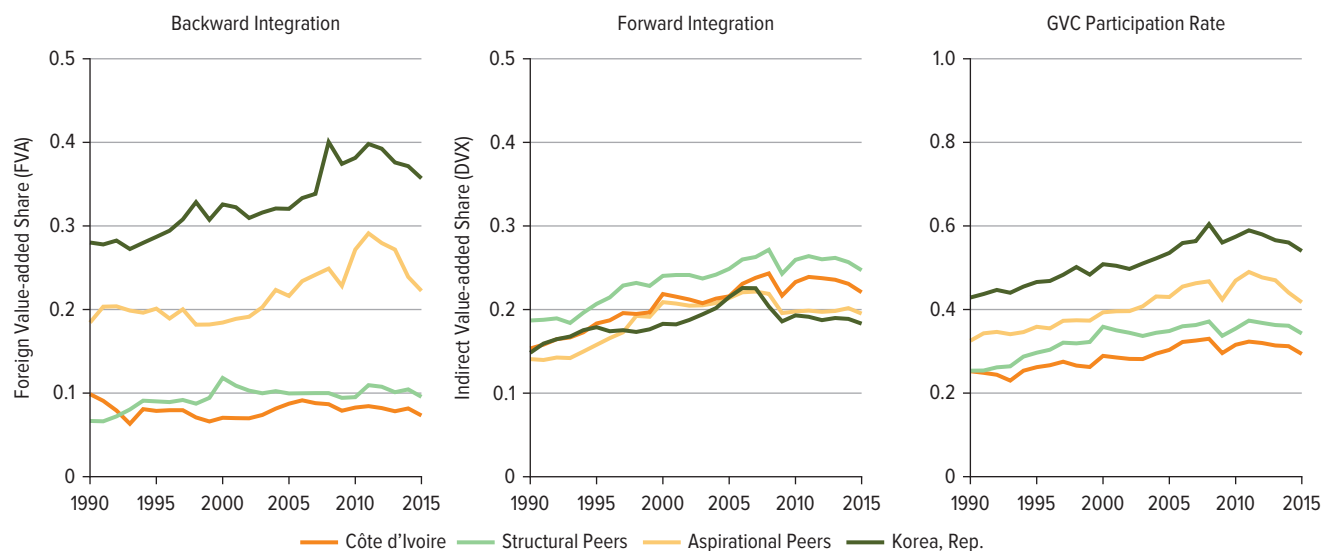
Stronger backward integration in manufacturing but still weak compared with peer countries

GVC integration differs across the broad sectors of the economy. GVC integration of the agriculture sector is about 20 percent, with a greater contribution from forward integration (figure 5.6).⁵ GVC integration of manufacturing is about 25 percent, with stronger backward integration than in agriculture, reflecting manufacturing's greater reliance on imported inputs in production. In contrast, the service sector has a higher level of forward integration (63 percent) than backward integration (7 percent). The mining sector also has considerably stronger forward integration (82 percent) than backward integration (7 percent). Mining's forward integration is even larger than that in the country's structural peers, suggesting that the sector's exports are predominantly less processed.

Strong forward integration of mining-based, capital-intensive industries

Of the manufacturing industries, the transport equipment and electrical and machinery industries have relatively strong backward GVC linkages, whereas food and beverages and wood and paper have the lowest backward GVC linkages (figure 5.7). Mining-based, capital-intensive industries, such as metals and chemicals and nonmetal industries, have high

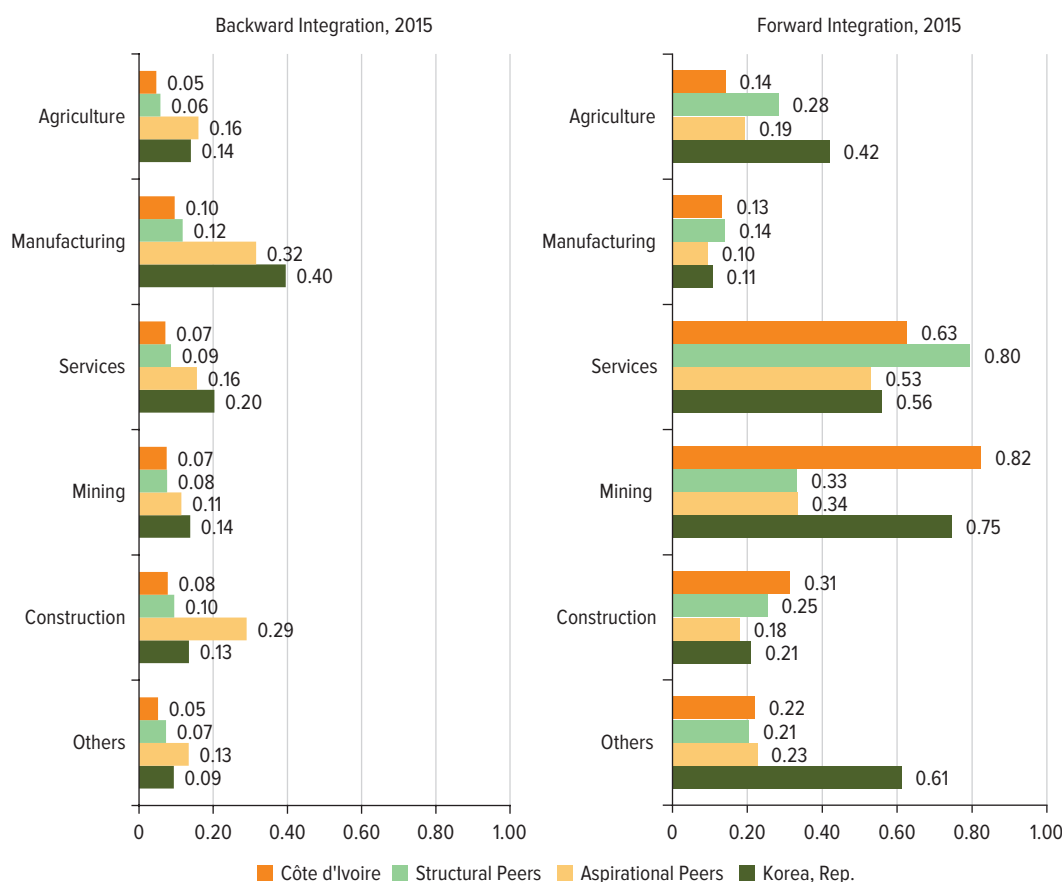
Figure 5.5. Comparison of global value chain integration for Côte d'Ivoire and benchmark countries, 1990–2015



Source: Based on data from the Eora database.

Note: Structural peers are Ghana and Senegal, and aspirational peers are Kenya, Morocco, Sri Lanka, and Vietnam.

Figure 5.6. Global value chain integration by broad sector, Côte d'Ivoire and peers, 2015



Source: Based on data from the Eora database.

degrees of forward integration. Again, food and beverages and wood and paper are the least integrated manufacturing activities. Over 1995–2015, metals, chemicals and nonmetal industries, and electrical and machinery industries led in GVC integration, driven by forward linkages, whereas transport equipment experienced a modest rise in GVC integration during that period.

Western Europe remains the main GVC partner, and China has a rising role

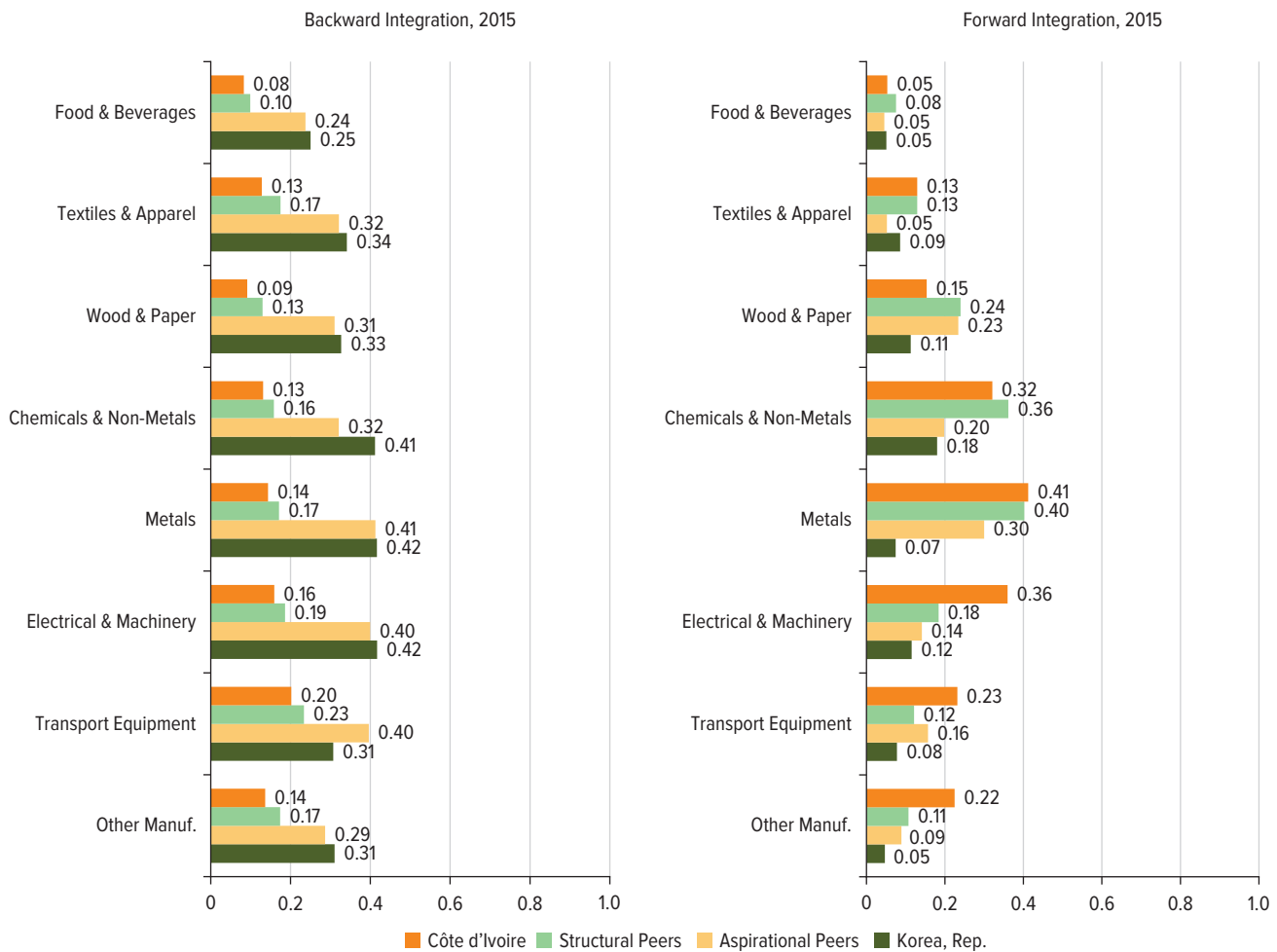
Among Côte d'Ivoire's major manufacturing trading partners, Western Europe is the most important source of foreign value added and an even more important destination for indirect value added (figure 5.8), despite the region's declining role as a GVC trade partner in recent years.⁶ There has been a decline in importance of the North American market. GVC linkages with China have risen, particularly through backward integration. Intraregional trade between Côte d'Ivoire and other Sub-Saharan African countries has also grown, with both backward and forward linkages increasing.⁷

Western Europe is still the main trading partner for all manufacturing industries, although the GVC linkages have weakened since 1995 for all industries except electrical and machinery and transport equipment (figure 5.9). The pattern is similar for North America. Since 1995, the relative importance of China in GVC integration has risen significantly for all manufacturing industries. With the exception of the food and beverages industry, Sub-Saharan African countries have become important sources of foreign value added. However, as destinations of indirect value added, their shares have declined, except for chemicals and nonmetal products and metal products. The decline is especially steep in the textiles and apparel industry.

5.2.2 Global value chain integration at the firm level

Because firms rather than countries and industries actually engage in international trade, they are an important unit of analysis of GVC integration. For firms, GVC integration means using importing as a source of production inputs and exporting as an outlet for their output. As for the relationship between GVC participation and firm performance, it is possible

Figure 5.7. Backward and forward integration of manufacturing industries, Côte d'Ivoire and peers, 2015



Source: Based on data from the Eora database.

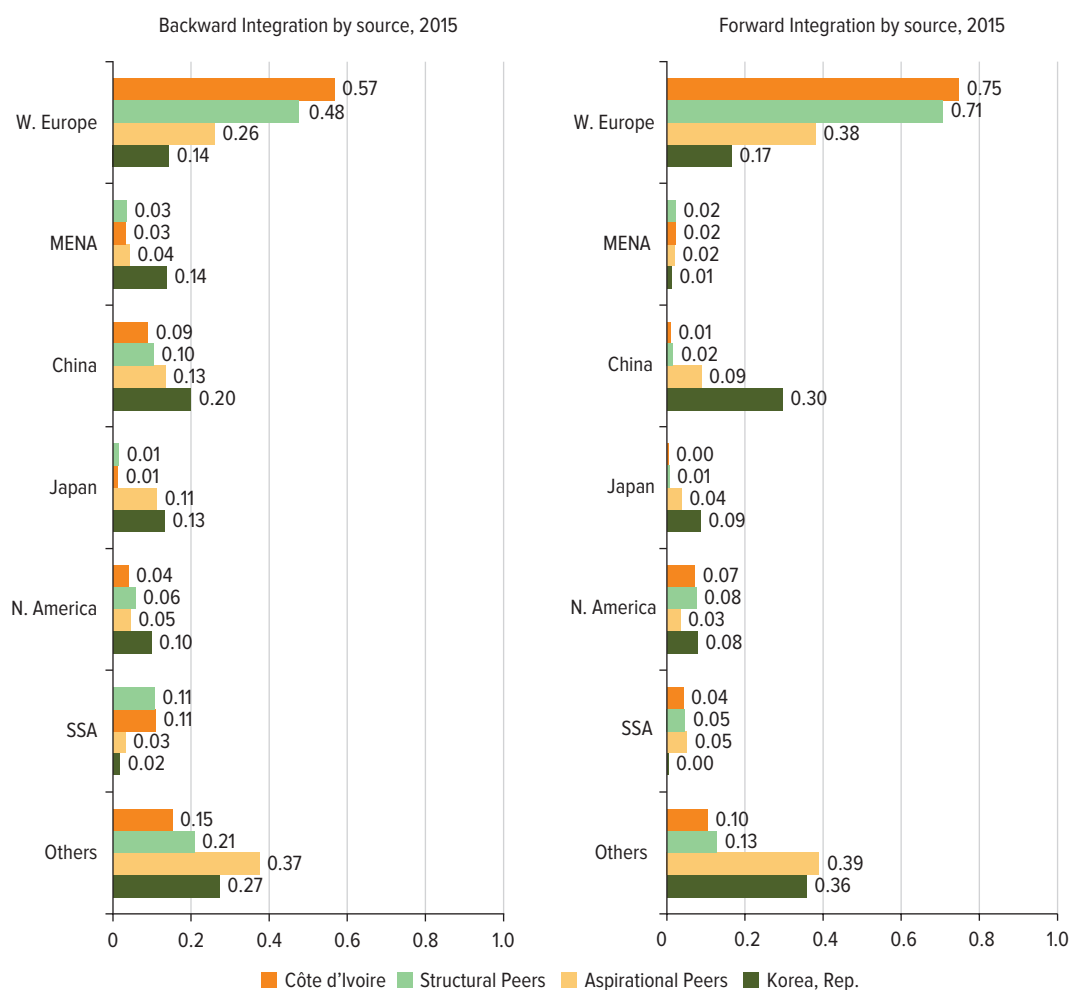
that high-performing firms become GVC participants, GVC participation makes firms high-performing, or both.

GVC participation and the dynamic effects of learning and upgrading are the most relevant. Some of the mechanisms include relaxation of financial constraints due to business relationships with large and established companies, which can raise finance with more ease; improvement of management practices and worker training; and access to more variety and/or high-quality inputs, and the like. These effects are not limited to the GVC participants but can spill over to companies that are not active in GVCs but are in the same location and/or belong to the same industry as their participating counterparts. Because of labor mobility, provision of specialized services, and resource sharing, nonparticipants can take advantage of the benefits associated with agglomeration economies.

Two-way trading has been the most common form of GVC participation until recently

Through the lens of GVC participation, manufacturing firms are classified into four mutually exclusive groups: domestic-only, export-only, import-only, and export and import (two-way traders). While the number of manufacturing firms in Côte d'Ivoire has grown considerably, from 433 firms in 2003 to 1,338 in 2014,⁸ the majority of the manufacturing firms limit their activities to the domestic market and are not integrated into GVCs (figure 5.10). Until recently, two-way trading was the most common mode of GVC integration. However, since 2013, import-only has become the primary mode of GVC integration.

Figure 5.8. Backward and forward integration of manufacturing, by trading partner, 2015



Source: Based on data from the Eora database.
 Note: MENA = Middle East and North Africa; SSA = Sub-Saharan Africa.

Lower likelihood of switching between different forms of GVC participation

Trade participation involves sizable fixed (one-time and periodic) and variable costs. The fixed costs come from market research, advertisement expenses, investment in logistics and distribution facilities, and contract write-up and enforcement, whereas the variable costs emanate mainly from transportation costs and tariffs. Because of these costs, firms' tendency to join and expand their scope of GVC participation is small. Nevertheless, there exists synergy in that if a certain firm has prior experience in international trade, it is highly likely to expand or at least maintain its participation.

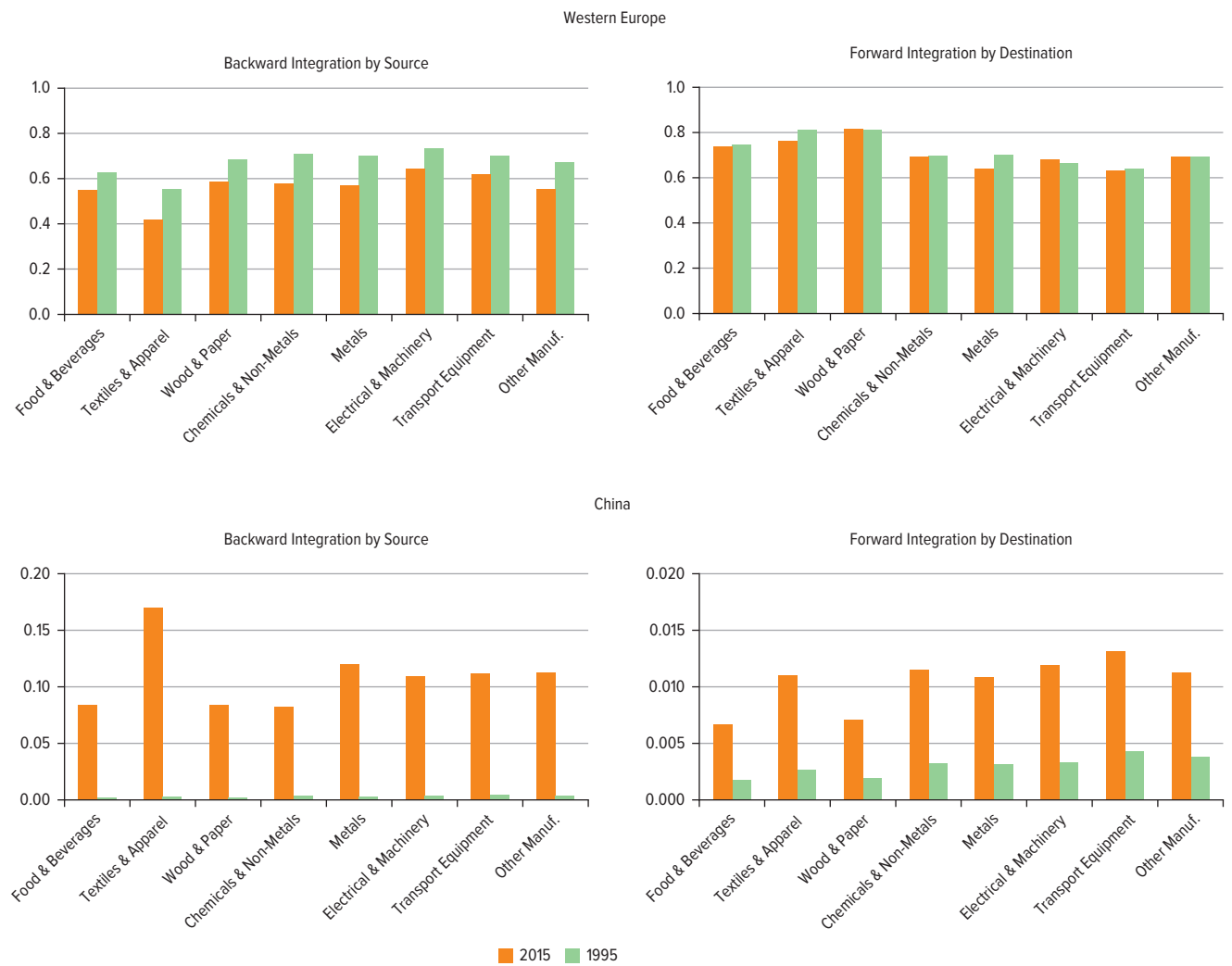
Table 5.1 shows strong persistence across time periods in the current mode of GVC integration. There is 88 percent probability that a domestic-only firm in one period will remain domestic-only in the following period. The respective probabilities for other firms are 63 percent (import-only),

30 percent (export-only), and 74 percent (two-way traders). Export-only firms are more likely to add importing and engage in two-way trading. Overall, the probability of starting to export is low. Two-way traders are the least likely to abandon any of their activities.

GVC-integrated firms are larger, more experienced, and productive

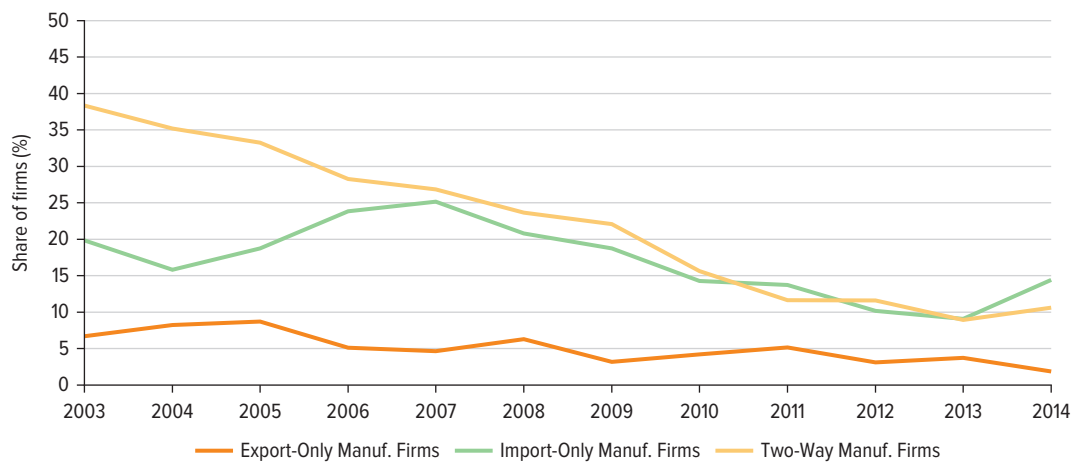
Several firm characteristics were found to affect the likelihood of a firm integrating globally by becoming an exporter, importer, or two-way trader. Young firms (10–20 years old) and established ones (20 or more years old) are more likely to have both backward and forward GVC linkages than startups (less than 10 years old). Larger firms (more than 20 workers) are more likely than smaller firms (fewer than 10 workers) to integrate with the global economy. Capital intensity and higher labor productivity are also associated with increased GVC integration (table 5.2).

Figure 5.9. Backward and forward integration of manufacturing industries, by selected trading partners, 1995 and 2015



Source: Based on data from the Eora database.

Figure 5.10. Global value chain integration of manufacturing firms, 2003–14



Source: Results are based on data from the Ivorian Registrar of Companies for the Modern Enterprises Sectors.

Table 5.1. Transition probabilities of mode of global value chain integration (percent)

Status in period <i>t</i>	Status in period <i>t</i> + 1			
	Domestic-only firm	Export-only firm	Import-only firm	Two-way trader
Domestic-only firm	87.93	1.30	9.03	1.75
Export-only firm	11.29	30.41	6.58	51.72
Import-only firm	24.78	2.33	63.46	9.43
Two-way trader	5.39	11.52	8.71	74.37
Cross-sectional average	54.48	5.32	18.14	22.06

Note: Results are based on data from the Ivorian Registrar of Companies for the Modern Enterprise Sectors.

Table 5.2. Relative likelihood of firm integration in global value chains, by firm characteristics (percentage point difference relative to reference group)

	Exporter only	Importer only	Two-way trader
Age (years) ^a			
10–20	6	11	6
20 or more	8	13	9
Size (number of workers) ^b			
20–100	19	28	14
100–500	60	45	50
500 or more	68	45	53
Production factor			
Capital intensity	+	+	+
Labor productivity	+	+	+
Manufacturing industry ^c			
Food and beverages	12	11	12
Textiles and apparel		–12	
Wood and paper			
Chemicals and nonmetals	7		8
Electrical and equipment			

Source: Results are based on data from the Ivorian Registrar of Companies for the Modern Enterprise Sectors.

Note: The values in the table are percentage point differences relative to the reference group. Only significant positive and negative coefficients are shown. See annex 5.A for details.

a. Reference group is startup firms (10 years or younger).

b. Reference group is small firms (fewer than 20 workers).

c. Reference group is the transport equipment industry.

Compared with startups, young firms have a higher likelihood of becoming exporters (6 percentage point difference), importers (11 percentage points), and two-way traders (6 percentage points). Established firms also have a higher likelihood of becoming exporters (8 percentage points), importers (13 percentage points), and two-way traders (9 percentage points). Compared with small firms, the larger is the firm size, the higher is the likelihood of becoming an

exporter, importer, or two-way trader. Relative to transport equipment firms, food and beverages firms and chemicals and nonmetals firms are 7–12 percentage points more likely to engage in GVC integration. Textiles and apparel firms are 12 percentage points less likely than transport equipment firms to engage in import-only operations. There are no other observable cross-industry variations in the likelihood of integration into GVCs.

5.3 Global value chain integration and jobs

Positive contribution to job creation by manufacturing firms

Job creation is front and center in Côte d'Ivoire's development agenda. Sustained economic growth and shared prosperity require that the economy generate more, better, and inclusive jobs. Jobs are especially crucial in view of the country's high population growth rate (2.4 percent), which seems to have accelerated in recent years. Young people are also disproportionately unemployed. The unemployment gap between the general population and youth has persisted even when unemployment rates have declined—for example, over 2012–18.⁹

In terms of job creation, manufacturing enterprises have contributed positively. These enterprises employed 60,935–93,753 workers annually during 2003–14 (figure 5.3). They have also added about 24,000 jobs to the economy. Despite the fact that most of the jobs are concentrated in incumbent firms, new firms have generated more net jobs than incumbent firms since 2012 (figure 5.4).¹⁰ Over 2004–14, incumbent firms created 19,000 jobs, entrants created 101,000 jobs, and exiters destroyed 96,000 jobs.

The observed job growth pattern appears to have been fueled by the availability of cheap labor. The ability to hire additional workers at roughly constant wages has propelled employment expansion in startups and young firms. Although manufacturing wages have been falling lately, the current rate of manufacturing job growth is unlikely to continue because labor productivity is falling faster than wages. Therefore, future job creation will require robust productivity growth.¹¹

5.3.1 Employment

GVC-integrated enterprises have larger workforces and hire mainly skilled workers

A typical manufacturing firm in Côte d'Ivoire employs a median of 15 workers, and five of them are skilled; pays its skilled workers \$4,265 annually and its unskilled workers \$1,269; and has a value added of \$3,059 per worker (table 5.3). Firms in the food and beverages industry have the largest number of workers, both skilled and unskilled; have the highest labor productivity; and pay the highest wages for both skill groups. Labor productivity is almost as high in textiles and apparel firms and electrical and equipment firms as in food and beverages firms.

GVC-integrated firms are considerably larger than nonintegrated firms. They create more employment opportunities for both skilled and unskilled workers. For example, the median number of workers in export-only firms is 15 times larger than in domestic-only firms, import-only firms are four times larger, and two-way traders are 20 times larger. And for each skilled worker in domestic-only firms, export-only firms have 14 workers, import-only firms have five workers, and two-way traders have 18 workers. For unskilled workers, the corresponding figures are 19, 5, and 26.

These employment patterns suggest that GVC-integrated firms have large-scale operations that require them to hire more workers of both skill profiles. Because their production operations use imported inputs and their output is sold in export markets, these firms have been able to generate substantial employment opportunities for skilled and unskilled workers.

Table 5.3. Summary statistics for manufacturing firms, by industry (median values)

Industry	Number of workers			Wages (2010 US\$)		Labor productivity (2010 US\$)
	Total	Skilled	Unskilled	Skilled	Unskilled	
Total manufacturing	15	5	6	4,265	1,269	3,059
Food and beverages	37	12	16	5,352	1,468	4,206
Textiles and apparel	9	4	2	4,463	1,415	4,162
Wood and paper	13	3	9	4,162	1,018	2,240
Chemicals and nonmetals	18	3	9	3,062	1,100	2,144
Electrical and equipment	13	6	3	4,357	1,491	4,152
Transport equipment	11	5	4	3,861	1,338	3,183

Source: Ivorian Registrar of Companies for the Modern Enterprise Sectors.

However, domestic-only firms create more employment opportunities overall for unskilled workers than GVC-integrated firms do. Compared with a typical domestic-only firm, a typical export-only firm of the same size, in the same industry, and in the same year hires, on average, 9 percent more skilled workers and 11 percent fewer unskilled workers (table 5.A.2, in annex 5A). A typical two-way trader hires 22 percent more skilled workers and 14 percent fewer unskilled workers. A typical import-only firm, however, hires 3 percent fewer skilled workers than a domestic firm and 15 percent fewer unskilled workers.

There are also some cross-industry variations. Among agriculture-based, labor-intensive industries, GVC-integrated firms in the wood and paper industry have the largest number of employees, followed by food and beverages firms and textiles and apparel firms. Among knowledge-intensive industries, transport equipment has the highest number of employees, particularly among export-only firms. These employment premiums should be viewed against the typical employment size in each industry.

These results suggest that skilled workers are better positioned to take advantage of the opportunities that arise from GVC integration. Among GVC-integrated firms, two-way traders have the largest numbers of workers and the most skilled workers. This pattern holds across all industries and supports the argument that export orientation is usually associated with accelerated employment generation.

Recent findings for developing countries, including Côte d'Ivoire's peers Kenya and Senegal, indicate that rising global demand for goods has contributed to employment generation, especially in agriculture. However, the overall job gains are weakened by loss of competitiveness in the manufacturing

sector and by technological changes, which are mostly labor saving.¹² This makes it all the more important to focus on reaping the economic gains associated with GVC integration—for example, by increasing the share of value added in any given value chain through upgrading toward downstream activities.

5.3.2 Wages

GVC-integrated enterprises pay higher wages, especially for their unskilled employees

Wages are significantly higher in GVC-integrated firms than in nonintegrated firms. Compared with domestic-only firms, the GVC wage premium for skilled workers is, on average, 26 percent in export-only firms, 39 percent in import-only firms, and 31 percent in two-way traders (table 5.A.2, in annex 5.A). There are also wage premiums for unskilled workers employed in GVC-integrated firms: 35 percent in export-only firms, 24 percent in import-only firms, and 40 percent in two-way traders. Among the manufacturing industries, the wood and paper industry has the highest premia.

GVC-related jobs are usually associated with the offshoring decision by businesses in advanced and emerging economies to low-cost locations. These jobs involve mostly labor- and resource-intensive tasks. The challenge is that the ability to attract and retain such jobs may have undesirable consequences (for example, suppression of wages and poor working conditions). Thus, there is a need to attract a significant number of high-quality jobs through GVC integration and foreign direct investment attraction.

5.4 Policy implications

GVCs have become integral aspects of manufacturing activities, and hence pathways toward structural change through industrialization. Analyses of the dynamics of GVC integration and manufacturing job growth in Côte d'Ivoire show the following:

- ▶ Côte d'Ivoire is less integrated into GVCs than its structural and aspirational peers. Backward integration is especially weak. The relative strength of forward linkages reflects the predominance of upstream activities in the value chain, such as extraction and raw material exports, which are vulnerable to global commodity price volatility.
- ▶ Established, larger, capital-intensive, and more productive firms are more likely to be integrated into GVCs through exporting, importing, or both.
- ▶ GVC integration is associated with manufacturing employment and productivity growth. GVC-integrated firms have larger workforces and hire more skilled workers. They also have higher labor productivity and pay higher wages, particularly for unskilled workers, than nonintegrated domestic-only firms. However, domestic-only firms provide more employment opportunities for unskilled workers.
- ▶ Compared with other sectors, manufacturing has stronger backward integration. Backward integration allows firms to access higher quality and sophisticated intermediate inputs, and benefits from technology transfer to stimulate productivity growth and facilitate upgrading to expand the scale

of production and subsequent creation of skilled and decent jobs. In this respect, the sector added about 24,000 new jobs between 2003 and 2014. Startups and young firms were the main drivers of this employment generation.

These key findings imply the need for a policy framework aimed at promoting GVC integration and upgrading in favor of high-growth markets; facilitating the entry, survival, and growth of firms; boosting productivity through within-firm changes and reallocation between firms; improving absorptive capacity and strengthening sectoral linkages; and supporting the creation of inclusive and better jobs.

Most importantly, the policy framework should embrace an ongoing megatrend, which is the increasing digitalization of economic activities. Manufacturing is becoming increasingly digitized and characterized by the application of advanced digital production technologies that involve extensive of hardware (for example, industrial robots and cobots and 3D printers), software platforms (big data analytics, artificial intelligence, and cloud computing), and connectivity (the internet of things).¹³

These technologies shape the prospects for GVC integration for job creation, productivity growth, industrialization, and structural change. And the traditional approach where countries join GVCs through labor-intensive activities and low-skilled tasks and eventually upgrade to knowledge-intensive and high-skilled and sophisticated tasks may be obsolete. Côte d'Ivoire should therefore position itself to exploit the opportunities these technologies bring and overcome the challenges they pose.

The following is a summary of key policy actions to harness the potential of GVCs for job creation, productivity growth, industrialization, and structural change. They are a mix of trade, investment, and competition policies as well as infrastructure and skill development.

Promote GVC participation

Trade policy plays a central role by reducing trade barriers for production inputs and facilitating market access for output. In this respect, tariff and non-tariff trade barriers are key aspects of trade policy. A competitive manufacturing sector usually depends on imports of cheaper and/or higher-quality inputs and relies on foreign markets as an outlet of its production output. This is particularly relevant given that tariffs on manufactured products in Côte d'Ivoire have been the highest until recently and shown no sign of decline over time (figure 5.5). With regard to enhanced access to local and foreign markets, the following policy actions are key:

- ▶ Reduce trade barriers to allow access to cheaper and/or higher-quality imported inputs. Emphasis should also be on regional value chains as they can be used

as steppingstones to integrate into the GVCs, which are more competitive.

- ▶ Exploit and position to seize opportunities available in existing regional economic agreements like the Economic Community of West African States and recent continent-wide initiatives such as the African Continental Free Trade Area.
- ▶ Negotiate and effectively utilize market access through favorable trade agreements (preferential tariffs, less restrictive non-tariff trade barriers, and simplified rules of origin) with advanced economies.
- ▶ Strengthen the reliability and efficiency of transportation and trade logistics.
- ▶ Target entering and expanding activities in high-growth markets such as Asian economies and sectors like tradable services.

Facilitate entry of new firms and growth of young firms

In Côte d'Ivoire, new and expanding manufacturing firms have been the primary drivers of job growth. At the same time, exiting firms have resulted in a large number of job losses. The manufacturing sector in Côte d'Ivoire has a relatively high firm turnover rate. Between 20 and 40 percent of the manufacturing firms are new enterprises, and 18-33 percent of them face plant closure or exit production operations each year. This implies that firm entry and exit rates as well as the role of market entry requirements and exit barriers are key to policy making. Policy interventions need to identify and address a range of issues, including business licensing, labor market regulations, cross-cutting and enabling sectors, and harnessing economic clusters. These include the following:

- ▶ Ease licensing and entry requirements to promote the formation of new establishments and investment by incumbents, especially younger firms. This also involves improving the business environment through easy access to finance, property rights protection, market regulation, and a well-functioning legal system.
- ▶ Invest in cross-cutting and enabling sectors such as digital infrastructure, energy, finance, transportation, and logistics.
- ▶ Narrow the infrastructure gap through raising public investments and adopting an appropriate public sector management system.
- ▶ Put in place sound labor market regulations and provide support to improve human resource management practices to enhance labor mobility and entrepreneurship via better hiring and firing practices along with effective training and skill development programs.

- ▶ Facilitate the acquisition and transfer of technological capabilities and strengthen sectoral linkages.
- ▶ Leverage urbanization and establish and bolster economic clusters to increase the pace of international technology diffusion and local spillover.

Support GVC upgrading for more high-quality jobs and productivity gain

As shown above, most of Côte d'Ivoire's GVC participation is through forward integration, suggesting the predominance of exports of raw materials and extractives. Exploiting this comparative advantage should not be abandoned. However, there is need for GVC upgrading; upgrading from labor-intensive and resource-intensive to knowledge-intensive activities is linked with the creation of more and better jobs, productivity gains, and structural change. It is equally important to address inclusion aspects. GVC upgrading is oftentimes biased in favor of skilled workers and can lead to significant labor market frictions associated with labor displacement and mobility within and across sectors.

Policy support should target channels that enable GVC upgrading, including the following:

- ▶ Actively support firms that are upgrading to higher skills and more productive jobs by prioritizing and streamlining fiscal incentives. This requires the adoption of better trade and investment policies such as identifying strategic sectors in the provision of incentive packages, and trade and investment promotions.
- ▶ Support technology adoption as well as research and development and innovation efforts to raise labor productivity to ensure that wages are not overly suppressed to attract and keep GVC-linked jobs.
- ▶ Develop systems of education and training programs that emphasize employability and facilitate transitions from study to work, particularly into GVC-specific jobs as well as enhance skills for upgrading.
- ▶ Adopt and enforce compliance with international standards of worker safety and benefits.

Annex 5.A

Table 5.A.1. Income, GDP per capita, population, the Human Capital Index, and Country Policy and Institutional Assessment ratings for Côte d'Ivoire and benchmark countries

Côte d'Ivoire	Income level	Nominal GDP per capita (US dollars)	Population (millions)	HCI	CPIA
	Lower-middle income	1,504.5	25.0	0.4	35
Structural Peers: LIC and LMIC, CPIA >= 3.4, Population 10–100					
Ethiopia	Low income	772.3	109.2	0.4	3.5
Ghana	Lower-middle income	1,529	28.3	0.4	3.7
Senegal	Lower-middle income	1,250	15.9	0.4	3.8
Aspirational Peers: + HCI >= 0.5; GDP per Capita <4000					
Kenya	Lower-middle income	1,569	46.7	0.5	3.9
Morocco	Lower-middle income	3,033	34.9	0.5	3.8
Sri Lanka	Lower-middle income	3,918	21.4	0.6	3.5
Vietnam	Lower-middle income	2,204	93.6	0.7	3.8

Source: World Bank 2019.

Note: Ethiopia is considered as one of the structural peers, but its GVC data from the EORA database are problematic and therefore excluded from the analysis. CPIA = Country Policy and Institutional Assessment; GDP = gross domestic product; GVC = global value chain; HCI = Human Capital Index; LIC = low-income countries; LMIC = low- and middle-income countries.

Table 5.A.2. Global value chain integration premiums (percentage differences relative to domestic-only firms)

Industry and type	Number of workers			Wage		Labor productivity
	Total	Skilled	Unskilled	Skilled	Unskilled	
Total manufacturing						
Export-only	1,154	9	-11	26	35	72
Import-only	272	-3	-15	39	24	42
Two-way	1,483	22	-14	31	40	113
Food and beverages						
Export-only	686					
Import-only	220		-18	33		39
Two-way	1,030		-21		26	87
Textiles and apparel						
Export-only	161					69
Import-only	110				31	
Two-way	895	66				148
Wood and paper						
Export-only	2,281	76	-34	76	50	214
Import-only	327		-19	81	30	51
Two-way	1,818	63	-39	110	86	322
Chemicals and nonmetals						
Export-only	834		-33			75
Import-only	511			39		
Two-way	1,739	71	-22			128
Electrical and equipment						
Export-only	503				35	57
Import-only	282		-20	21	31	43
Two-way	1,234					131
Transport Equipment						
Export-only	1,605			39	45	
Import-only	230		-16	31	28	43
Two-way	1,953		23	25	22	

Source: Ivorian Registrar of Companies for the Modern Enterprise Sectors.

Note: The reported numbers are percentage differences relative to domestic-only firms. Only significant coefficients are shown.

Notes

1. Manufacturing in the era of the Fourth Industrial Revolution is characterized by the use of advanced digital production technologies. These technologies involve extensive use of hardware (for example, industrial robots and cobots and 3D printers), software platforms (big data analytics, artificial intelligence, and cloud computing), and connectivity (the internet of things). See UNIDO (2019).
2. Data on aggregate and sectoral GVC participation come from Abreha et al. (2019b). It is constructed from the UNCTAD EORA database. Similarly, results on GVC participation of manufacturing firms are based on data used in Abreha et al. (2019a). It is a panel and extracted from the Ivoirian Registrar of Companies for the Modern Enterprise Sectors. Both are background papers for the upcoming flagship report “Industrializing for Jobs in Africa” of the World Bank’s Office of the Chief Economist in the Africa Region.
3. Domestic value added is what remains after foreign value added is deducted from gross exports. It comprises payments to primary inputs engaged in the production of exports.
4. Benchmark countries are selected based on income per capita, population size, human capital development (using the Human Capital Index), and policy and institutional capacity (using the Country Policy and Institutional Assessment). These countries are classified as structural peers (Ethiopia, Ghana, and Senegal); aspirational peers (Kenya, Morocco, Sri Lanka, and Vietnam); and the Republic of Korea (see table 5.A.1 in annex 5.A for comparisons of Côte d’Ivoire and the benchmark countries). Structural peers are countries at a comparable level of economic development and population size. Aspirational peers are chosen because they represent the level of income and GVC integration that Côte d’Ivoire aspires to achieve. Ethiopia is considered one of the structural peers, but its GVC data based on the Eora database are problematic and therefore excluded from the analysis.
5. For purpose of illustration, the Eora database sectors are regrouped into six broad sectors:
 - a. Agriculture: Agriculture (1); Fishing (2)
 - b. Mining: Mining and Quarrying (3)
 - c. Manufacturing: Food and Beverages (4); Textiles and Wearing Apparel (5); Wood and Paper (6); Petroleum, Chemical and Non-Metallic Mineral Products (7); Metal Products (8); Electrical and Machinery (9); Transport Equipment; Other Manufacturing (11)
 - d. Construction: Construction (14)
 - e. Services: Wholesale Trade (16); Transport (19); Post and Telecommunications (20); Financial Intermediation and Business Activities (21)
 - f. Others: Recycling (12); Electricity, Gas and Water (13); Maintenance and Repair (15); Retail Trade (17); Hotel and Restaurants (18); Public Administration (22); Education, Health and Other Services (23); Private Households (24); Others (25)

The distinction between services and other services is based on potentials of tradability of the core economic activities. Services therefore include those economic activities whose outputs are likely to be tradable. Details of the data preparation to construct the GVC participation indicators are available upon request.

6. Côte d’Ivoire’s main trading partners are
 1. Western Europe: Andorra; Austria; Belgium; Denmark; Finland; France; Germany; Greece; Iceland; Ireland; Italy; Liechtenstein; Luxembourg; Monaco; Netherlands; Norway; Portugal; San Marino; Spain; Sweden; Switzerland; and United Kingdom.
 2. Middle East and North Africa: Algeria; Bahrain; Djibouti; Arab Republic of Egypt; Gaza Strip; Iran; Islamic Republic of Iran; Israel; Jordan; Kuwait; Lebanon; Libya; Malta; Morocco; Mauritania; Oman; Qatar; Saudi Arabia; Syrian Arab Republic; Tunisia; United Arab Emirates; and Republic of Yemen.
 3. North America: Bermuda; Canada; and United States.
 4. Sub-Saharan Africa: Angola; Benin; Botswana; Burkina Faso; Burundi; Cameroon; Cabo Verde; Central African Republic; Chad; Republic of Congo; Côte d’Ivoire; Democratic Republic of Congo; Eritrea; Ethiopia; Gabon; The Gambia; Ghana; Guinea; Kenya; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritius; Mozambique; Namibia; Niger; Nigeria; Rwanda; São Tomé and Príncipe; Senegal; Seychelles; Sierra Leone; Somalia; South Africa; Sudan; Eswatini; Tanzania; Togo; Uganda; Zambia; and Zimbabwe.
7. Calderon, Cantu, and Zeufack (2020) find that trade integration fosters growth for Sub-Saharan African countries. Doubling the manufacturing trade share in Sub-Saharan Africa’s GDP increases growth by 1.9 percentage points a year, while doubling intraregional trade enhances growth by 0.6 percentage point.

8. The data were extracted from the Ivorian Registrar of Companies for the Modern Enterprises Sectors. The data cover all firms in all sectors of the economy. It is a panel data set and available for 2003–14. A subset of manufacturing firms was examined for GVC integration at the firm level.
9. The unemployment rate refers to the share of the labor force without work but available for and actively seeking employment. Youth unemployment is the unemployment rate among the population ages 15–24. In addition, the annual population growth rate is computed for all residents irrespective of legal status or citizenship.
10. Abreha et al. 2019a.
11. Abreha et al. 2019b.
12. Pahl et al. 2019.
13. See UNIDO (2020) for different eras of industrial revolution.

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CHAPTER 6

Urbanize efficiently and sustainably

Urbanization is essential for development—no country has reached high income status without it (figure 6.1).¹ In high-income countries, it averages above 87 percent of the population. Its symbiosis with industrialization has been extensively documented, showing its benefits for inventions, skill development, technological innovation, productive agglomeration, and new products and industries. It risks creating problems such as slums, plagues, pollution, and congestion, but the risks are manageable. Some urbanization has been better managed (as in East Asia) than others (as in South Asia).

Côte d'Ivoire needs a comprehensive urbanization strategy to integrate urban and rural spaces. More than half the country's population already lives in cities. In the greater area of Abidjan, rising stresses range from economic to social to environmental. Supporting and managing rapid migration into towns, cities, and metropolises is the challenge facing policy makers.

Urbanization can facilitate export-led and investment-driven growth. Fostering it over the next decade could offer Côte d'Ivoire a core strategy for rising to upper-middle-income status. But the quality of urbanization will matter more than it has in the past.

For example, the high costs in time and money of mobility and connectivity hurt. On average, commuting costs each household in the Abidjan metropolitan area CFAF 1,075 (about \$1.80) and more than three hours a day. The city thus loses more than CFAF 4 billion (almost \$7 million) a day to commuting—CFAF 1,200 billion (about \$2.4 billion) a year. Due to inadequate public transport, disregard for traffic regulations and weak institutional oversight, fragmented intra-urban transportation, and ineffective urban management, workers, consumers, firms, and families bear these costs.

Without inclusive and efficient urbanization across Abidjan's metropolis, secondary cities, and towns, those costs will escalate as the population reaches a projected 10 million by 2040. But given the right policies, inclusion and efficiency

are attainable and mutually reinforcing, as seen in the experiences of clean, efficient, and inclusive metropolises around the world, such as Seoul, Hong Kong, Singapore, and Barcelona.

For Côte d'Ivoire's cities, structural transformation to improve economic performance should center on urbanization. In the experience of developed and emerging economies, production has risen with increasing urbanization. A country's development from agriculture to industry and services depends on the growing economic concentration and diminishing distance to economic density that urbanization provides, along with lowering cross-border trade barriers, according to the 2009 *World Development Report: Reshaping Economic Geography*.

In the spatial transformation accompanying structural transformation, rural-urban migration occurs for economic reasons as migrants leave rural areas—where modernizing agriculture has reduced the demand for labor—for urban centers—where manufacturing and services provide jobs. In Côte d'Ivoire, family reasons appears to be the leading reason for internal migration, especially as women move to reunite with family or to marry in a more prosperous place. People also move to find jobs and go to school. Between 2002 and 2008, the sociopolitical crises prompted some migratory flows, though the reasons for migration did not fundamentally change. In 2008, high migration was associated with improved access to such basic infrastructure as decent housing and toilets.

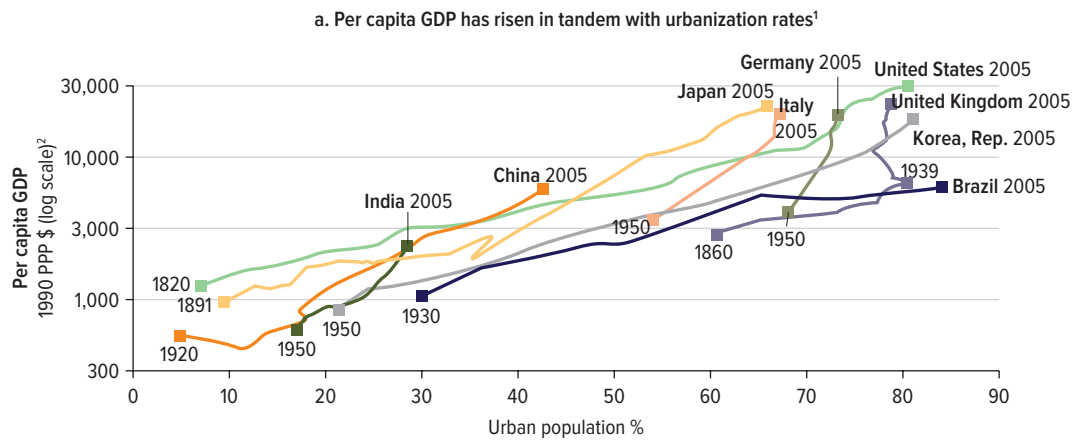
Most firms in Côte d'Ivoire are in a few southern cities, which attract migration. Between 1999 and 2011, 89–96 percent of registered firms were in the south—mostly in greater Abidjan. That area has 80 percent of formal jobs. It is the main employment zone for transport, telecommunications, wholesale and retail, food and agriculture, and services to households and industries. Abidjan is the main economic hub, having one of the largest ports in Sub-Saharan Africa, plus a deep seaport at San Pédro. The rest of the country subsists mainly by growing cash or food crops.

6.1 Context and challenges

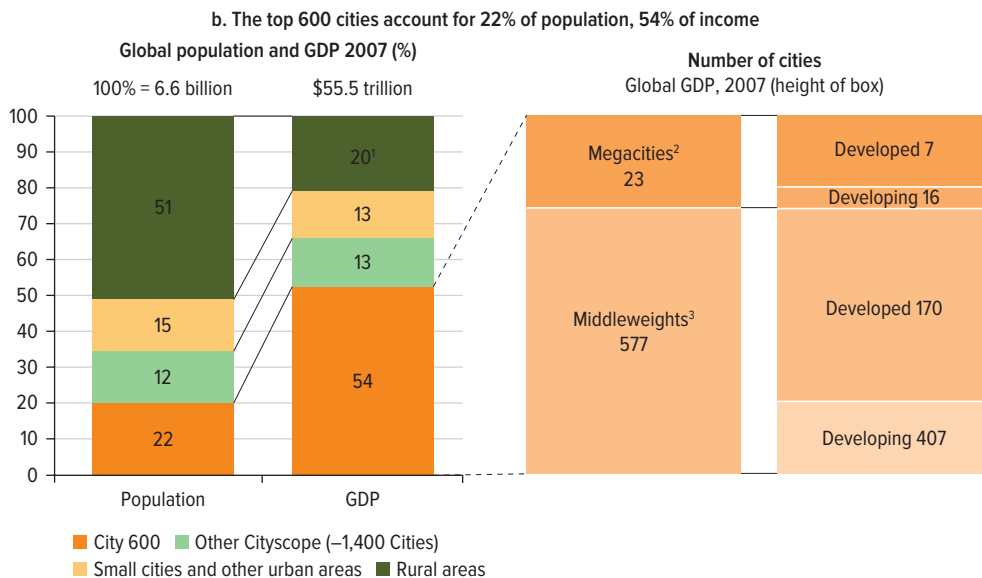
Urbanization boosts economic performance through three forces: economies of scale, factor mobility, and lower transport costs. In economies of scale, greater output of some goods and services reduces unit production costs, making the firm more productive and competitive. Mobility lets factors be used in a more productive firm, city, or country. Lower transport costs allow firms, cities, and countries to specialize.

Urbanization does not simply develop a single city in a country. A country's cities can be treated together as a portfolio of assets, each differentiated by size, location, and density of settlement. Businesses and people can exploit agglomeration and economies of scale most effectively if their urban settlements work as intended. Small cities with incipient urbanization facilitate internal economies of scale, such as hosting a large firm transforming local

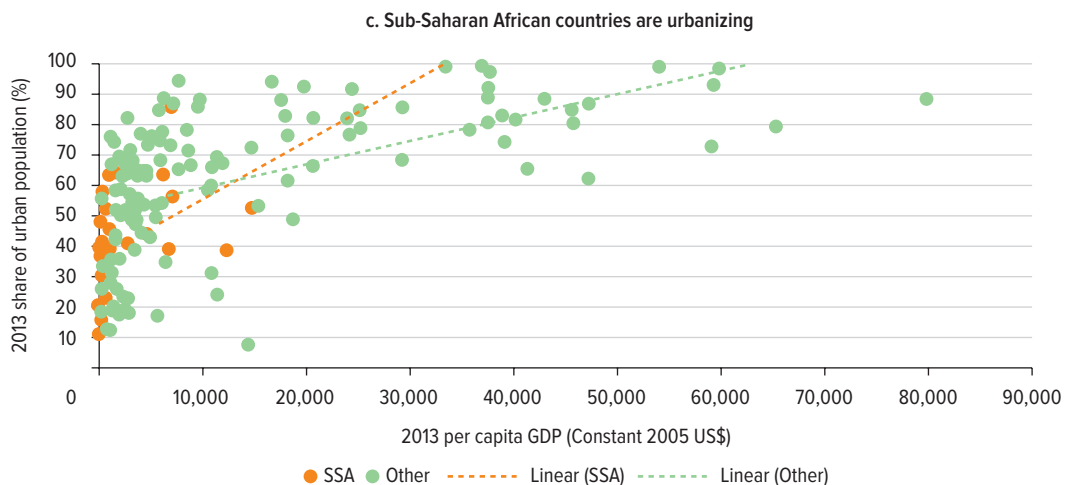
Figure 6.1. Urbanization and transformation from a low-income, through a middle-income, to high-income economy



1. Definition of urbanization varies by country: per-1950 figures for the United Kingdom are estimated.
2. Historical per capita GDP series expressed in 1990 Geary-Khamis dollars, which reflect purchasing power parity (PPP).



1. Estimate based on global GDP not including agriculture and mining; and GDP contribution of smaller Cityscope cities.
2. Megacities include cities with more than 10 million inhabitants in 2007.
3. Middleweight cities have a current population between 150,000 and 10 million.



Source: Panels A, B, and C are taken from Chapter 1 of the World Bank. 2017. Côte D'Ivoire Urbanization Review, Washington, DC: World Bank.

agricultural products. Secondary cities with intermediate urbanization facilitate localization economies through competition between firms in the same sector. Large cities with advanced urbanization facilitate urbanization economies through a diverse economic base favoring innovation.

Early after independence, the Ivorian government adopted a series of interventions to fight spatial concentration around the economic centers of Abidjan, Bouaké, and San Pédro. The first development plan (1960–70) identified agriculture, agribusiness, and the construction of backbone infrastructure as economic pillars. The second development plan (1970–75) took a more interventionist stance to establish growth poles in the southwest (the deep seaport of San Pédro), the center (for agro-pastoral activities), and the north (for agro-industrial state-owned enterprises). The third development plan (1975–80) created new financial instruments, such as a rural development fund, to disperse the economic concentration of Abidjan, San Pédro, and Yamoussoukro. But although the country mobilized resources to spread economic dynamism, market forces reinforced the economic concentration of production and people.

Recognizing the power of urbanization, the authorities are considering urban plans for individual cities. The most recent is the master urban plan (Schéma Directeur d'Urbanisme) for greater Abidjan (2015–30) developed by the Japan International Cooperation Agency (JICA) and the Ministry of Urban Development (Ministère de la Construction, du Logement, de l'Assainissement et de l'Urbanisme). Abidjan's master plan encompasses 13 municipalities and 6 peri-urban areas (Alépé, Azaguié, Bonoua, Dabou, Grand-Bassam, and Jacqueville). Yamoussoukro has begun working on its master plan, and other cities are planning theirs.

6.1.1 Types of cities

Côte d'Ivoire has three classes of cities (figure 6.2). Global connectors generate urbanization economies for innovation, increasing returns to scale, and global competitiveness. Regional connectors generate localization economies for efficient regional trade and transport. Domestic connectors generate internal economies of scale to unleash the agricultural potential of their regions.

Abidjan, San Pédro, and Yamoussoukro are Côte d'Ivoire's global connectors. Greater Abidjan contains 20 percent of the country's population, 80 percent of its formal employment, and 90 percent of its formal enterprises. It faces metropolitan challenges that confront other major cities around the world. The port of San Pédro, the main export gateway for agricultural products, connects by rail to the mining in the heart of the west (Man and its surrounding area).

Yamoussoukro has been one of the two political capitals since the 1980s, though the national public administration is still in Abidjan. It has one of the most reputable

polytechnic engineering schools in francophone Africa, offering the potential to interact with technology companies if the authorities are able to scale up information and communications technology infrastructure.

The regional connectors of Côte d'Ivoire are linked to the West African region through five corridors:

- ▶ The northern corridor connects Abidjan with Ouagadougou through a road and rail link that passes through Bouaké (the country's second-largest city), Korhogo (the capital of the northern region with nearly 200,000 inhabitants), and Ferkessédougou (a secondary city of 75,000 inhabitants).
- ▶ Eastward, Côte d'Ivoire is connected to Lagos, Nigeria, by a road running through Aboisso and Noe on the Ivorian side and three West African capital cities in—Accra in Ghana, Lomé in Togo, and Cotonou in Benin.
- ▶ A second eastward connection to Ghana (via Kumassi and Tamale), which runs through Adzope, Abengourou, and Bondoukou.
- ▶ A road connecting Abidjan is to Nzerekore in Guinea via Yamoussoukro, Daloa, and Man, each having more than 150,000 inhabitants in a region rich in agriculture, minerals, or tourism.
- ▶ A second westward connection to Monrovia in Liberia through Grand Lahou, Sassandra, San Pédro, and Tabou along the Gulf of Guinea.

Six secondary cities with populations of 100,000 or more are the main regional connectors along the corridors: Adzope and Abengourou (east corridor), Bouaké and Korhogo (north corridor), and Daloa and Man (west corridor).

Small cities and market towns could be agribusiness anchors generating economies of scale (called "localization economies"). Southwest regions contribute produce cash crops for export, and savanna areas could scale up food and cereal production to supply urban centers domestically and regionally. In the long term, as the cocoa belt moves from eastern and central regions to the south (with an eye on the port of San Pédro), climate change and international economic conditions could further shift the heart of these cash-crop production areas. Given increasing regional disparities in Côte d'Ivoire, good connections between the agricultural hinterlands of secondary cities and strategic regional capital cities could help smallholders modernize and integrate into agribusiness chains.

The following are domestic connectors:

- ▶ The hinterland of the metropolis, consisting of the remaining secondary cities in the supraregions of Goh-Djiboua (Divo and Gagnoa) and Grands Ponts (Agboville and Dabou).

Figure 6.2. Ivorian urban areas classified as global, regional, and domestic connectors



Source: General Directorate for Decentralization and Local Development (Direction Générale de la Décentralisation et du Développement Local), Ministry of the Interior and Security and AGEROUTE.

- ▶ The central integrator, consisting of the remaining secondary cities in the supraregions of Lacs (Bongouanou, Daoukro, Dimbokro, and Toumodi), Sassandra-Marahoue (Bouafle), Montagnes (Duekoue and Guiglo), and Bas-Sassandra (Soubre).
- ▶ The northern integrator, consisting of the remaining secondary cities in the supraregions of Zanzan (Bouna), Vallée du Bandama (Katiola), Savanes (Boundiali), Woroba (Mankono, Seguela, and Touba), and Denguele (Odienné and Minignan).

6.2 Priorities: Financing, planning, connecting, and greening

Managing urbanization well will help Côte d'Ivoire rise to middle-income country status. With a 50 percent urban population, the economy is underperforming some comparator countries in urbanizing. The GNI per capita should be around \$2,700, if urbanization economies worked as economic geography theory predicts. For example, three countries in different continents with urban populations close to Côte d'Ivoire's are Georgia, with a GNI per capita of \$3,570, Guatemala, with \$3,340, and Indonesia, with \$3,580.

Côte d'Ivoire's government has historically adopted a balanced approach to territorial development. Its territorial development master plan prioritizes growth poles, intending them to radiate widespread economic activity. But such approaches in other countries have produced mixed or even negative results. Although supporting economic development in regions with resource endowments or economic potential makes sense, doing so at the expense of primary cities that are the country's engines of growth can reduce overall growth and delay economic transformation. Economic growth is inherently uneven, so some places are viable for rapid growth even though others are not. Experiences of the past 50 years suggest two characteristics shared by strategies that pay off in social equity and economic prosperity: social services are universally available across all areas, and economic infrastructure investments are selected according to cities' characteristics and the potential to exploit their comparative advantages and agglomeration economies.

Ivorian policy makers can target their policies to advance inclusive, sustainable, and efficient urbanization in four areas:

- ▶ *Financing.* Mobilize resources for economic infrastructure and social services as urbanization accelerates.
- ▶ *Planning.* Chart courses for various type of urban areas, towns, and rural regions, especially through policies on urban land use, housing markets, and

institutions, expanding basic infrastructure and universalizing social services.

- ▶ *Connecting.* Make cities and their markets accessible for labor mobility and the flow of goods and services across districts within the city, to other cities, and to export markets.
- ▶ *Greening.* Enhance livability by reducing pollution and emissions (within the limits imposed by environmental and financial resources).

Good governance is a prerequisite. Policy makers at all levels should work together. But currently, multiple urbanization institutions present overlaps, fragmentation, unclear mandates, and a dearth of coordination. The Ministry of Planning and Economic Development oversees planning, land development, and population. The Ministry of Construction, Housing, Sanitation, and Urbanization develops and implements urban master plans. The Ministry of the Interior and Security hosts the directorate (Direction Générale de la Décentralisation et des Collectivités Locales, DGDCL), which oversees municipalities and regions. The Ministry of Economic Infrastructure is responsible for building and maintaining the infrastructure connecting domestic economic centers with each other and with regional and global centers. The Ministry of Transport is in charge of intra- and inter-urban transportation, as well as international transportation. Two associations represent municipalities and regions: the Association of Cities and Communes of Côte d'Ivoire (UVICOCI) and the Association of Regions and Districts of Côte d'Ivoire (ARDCI). They are bottom-up consultative bodies of elected officials and urban and regional development specialists. That's seven governmental bodies, plus the private sector—which the government is intended to serve and drives growth—so active business associations and citizens must be engaged, as well. Adequate coordination would create synergy. But without coordination, waste, delays, buck-passing, duplication, undercutting, and chaos would result.

6.3 Financing

Financing is the weakest link in Côte d'Ivoire's urbanization program, partly due to weaknesses resulting from decentralization, which will affect the pace and pattern of urbanization but has compromised the fiscal autonomy of local governments. In 1978, decentralization was initiated through Law No. 78-07 setting up a uniform system of 28 communes (municipalities). In 1980, Law No. 80-1180 on municipal organization and Law No. 80-1181 on the municipal electoral system established

commune governance structures. In 2001, decentralization of territorial administration was rearranged through Law No. 2001-476 into five levels: municipalities (communes), cities, departments, districts, and regions. Beginning in 2003, as stipulated in Law No. 2003-208, all responsibilities pertaining to social, economic, schooling, environmental, urban, scientific research, and communal and cultural functions were devolved and assigned to municipalities.²

Soon after, in 2006, before the municipalities had established capacities to execute their functions or developed revenue instruments to deliver them, the government established a multiministerial commission for an ambitious territorial development framework. Its mandates include designing, coordinating, planning, reviewing, and managing countrywide infrastructure investments and all spatial policies.³ Most recently, in 2012, the government rationalized its five-level administrative structure into 197 municipalities (communes), 31 regions, and 2 autonomous districts (Abidjan and Yamoussoukro) of the 14 supraregions with 12 other supraregions not formalized as autonomous entities (figure 6.3). But the division of powers is still based on the outdated five-level decentralized structure.

Formulating and implementing municipality and region budgets have suffered constant delays, causing ineffective services, weak project implementation, and poor credibility for local budget management. The local executive body—the mayor and the municipal council, or for regions, the president and cabinet officers—is responsible for preparing the budget, relying on its own and central government services. Deadlines are hardly ever met due to delays by local authorities and further delays by the regulatory authority, so local budgets are completed late. Decree No. 31 (February 13, 1992) grants the regulatory authority 45 days from the date of submission to approve the budget. After that, the municipal authority is allowed to begin executing the budget, even without approval. But in practice, the treasury accountant refuses to make

Figure 6.3. 31 regions, 12 nonautonomous supraregions, and 2 autonomous districts, 2018



Source: National Institute of Statistics (Institut National de la Statistique) and General Population and Housing Census (Recensement General de la Population et de l'Habitat) 2018.

payments without receiving notification of budget approval from the regulatory authority.

Article 119 of the Constitution, establishing the principle of self-administration by local authorities, aims to bring decision making and accountability closer to the populace so local residents can participate in choosing their priorities and managing their affairs. Decentralization also has an economic objective: transforming subnational entities into local development agents as they exercise the responsibilities transferred from the national government. Decentralization is also expected catalyze a reduction of regional disparities.

The decentralization model of service delivery faces two areas of impediment. The first is systemic damage to municipal budgets through unpredictable financing, late transfers, the lack of transparency on shared revenues from the center, and small own-source revenue, even in large urban areas. The second concerns devolved responsibilities, where despite some progress, contradictions and overlaps in legislation and in the application of mandates lead to confusion between national ministries and local governments over financing and service delivery. The implementation of the transfer of power often leads to conflicts of responsibility or incongruent accountability between decentralized entities and other public bodies. Local authorities, under Law No. 2003-208, are tasked with a wide range of responsibilities, but the financing did not follow these responsibilities from the central government to local authorities. And some decrees and orders on the specifics of devolution have not been drafted or adopted. Unexpected unilateral central ministry decisions have often reversed or contradicted provisions in the legal and institutional framework, undermining municipal budgeting, planning, and decision making.

6.3.1 Financing distortions and constraints

To develop more efficient financing, Ivorian authorities could better allocate responsibilities for governing urban areas, and improve coordination and accountability. The following are prerequisites to making financing more efficient:

- ▶ Reducing inconsistencies between devolution and decentralization to align delegated functions and fiscal resources. The human resources dedicated to fulfilling these responsibilities need to be expanded, and fiscal transfers should be simplified to improve timeliness and efficiency.
- ▶ Empowering regions and municipalities to gather own-source revenue by tapping into financing from foreign investors and using external finance to improve financial management. This should be accompanied by improving commune-level performance, strengthening local finance systems, generating economies of scale in infrastructure

services, and disciplining and leveraging collaboration among regions and municipalities.

- ▶ The experiences of Costa Rica; Southeast Asian countries Thailand, Indonesia, and Malaysia; and local governments in China in attracting private financing and new foreign investors are relevant to Côte d'Ivoire. A strategic foreign direct investment policy could attract investments enabling the economy to join global value chains while expanding its agglomeration economies. But upgrading the fiscal system to be internally consistent, transparent, accountable, and efficient is a prerequisite to empower local governments to seek new private investors and external providers of technology. This requirement would imply some commitment of public funds, but they could be reallocated from lower-value uses.
- ▶ The share of the central budget allocated to local governments has been falling since 2003, and criteria for allocating central shared revenues have not been applied consistently. Reduced staffing by the central government for communes has exacerbated the fall in resources. A recent World Bank Group analysis⁴ found that on average 1.8 formal government officials serve each of the 197 communes.

The authorities can consider five measures to strengthen fiscal management:

- ▶ Revise the formula for transfers and simplify their number.
- ▶ Evaluate the performance of general financial allocation (DGF—Dotation Globale Financière) and its efficiency in absorbing and using resources.
- ▶ Pilot targeted development grants tied to performance indicators (such as revenue collection, cost recovery, and asset management and upkeep).
- ▶ Review the performance of the municipal credit fund (Fonds de Prêts aux Collectivités Locales) and its existing debts.
- ▶ Improve tax collection by registering all taxpayers, completing street address registration, and upgrading cadastral registries.

Although local governments depend on shared revenues, grants, and transfers from the central government, those resources are too small for their needs. Revenue transfers to the 197 municipalities in Côte d'Ivoire over 15 years averaged 0.5 percent of GDP, whereas in neighboring Ghana, the share was about 1.0 percent, according to a World Bank Group analysis.⁵ Of every dollar of municipal spending during the past decade, more than 80 cents go to current expenditure—with half spent on staff costs—

and less than 20 cents to investment. That difficulty in mobilizing resources for developing infrastructure dampens urban agglomeration economies and reduces their spillover benefits.

Ivorian authorities have emulated East Asian nations by mobilizing their own resources to fund infrastructure investment from external sources. For instance, local authorities have increasingly turned to build–operate–transfer arrangements to finance income-generating markets, stalls, and kiosks. In Adjamé, a CFAF 12 billion market was built with financing entirely from the Ivorian Concept and Management Company (Société Ivoirienne de Concept et de Gestion), which will manage the market for 25 years and then turn it over to the municipality. Similar operations have taken place in Treichville, Sinfra, and Daloa.

East Asian experience has also pointed to using foreign direct investment (FDI) in public–private partnerships (PPPs) with municipalities, exploring opportunities in land financing, and assessing Abidjan municipalities' creditworthiness due to their growth potential and their eligibility for International Finance Corporation financing.

In the medium to long term, the government could seek new sources of financing for global connectors and creditworthy regional and domestic connectors. To do so, they would:

- ▶ Assess the sustainability of the current municipal borrowing scheme and whether, in light of the low repayment rates, it could be credible.
- ▶ Explore the opportunity to amend and update legislation on public–private partnerships to allow municipalities to use them more.
- ▶ Investigate opportunities for land financing.
- ▶ Expand, deepen, and institutionalize mechanisms for intermunicipal collaboration.
- ▶ Public–private partnerships and intermunicipal collaboration seem most likely in the medium term.

Cities should strengthen their fiscal risk management before taking further steps with these instruments, since debt raises the risk of insolvency. Likewise, fiscal rules for borrowing by subnational governments should align debt-financed capital spending with the capacity to service debt. Cities must fix their local finances and get the basics right before embarking.

Integral and functional fiscal governance requires finances aligned with functions, cadres incentivized for performance, and viable external financing options. These would undergird reforms in the other three areas of efficient and sustainable urbanization—planning, connecting, and greening.

6.4 Planning

Planning underlies agglomeration economies in four ways:

- ▶ In land use planning, effective land valuation systems and a sound understanding of demand by different market segments are used to allocate land to its most viable uses.
- ▶ Planning should be integrated with infrastructure, especially for transport.
- ▶ Affordable and well-sited housing reduces the tradeoff between urban density and livability.
- ▶ The basic infrastructure services of water, energy, sanitation, and solid waste management should be provided for all residents, urban and peri-urban alike.

Denser cities have not improved livability. Core issues include affordable housing, basic services, and infrastructure. Households must choose between high rents in good locations and high transport costs in peripheral areas. They often live in overcrowded conditions to avoid costly commutes from peri-urban areas—more than 50 percent of Abidjan's residents share rooms with two or more people.

After the government withdrew from developing land and producing housing in the early 1980s, the country entered a housing crisis, which was exacerbated by the sociopolitical crises in the late 1990s and 2000s. The widening housing deficit is estimated at 400,000–600,000 units, concentrated in cities, half of it in Abidjan.

The qualitative deficit is even worse. A lack of basic services and insecure tenure weaken households' confidence in the future and reduce their willingness to invest in their house. A large part of the housing stock is built of temporary material and lacks basic services. About two-thirds of primary housing has permanent walls, but less than 4 percent has a permanent roof. Investment in sanitation (primarily by households) is also low: just 27 percent of households in 2008 had flush or improved toilets, down from 35 percent in 2002.

Despite the 1998 Rural Land Law to promote transparent land markets, land registration and titling remain problematic. About 98 percent of the country's land is still governed by customary practices, despite the statutory system. The state has difficulty accessing land, and uncertainty persists over the demarcation between rural and urban areas. The state

must deal not only with a predominant customary system of land ownership and tenure, but also with only sporadic use of the Rural Land Law and lengthy, expensive, and bureaucratic processes to register land and obtain title. Registration's cost—an estimated 10.8 percent of a property's value, which is above the Sub-Saharan African average—discourages people from pursuing it. Another disincentive is the likelihood of taxes being levied on registered land. Demand for land titles is low, and their value added—compared with land security based on local consensus—is unproven.

Regional and global connector cities lack sufficient housing with basic services, contributing to the housing deficit. Access to electricity is almost 90 percent in urban areas, but access to piped water is 72 percent, down 7 percentage points between 1998 and 2011. In several cities, a large proportion of neighborhoods are formal and organized, but housing is underprovisioned, underserved, and deteriorating. Organized and provisioned neighborhoods occupy only 20 percent of residential sector in the communes of Abidjan and 50 percent of the residential sector in San Pédro and Bouaké. The share of formal and provisioned housing tends to be much lower in smaller cities—just 3 percent in Korhogo, concentrated in the city center's individual homes and buildings.

Informal housing in irregular settlements is expanding, especially in large cities. Usually situated on publicly owned land, informal settlements are common in urban and peri-urban areas of Côte d'Ivoire. They follow no urban guidelines, often lack land title and building permits, suffer serious sanitation problems, and have little or no access to other basic services. Most houses, built of wood and zinc, resemble huts. Irregular settlements are common in large cities such as San Pédro and Abidjan. Informal housing accounts for more than 6 percent of urban dwellings in Côte d'Ivoire, sheltering 15–17 percent of the population. In Abidjan, 15–17 percent of settlements are illegal because of their location, absence of basic services, or substandard construction.

High prices and limited mobility exacerbate the urban housing deficit. For the African region more widely, housing is expensive at a relatively constant 17–18 percent of spending in all income quintiles. When transport is added, accounting for more than a third of total outlay, Abidjan's 26.6 percent share of spending on housing is the highest of all urban areas across West Africa. The rental market in central areas is under severe pressure as the large housing deficit creates speculation on rents.

Sparse street grids limit mobility and access to services. A dense, well-connected street grid aids connectivity, productivity, quality of life, and social inclusion. Streets often provide a public right-of-way for other systems, so they presage access to basic services such as water and sanitation, solid waste collection, and stormwater drainage. In a global study, UN HABITAT judged that livable and competitive cities

have at least 20 kilometers of paved road per square kilometer of area. The largest cities in Côte d'Ivoire have 2.1–10.5 kilometers of paved road per square kilometer.

City infrastructure has deteriorated greatly. For most basic services, it was heavily damaged during the civil war and has not been maintained nor improved in the past 10–15 years. In Abidjan, for instance, before the 2002 civil war, piped water coverage was estimated at 75 percent. After 2002, it dropped to 56 percent as the city struggled to provide 1 million displaced Ivorians with basic services. The electricity networks that serve up to half the urban population are deficient, forcing dwellers to rely on informal and illegal connections. In San Pédro, electricity covers less than half the commune's neighborhoods; in Korhogo, public lighting covers only a quarter of the city. In Abidjan, the communes mainly lack drainage and sanitation. Waste management is also deficient across cities.

6.4.1 Reform in planning

Better planning will make cities more valuable and more livable. There are three significant types of improvements that would make planning more effective: improving land market fluidity, expanding services, and simplifying regulations.

Improving land market fluidity

An inefficient land market reduces private investment. A more fluid land market attracts more investment in industrial and residential development. Increasing fluidity requires increasing the quantity of usable land:

- ▶ Tenure security should be improved through simpler, shorter, and less costly procedures.
- ▶ Trunk infrastructure (particularly roads, electricity, and water) should be provided quickly, especially before new urban extensions that are not yet connected to urban services are settled.
- ▶ Land for different uses should be identified, planned, and allocated efficiently to meet increasing demands.

Expanding services

Most basic infrastructure services should reach all city residents—urban and peri-urban—as global and regional connectors grow and new domestic connectors are added. Investing in infrastructure requires local and national authorities to work together prioritizing needs as they develop:

- ▶ More serviced land.
- ▶ Financially sustainable service delivery models and strengthened regulations to increase cost recovery and investment and service coverage.

Simplify planning regulations

Land use plans help cities enforce compliance with planning guidelines and building codes, guide development by allocating budgets to different zones, and develop zoning regulations. These plans can facilitate the harmonious development of public and private properties with mixed economic and residential activities, as well as green and protected areas. Reforms can include the following steps:

- ▶ Responsibilities should be clarified and coordination improved in governing urban areas. For example, city planning in Abidjan and other cities is in the

hands of the Ministry of Construction, Housing, Sanitation, and Urban Development, rather than mayors and the chairs of regional councils. But it is the mayors and councils, along with local governments, who have wide knowledge of commune needs and experience in providing facilities, amenities, and services.

- ▶ Land use policies and planning standards should be aligned with infrastructure availability and plans.
- ▶ Regulations on land use and zoning should be simplified and relaxed to improve housing affordability.

6.5 Connecting

Connections between and within cities benefit producers and consumers. They give producers access to input (including labor) and output markets. They give consumers options and in many cases better prices and new economic opportunities. The connections between and within Ivorian cities are being impeded in three ways:

- ▶ Low mobility within cities fragments urban labor markets and creates a wedge between people and jobs.
- ▶ High transport costs across cities dampens gains from market access and specialization.
- ▶ Lack of intermodal infrastructure hinders economic growth.

Across cities, these hurdles limit the economic gains that specialization and market access could bring. Within cities, they limit matching the skills of job seekers with employment opportunities.

Urban mobility

More than 50 percent of trips to work in Abidjan are on foot or on a bicycle. Work and business activities are concentrated in the center, with fewer jobs at the periphery. Mobility is worse for the poor, who have access to a small share of the labor market with their average work trip less than 5 kilometers. So, Abidjan loses out on the potential agglomeration benefits of a unified labor market.

In greater Abidjan, the informal sector—with metered taxis and intercommunal taxis—accounts for 85 percent of public transport trips. Informal transport has grown at the expense of the formal sector. Unqualified operators with obsolete vehicles pose safety, reliability, and pollution problems. Bus services are concentrated on routes originating from suburban areas and ending in several city terminals. Public

transportation modes are not diversified, even though the navigable lagoon could allow water transport and they are not commensurate with a metropolis of more than 4 million people.

Regional connectivity

The main Ivorian cities are linked by an extensive road network, with four main axes radiating from Abidjan. Transport costs distort trade patterns between cities. According to global evidence, falling transport costs due to large infrastructure investments and breakthroughs improve countries' economic integration and specialization.

Domestic transport costs in Côte d'Ivoire are amongst the highest in the world. A trucking survey conducted for this chapter found the average freight transport cost is \$0.35 per ton-kilometer—much higher than in other developing countries such as Vietnam and India, and considerably higher than in the United States, where labor costs and overheads are much greater.

Routes on domestic connectors face the highest costs. Transport costs are the highest along routes connecting regional and domestic connectors (\$0.47 per ton-kilometer) and those connecting domestic and global connectors (\$0.39 per ton-kilometer). In contrast, transport costs between global connectors are more in line with the national average (\$0.32 per ton-kilometer), and routes connecting global and regional connectors have lower costs (\$0.17 per ton-kilometer).

High transport costs hinder the growth of secondary cities and reduce connectivity for higher-poverty lagging areas of the country. The routes connecting domestic and global connectors, carrying considerable freight, integrate the domestic and global economies. Because these routes also link

the country's lagging areas with markets, their high costs hurt competitiveness and impair the development of the lagging areas.

Global connectivity

Transport and information and communications technology (ICT) infrastructure for are vital for boosting the efficiency of global, regional, and domestic connectors. Cities should be regarded as an interlinked portfolio of assets—each differentiated by size, function, location, and density of settlement—that connect the economy to local, regional and global markets. International experience shows that businesses and people can exploit economies of scale and agglomeration if their cities are efficient. External connectivity passes through node cities containing or connecting to international transport and communication infrastructure—ports, airports, railways, and ICT backbones.

Abidjan and San Pédro are world-class ports. The Autonomous Port of Abidjan and the deep seaport of San Pédro provide maritime transport for Côte d'Ivoire and landlocked countries such as Burkina Faso, Mali, and Niger. Abidjan is the country's main port, accommodating 80 percent of maritime traffic. Abidjan handles larger freight volumes than most ports in West Africa and has a capacity of around 650,000 twenty-foot equivalent units (TEUs) per year. It was, however, one of the world's most expensive ports in 2009. Limited competition among port operators contributes to high prices. The San Pédro port is mainly dedicated to timber traffic and handles part of the export of agricultural products such as coffee and cocoa.

Abidjan's port operations were seriously disrupted by the crises between 1999 and 2011. Since the end of the postelection crisis in 2011, it has been regaining its place among the most important ports of Africa. However, its container traffic is still only one fifth of South Africa's more than 4 million TEUs. Traffic in transit to the hinterland countries Burkina Faso and Mali surged after the end of the crises from 0.76 million tons in 2011 to 1.76 million tons in 2013.

ICT connectivity is more developed compared with that in neighboring countries. Mobile phone coverage at 95 percent is above Economic Community of West African States (ECOWAS) average of 78 percent. In Abidjan and other cities, most citizens live within reach of a 3G-enabled mobile telephone network, and internet access. Three major fiber optic cables land in Abidjan: The WACS (West African Cable System), the ACE (African Coast to Europe) and the SAT3/WASC (South Atlantic 3/West Africa Submarine Cable). Competition among three major Internet Service Providers (MTN, Orange, and Moov) has lowered Internet connection costs, although connectivity charges remain high compared with those in Ghana and South Africa, and access outside

urban centers is relatively low. Advanced 4G technology has been introduced, but much more investment is needed. High speed internet is generally lacking—according to the United Nations E-Government Survey in 2014, Côte d'Ivoire is currently 171st of 193 countries in the world, near the average of ECOWAS countries, but considerably behind Ghana (123rd) and Sri Lanka (74th). Mobile broadband is also low with only about 6.8 percent penetration (end 2013), on par with Senegal and Nigeria, but much lower than Ghana (28.2 per 100 inhabitants) and Sri Lanka (15 per 100 inhabitants).

6.5.1 Reform in connectivity

Improved urban mobility and transport are best addressed in an integrated strategy accommodating distinct user groups and anticipating long-term needs. An urban transport master plan should promote a reliable, safe, modern, and sustainable multimodal system accessible to all urban dwellers. Côte d'Ivoire has yet to develop a national transport master plan to reflect the government's spatial development strategy.

Reforms should professionalize transport sector operators, increase competition, and improve financial terms for sustainable operations. Measures to increase the attractiveness of public transport would improve overall system efficiency. Upgrading traffic signal control, implementing traffic information systems and traffic management on highways, and improving enforcement would also improve urban transport. Restrictive parking management combined with priority for public transport could also improve urban mobility. Finally, an environment enabling transporters to finance upgrades to their fleets on competitive terms would lead to better, more reliable service.

Freight transport needs to be better organized and more competitive. Entry into the sector has been easy, leading to a fragmented market dominated by informal small operators relying on obsolete trucks and old vehicles. Many operators may seek informal payment because they do not comply with regulations. Multiple local trade unions become poles of vested interest that fragment the market and distort prices. Practices such as freight repartition and *tour de rôle* (assigning freight loads to transport operators in rotation) reduce the quantity, quality, and value of transport services

A market information system would better connect transporters with customers. It would centralize, standardize, analyze, and provide information to all market participants. It could build on ICT as a virtual freight exchange and a customer management application for passengers.

Investing in strategic corridors would strengthen urban agglomerations and city development. For the Abidjan–Ouagadougou corridor, an extension of the highway beyond Yamoussoukro to connect Bouaké and Korhogo would amplify benefits from regional trade facilitation and boost trade between Côte d'Ivoire and Burkina Faso. It would increase

volume and speed freight and passenger traffic among the four big cities and open trade and transport for the Sikasso (Mali)–Bobo Dioulasso (Burkina Faso)–Korhogo (Côte d'Ivoire) border region.

Adding to the corridors connecting the domestic economy to regional markets would also diversify urbanization. The Abidjan–Lagos corridor offers denser market potential, and extending the highway from Grand-Bassam–Aboisso to the Ghana border would allow a seamless connection of six major cities: Abidjan, Accra, Lomé, Cotonou, and Lagos. An alternative eastward corridor would go through Adzope, Abengourou, Agnibilekro, and Bondoukou to connect with inland secondary cities in Ghana such as Kumassi and Tamale. A third corridor going west and linking Abidjan to Nzerekore could be considered, with a highway connecting Yamoussoukro to Daloa and Man to facilitate domestic and regional trade. As these regional corridors develop, there should be attention to logistics, distribution infrastructure, and institutions in the regional connector cities.

Connecting cities spatially supports their distinct agglomeration profiles. Global connectors benefit from

international connectivity through ports, airports, and ICT and from good interurban infrastructure bringing domestic raw materials to industrial zones with. Such infrastructure could make Côte d'Ivoire a regional hub for West Africa. For regional connectors, the most valuable trade and transport efficiently connects the domestic economy to regional markets. For most domestic connectors, situated in predominantly agricultural or resource-based regions with low economic density and emerging urbanization, market allocations of land use and the development of basic services can reinforce agglomeration forces.

Yamoussoukro could become a West African technology hub. Developing a technology hub in the Polytechnic Engineering School in Yamoussoukro would complement the government's growth pole initiative for Abidjan, Bouaké, and San Pédro. Domestic technology firms and external private partners could form a cluster around the polytechnic employing a trained, low-wage, attractive labor pool. This development would require technology-oriented city progress and world-class ICT connectivity to participate in ICT innovations such as massive open online courses, which the polytechnic could develop.

6.6 Greening

The environmental cost of infrastructure and land use, which determine the growth patterns of urban areas, is often neglected. That cost can be steep. In China, for example, the health cost of urban air pollution has been estimated at 3.8 percent of GDP. And knock-on effects affect a city's entire economic development: health problems undermine worker productivity, pollution makes a city unattractive to families, and climate-related extreme weather events disrupt businesses and damage infrastructure.

Congestion and pollution generally rise as urbanization intensifies and wealth grows. And the consumption and waste associated with each urban resident are likely to grow, straining solid waste services and raising pollution and health risks, unless managed properly. Making a city greener requires incorporating such externalities into planning and management decisions.

Shortcomings in infrastructure and land use coordination deepen Côte d'Ivoire's urban pollution and its vulnerability to natural disasters. Cities have shortages in basic sanitation, solid waste management, and stormwater infrastructure. Untreated water from industry and households is discharged into urban water bodies and the Atlantic Ocean, washing pollutants into lakes, lagoons, and the ocean and exacerbating problems from extreme weather events. In June 2014 alone, more than 20 people died in Abidjan in flood-related

incidents. Uncoordinated development has led to increasing reliance on environmentally inefficient forms of transport. As motorization increases, emissions will rise while green spaces in and around cities, which help filter pollutants and absorb flood water, disappear due to inadequate green management.

Air and water pollution have high costs. Air pollution has been linked to lower respiratory tract diseases such as asthma and pneumonia that account for 6,417 years of life lost per 100,000 in Côte d'Ivoire due to disability or death. Polluted water is associated with the spread of highly communicable waterborne diseases such as diarrhea and cholera, which account for more than 50 percent of adult deaths and about 80 percent of deaths among children under age 5. The number of disability-adjusted life years lost to diarrhea alone is 7,897 per 100,000. Pollution also affects productivity and economic activity, with water pollution hurting property values and tourism, fishing, and other activities that require clean water.

6.6.1 Reform in greening

Coordinated, forward-looking, and context-specific actions can mitigate the impacts of pollution and environmental degradation. Greening cities does not require a new paradigm. Priority initiatives advancing development throughout Côte d'Ivoire's system of cities will increase efficiency, help cities

individually, anticipate the future costs of today's decisions, and build resilience to environmental risks.

Greening can improve the competitiveness and productivity of global connectors. The economy of Abidjan and other global connectors is based on innovation, productivity, and international trade. But high rates of urban pollution threaten their quality of life, making them unattractive to high-skilled labor and their families and so undermining productivity and livability. Although no estimates are available for Ivorian cities, in Nigeria, environmental degradation costs around 9 percent of GDP, and in Ghana, around 10 percent of GDP, according to World Bank studies.

Coastal cities have additional vulnerability to natural disasters and flooding associated with sea-level rise. Two-thirds of Côte d'Ivoire's coast is exposed to erosion, losing 1–2 meters a year, but sometimes up to 20 meters.

Greening initiatives offer potential solutions. Upgrading basic infrastructure in Abidjan's 144 precarious settlements could yield social, economic, and environmental benefits. Protecting green and open spaces along the waterfront, while making the city more attractive and livable, can provide a vital buffer against climate change-related risks. And coordinated efforts to provide public transport, while providing a wide range of social and economic advantages, can stem rising congestion and air pollution.

Green policies can support the growth of regional connectors. Their economies are grounded in regional trade related to extractive industries and small manufacturing. Understanding the environmental costs and tradeoffs associated with these activities can lead to better planning and more efficient resource use. Building resilience to environmental risks into infrastructure investment will also help cities save in the long run. Roads, for example, can be designed to withstand landslides, coastal erosion, and heavy rains.

6.7 Conclusion

Côte d'Ivoire is one of the most urbanized countries in Sub-Saharan Africa, one of a dozen where the urban population is larger than the rural population. The share of employment in agriculture in those countries is estimated to have been declining over 2005–15, indicating that structural transformation is under way.

The Côte d'Ivoire 2014 census put urbanization at about 50 percent. With 3.8 percent estimated annual growth, urbanization is set to rise to 60 percent by 2025 and to exceed 70 percent by 2050. The urban system is characterized by a

The environmental footprint and efficiency of light manufacturing can be improved, often in industrial zones where economies of scale pollution treatment are possible. Better regulated and modernized freight transport could help reduce the environmental costs of trucking on top of the economic and social gains the government has identified. With ecotourism as the fastest-growing area of the tourism industry and a growth area in green jobs, the natural beauty and ecological uniqueness of regions such as Man present underexploited economic opportunities.

For domestic connector cities, greener growth patterns will stimulate localization economies. Domestic connectors connect agricultural inputs and outputs to markets. They should get basic services right from the outset to support sustainable growth. Planning can greatly reduce the long-term costs of urban development by preparing for basic service infrastructure such as sewage systems and roads. This can insulate small cities from future costs like those now facing larger cities such as Abidjan, where, for example, due to the city's layout, 40 percent of houses cannot be reached by solid-waste trucks. Domestic connectors can also consider alternative technologies to reduce the costs of basic services, as smaller cities in Kenya are doing by exploring off-grid photovoltaic street lighting.

The national government can lead in greener urban development. Policy makers and consumers require better information on the environmental costs of their decisions. The government can lead in collecting and disseminating such information. For example, it can establish reporting standards for firms, monitoring national data on water and air quality, and supporting cities in measuring urban indicators to help households, businesses, and policy makers. It can also educate through schools and use incentives, regulations, and price instruments to change behavior among firms and households.

primary city of nearly 4.5 million (Abidjan), a city of about 500,000 (Bouaké), three cities of more than 200,000 (Daloa, Korhogo, and Yamoussoukro, the capital), and other secondary cities of more than 100,000 inhabitants.

Efficient, sustainable, and diversified urbanization should be based on four elements:

- ▶ *Financing*—finding sources for the large capital outlays needed to provide infrastructure and services as cities grow and urbanization picks up speed.

- ▶ *Planning*—charting a course for cities by setting the terms of urbanization, especially policies for using urban land, enabling housing markets, and expanding basic infrastructure and public services.
- ▶ *Connecting*—making a city's labor, goods, and service markets accessible to other cities and to other neighborhoods in the city, as well as to export markets.
- ▶ *Greening*—enhancing the livability of cities by reducing pollution and conserving scarce environmental and financial resources.

Côte d'Ivoire's urbanization has been gradual. The urban population was estimated at less than 20 percent in the 1960s, with Abidjan and Bouaké home to a large share of urban dwellers. It took Côte d'Ivoire 18 years to move from 40 percent urbanization to 50 percent, compared with 17 years in Cameroon, 14 in Ghana, and only 9 in Gabon.

Earlier government policies on spatial integration worked against market forces as the government tried to reduce concentration around Abidjan, Bouaké, and San Pédro. Ultimately, however, market forces prevailed, and the disparity between those three poles and the rest of the country widened.

The biggest weakness in urbanization is financing, partly due to the institutional inconsistencies from decentralization, which began in 1980. Decentralization assigned municipalities responsibility for many government interventions. It started with five levels of decentralized entities—municipalities, cities, departments, districts, and regions—and moved to a simpler structure in 2012 of 197 municipalities (*communes*) and 31 regions. However, institutional distortions and inconsistencies remain from the earlier structure.

Asset investment needs for urbanization are immense. They range from transportation and logistics, internet, broadband, electricity, to water, sanitation and other utilities. To facilitate foreign direct investment, the government must resolve the inconsistencies of devolution and decentralization to align finances with delegated functions, establish adequate human capacity for local entities, and strengthen local fiscal management is strengthened. Spillover benefits from the use of external finance should include better intermunicipal collaboration, enhanced regional competitiveness, institutional accountability, economies of scale in infrastructure, improved public financial management, incentivized cadre performance, and global practices of public financial management.

Domestic savings rates should increase to finance these investments, as in the East Asian transformation, but equally important is attracting strategic FDI. Besides raising the quality of the work force, improving governance, and establishing business-friendly environments, this chapter

argues that removing distortions and disincentives from the Ivorian fiscal system is a top priority. To develop a more efficient financing mechanism, Ivorian authorities can improve the allocation of responsibilities for governing urban areas, their coordination, and accountability. Currently, institutional fragmentation prevails with a multiplicity of policy making institutions involved in urbanization with overlaps, unclear mandates, and weak coordination.

Once its public finance system is on a more solid footing, Côte d'Ivoire will be better positioned to address challenges in other areas—urban planning, connectivity and mobility, and greening.

Planning priorities consist of improving myriad land market institutions and regulations to increase the market's fluidity and so encourage investment in industrial and residential development. This will require measures to increase the supply of usable land through:

- ▶ More secure tenure provided through simpler, shorter, and cheaper procedures.
- ▶ Expanded trunk infrastructure, especially for new urban extensions not yet connected to urban roads, electricity, and water.
- ▶ Efficient land identification, planning, and allocation for different investment activities.
- ▶ Development of serviced land so that basic infrastructure services can reach all urban and peri-urban residents alike.

Land use plans must enable public and private developments to be complementary, improve housing affordability, and provide mixed developments of commercial and residential activities along with green and protected areas. Land use policies and planning standards should be aligned with infrastructure accessibility.

Connectivity and mobility priorities to coordinate land use with infrastructure, professionalize transport sector operators, improve freight transport competition, and establish a market information system to connect transporters with customers. More options, better access to financing, and strategic investment plans would amplify the effects of these policies in Côte d'Ivoire's cities of different sizes.

A greener Côte d'Ivoire can be realized by strengthening resilience to environmental risks. Land use planning and infrastructure investments can integrate assessments of flooding and climate change risks into city planning. An integrated approach to planning storm water drainage and green spaces can increase resilience. Reducing emissions by linking people to jobs through mixed land use planning and mass transport systems wherever density is sufficiently high, and linking goods to markets through improved freight logistics are other aspects of this activity.

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SPOTLIGHT

Raise agricultural productivity

Enhancing the productivity of agriculture is vital for Côte d'Ivoire's economic future and is one of the most important tools to end extreme poverty, boost shared prosperity, and make urbanization more efficient and inclusive. Boosting agricultural productivity would raise the incomes of farm households, which make up over half the country's

population, while lowering food costs for the nonfarm population and promoting the development of agro-industry. These outcomes, in turn, would promote broader economic growth by stimulating demand for nonfarm goods and services. Higher productivity would also free up resources, such as labor, that could be shifted to other economic sectors.

Agriculture, income growth, and poverty reduction

The agriculture sector is the cornerstone of Côte d'Ivoire's economy, accounting for 22 percent of GDP and more than 75 percent of exports. It is also the primary source of employment and income for two-thirds of the country's households. Agriculture is closely linked with other sectors of the economy, particularly manufacturing, commerce, and transport. Cotton, rubber, palm oil, and sugar factories—some large and relatively modern, others small and artisanal—are vital constituents of the rural economy, while cocoa, textiles, coffee, cottonseed oil, and oil-based soaps and cosmetics are all critical components of the urban industrial sector. Growth in agriculture can have substantial positive effects on nonagricultural self-employment and microenterprise establishment and growth in rural areas, including in the services sector.

Despite the critical importance to the economy, agriculture has had only a modest impact on income growth and poverty reduction in rural areas. Although it continues to provide the livelihood for a majority of Ivoirians, value addition in the sector is low and unstable. The poverty rate is highest among households whose head is occupied in the agriculture sector. Poorer rural households rely heavily on crop production. For the poorest 40 percent, crop production constitutes nearly 70 percent of their income. For the top 20 percent, however, crop production accounts for only 47 percent of income, and wage and nonfarm income account for 37 percent.

Land use and land cover in Côte d'Ivoire have changed dramatically over the last few decades. Most striking has been the expansion of agricultural land, with a net increase of 84 percent. In the southern half of the country, rainfall is

higher and the soils more productive, making it the center of production for most export crops, including coffee and cacao. In the northern half of the country, large increases in subsistence and cash crops, such as cotton, sugar, starches, and rice, have fragmented the broad expanses of woodland and savannas. Because a large part of the population in Côte d'Ivoire obtains its subsistence from farming, agricultural land expansion has been driven mostly by population growth.

Land is the main productive asset of rural households in Côte d'Ivoire. Insecure property rights over land and other assets limit agricultural productivity and economic activity through expropriation risk, which dampens incentives to invest; limited land market activity, which prevents land from being transferred (for example, through sales or rentals) to the most productive users; and restricted use of collateral for access to credit, which reduces productive investments. Land policies and institutions may be constraining investment and productivity growth.

Farmers in Côte d'Ivoire face numerous constraints to raising productivity. These include technical and circumstantial issues, such as limited access to inputs; weak extension services; large postharvest handling, transport, and storage losses; inadequate information about modern farming techniques; and poor plantation maintenance (especially for coffee, cocoa, and oil palm). These limitations are compounded by structural economic factors, such as volatile market prices, poor sector governance, deteriorating physical infrastructure, and a general absence of public goods, all of which have contributed to the long-term stagnation of productivity.

Productivity constraints and public spending in agriculture

The successes of African countries such as Ethiopia, Kenya, Rwanda, and Tanzania offer lessons for Côte d'Ivoire's agriculture productivity growth. Evidence shows that investments in rural public goods, combined with better policies and institutions, have driven agricultural productivity

growth across the region. The dividends from investments to strengthen markets, land and water management, and the development and dissemination of improved technologies, for example, can be enormous.⁶ In addition, improving the business environment through trade and regulatory policy

reforms can increase incentives for producers and innovators to take advantage of public goods that enable private investment. Sustained productivity growth depends crucially on addressing systemic constraints to productivity through integrated investments in improved technologies, extension services, land governance, water management, and market linkages.

Public investment in agriculture

Not only does average public agricultural spending in Sub-Saharan Africa lag far behind that in other developing regions, but it is also vitiated by subsidy programs and transfers that benefit the better off and leave insignificant gains for the sector and the poor. Shortcomings of the budgeting process also reduce spending effectiveness. Addressing the quality of public spending and the efficiency of resource use is even more important than addressing the level of spending. Rebalancing the composition of public agricultural spending could reap massive payoffs. Input promotion during the green revolution periods of high agricultural productivity in Asia and South America, for instance, addressed systemic constraints to productivity through integrated investments in improved technologies, extension support, irrigation, and market linkages.

Spending on agricultural research and development (R&D) is worth an especially close look, given the strong evidence that returns to investments in this area are consistently high around the world. A large sample of studies estimated rates of return averaging 43 percent in developing countries and 34 percent in Sub-Saharan Africa. Yet agricultural R&D capacity in Sub-Saharan Africa is still low by international norms. Most high-income countries spend around 1 percent of their agricultural GDP on R&D, as does Brazil, a country whose research agency, Embrapa, is widely regarded as very effective.

Examination of the shift in the patterns of spending in agricultural R&D in Sub-Saharan countries over time reveals important country differences and challenges. Despite the large, well-documented payoffs to agricultural R&D and the demonstrated political commitment to agricultural R&D in Africa, many Sub-Saharan countries have continued to underinvest in this activity. Over 2000–11, half the Sub-Saharan countries experienced near-zero or negative growth in agricultural R&D spending. In Côte d'Ivoire, especially, many producer organizations have raised research funds through membership fees. In 2014, these organizations financed about 45 percent of the research conducted by Côte d'Ivoire's National Agricultural Research Center.⁷ Several other countries in Sub-Saharan Africa have also used levies to support agricultural research for export commodities, particularly for cocoa, coffee, tea, sugar, and tobacco.⁸

In the past, policies in many developing countries have discriminated against agriculture, effectively taxing farmers to provide subsidies to urban dwellers or nonagricultural sectors. Such policies lower returns to agricultural investment, discourage technology adoption, and lead to inefficient use of economic resources. At the same time, due to the unique characteristics of agriculture—farms are highly heterogeneous and geographically dispersed, production is seasonal and subject to severe weather shocks, and property rights over land and other assets are often insecure—markets suffer from asymmetric information and high transactions costs and may fail to provide critical services needed for rapid and efficient technology adoption. From a farmer's perspective, these factors can make technology appear unprofitable and too risky. Overcoming barriers to technology adoption may require government policies to improve farmers' access to information and learning, help farmers manage and hedge risk, strengthen financial services, build rural marketing infrastructure, and provide secure land tenure. Extensive experience across Sub-Saharan African countries shows that land titling programs increase soil conservation investments, productive on-farm investments, yields, and profits for farmers.⁹

Investment in extension services

For sustained productivity growth, Côte d'Ivoire needs to invest in high-return areas of human capital. Human capital-enhancing effects are associated with investments in extension, training, and information services that transfer knowledge and skills to those engaged in agricultural production. These investments create positive externalities through demonstration effects: if one farmer benefits from adopting new productivity-enhancing technology, neighbors may learn from that experience. Such extension investments are becoming increasingly important as agricultural production processes become increasingly knowledge intensive, with higher demand for precise and timely information.

Attention to extension services peaked in the 1980s and early 1990s, when money was poured into systems that promoted the adoption of agricultural technology in a centralized, linear, one-size-fits-all approach. In the late 1990s, when many of these traditional systems were exposed as deficient in quality and relevance, investments in extension declined. However, the rapid adoption of digital technologies in rural areas shows promise in reviving the importance of some aspects of extension services and consequently improving productivity. Innovative models are being implemented in Kenya, Nigeria, and Uganda. New digital tools and approaches have helped to overcome information problems that impede market access for many small-scale farmers, promote knowledge and skill development, and stimulate opportunities for agricultural supply chain management.¹⁰

Although much attention has been paid to understanding farm-level patterns of adoption of modern agricultural production technologies and identifying the causal drivers of technology adoption and diffusion, the greatest changes today are occurring in postharvest systems of distribution and processing as modern value chains are rapidly replacing traditional markets matching smallholder supply to consumer demand. The agri-food value chain transformation occurring throughout the developing world has significant implications for the poor. Farmers increasingly have the opportunity to access higher value markets, both domestically and globally, but at a cost of higher standards demanded for the quality, reliability, and volume of the products they supply. Complying with these higher standards commonly necessitates technology upgrading by producers and marketing intermediaries alike.

Integrating agriculture into global value chains. The rise of value chains in agriculture radically changes the landscape of global agricultural production and marketing and offers new tools to resolve market failures that impede research and adoption of new technologies in the presence of weak government

capabilities. But whether smallholders can benefit from value chain productivity effects has been widely discussed. Several theoretical arguments explain why companies might prefer working with fewer, larger, and more modern suppliers: transaction costs favor larger farms in supply chains, small farms are more constrained in making the investments necessary to participate in some value chains, and small farms typically require more assistance per unit of output. However, empirical studies show that companies work with surprisingly large numbers of suppliers, of surprisingly small size, for several reasons. Companies may have no choice if small farmers represent most of the supply base. In addition, farmers' willingness to learn may be more important than farm size in farmer–processor relationships. Small farms may have cost advantages in undertaking labor-intensive production activities. Moreover, processors may prefer a mix of suppliers as a risk management strategy.¹¹ Other empirical studies have documented that as standards rise, a decreasing share of export produce is sourced from small farmers. For example, studies find decreased inclusion of smallholders in food export chains in Kenya and Côte d'Ivoire.¹²

Notes

1. This chapter synthesizes discussion, findings, and policy recommendations from the two most recent World Bank reports, Hommann and Lall (2019) and Fall and Coulibaly (2016).
2. These functions include but are not limited to spatial planning, urbanization, housing, road investment, communication networks, and transport linkages; scientific research and education; health care, hygiene, and social services; environment and natural resource management; defense, security, and civil protection; culture, sport, and leisure; economic development and employment; tourism; communication; water, electricity, and sanitation; and social development areas such as family support, social safety nets, youth, women, children, the elderly, and the disabled.
3. It is anchored on five actions: (1) adopting a territorial development law to set the legal framework for central and local government interventions; (2) forming an interministerial committee to ensure coherence between country, urban, and sector infrastructure development plans; (3) establishing regional councils to promote a participatory development process at the regional level; (4) linking national development objectives to regional development plans; and (5) establishing a national observatory of spatial dynamics within the Ministry of Planning and Development to collect, analyze, and disseminate spatial information.
4. See Chapter 4 in World Bank (2015). The share of the national budget for local government grants has decreased over the last decade. The amount has been cut by half, and because government transfers to local authorities repeatedly fail to follow official criteria, the financing allocation is uncertain. Municipalities are unable to generate large savings to enable borrowing. From 2001 to 2015, communes registered net savings of CFAF 72.8 billion (about \$146 million)—CFAF 24.4 billion (about \$49 million) from communes in Abidjan and CFAF 48.1 billion (about \$96 million) from communes in the hinterland. Although Abidjan communes contribute the most to total operating income, their operating spending is also high, so their level of savings is lower than that of interior communes. The funding deficit is probably partly due to bottlenecks in the disbursement of government development subsidies. That net debt flow of communes during the period totals CFAF 48.4 billion (about \$97 million). According to the decentralization office (Directeur Général de la Décentralisation et du Développement Local, or DGDDL), between 2003 and 2007, the gap fell to an average of CFAF 1.7 billion (about \$3 million).
5. See Chapter 4 in World Bank (2015).
6. Goyal and Nash 2017.
7. ASTI 2017.
8. Fuglie et al. 2020.
9. Deininger and Byerlee 2011.
10. Aker and Mbiti 2010, Deichmann, Goyal, and Mishra 2016.
11. Maertens, Minten, and Swinnen 2012; Reardon et al. 2009.
12. Dolan and Humphrey 2000; Gibbon 2003; Jaffee 2003; Minot and Ngigi 2004.

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CHAPTER 7

Empower
women
and girls

Women in Côte d'Ivoire are disadvantaged across multiple domains. They fare worse than men in outcomes that affect both genders, such as earnings, education, productivity, and youth unemployment. In addition, they face unique challenges, such as teen pregnancy, maternal mortality, and poor access to water, sanitation, and hygiene (WASH). The past decade has seen real but uneven progress. While completion of primary school and progression to secondary school have improved in absolute value and in terms of the gender gap, the gap in youth unemployment and in lower secondary school completion has widened. Estimated maternal mortality has decreased faster than the Sub-Saharan African average, but adolescent fertility has declined more slowly. Côte d'Ivoire is the only West African Economic and Monetary Union (WAEMU) country that has not witnessed a decrease in female employment in agriculture, but reductions in the agricultural productivity gender gap over the past decade are notable. The gender gap in mobile money account ownership has decreased, but that for formal financial accounts has widened. Longitudinal data on agency and violence are lacking, but estimates indicate there is much to do on these fronts, as well as on the political representation of women. Many gender constraints and gaps in Côte d'Ivoire have worsened in 2020–21 due to the societal and economic shocks posed by the COVID-19 pandemic.

The analysis here suggests that strategically targeting the binding constraints to women's empowerment with evidence-

backed policy solutions can have meaningful impacts, using critical junctures in household decisions—such as the receipt of a new cash crop or plot certification—to promote gender equality in resource allocation. This can be achieved by targeting attitudes, providing skills, or reducing costs. Moreover, promoting gender dialogue groups and making it easier for women to open and use private savings accounts have also shown positive impacts in Côte d'Ivoire, with more testing of innovative interventions—such as the provision of foundational skills training for young women and the reduction of transaction costs related to civil marriage—currently under way.

Evidence-based solutions from other contexts include helping girls by reducing the direct and indirect costs of schooling, by creating safe spaces for girls to receive job and life skills training, promoting hygiene, improving water treatment, improved sanitation, and safe water storage in schools and by structuring pedagogy and interventions to help teachers teach at the right level. For working-age women, interventions include subsidizing childcare and parental leave, creating new kinds of entrepreneurship training, improving access to labor and non-labor inputs in production, as well as initiating role models and media interventions to achieve norm change. The government has a crucial role in creating an enabling legislative framework, investing in women's equality, and convening partnerships that are likely to accelerate progress.

7.1 Introduction

Following the postelectoral crisis in 2010–11, Côte d'Ivoire has consistently ranked among the top performers in terms of economic growth in Sub-Saharan Africa, averaging real gross domestic product (GDP) growth of 8 percent between 2011 and 18.¹ But the accelerated pace of growth contrasts sharply with its modest progress in reducing poverty, which fell marginally from 29.1 percent in 2008 to 25.2 in 2018.^{2,3} Despite gradual improvements in maternal health and education, Côte d'Ivoire's overall level of human development remains low, with women experiencing even greater challenges than men—Côte d'Ivoire ranks very low in both the United Nations Human Development Index (165th of 189 countries) and the Gender Inequality Index (157th of 162 countries).⁴

On average, women in Côte d'Ivoire have lower levels of literacy and education than men, are less likely to work than men, and tend to earn substantially less than men when they do work. These gender gaps in education and labor market outcomes have major implications for the economy, which according to some estimates could stand to gain an

estimated \$6 billion if men and women achieved parity in labor force participation and earnings.⁵ So empowering women is not only a moral imperative for achieving a society where women are able to exert greater influence over their own lives, but also an economic necessity for recovering from the economic shocks of the COVID-19 pandemic and sustaining and broadening the benefits of growth in Côte d'Ivoire.⁶

Yet, to understand the key policy reforms and programming needed to unlock women's full potential, it is necessary to take stock of the existing gender gaps in Côte d'Ivoire, and to understand their underlying causes and where there has or has not been progress over the past decade. This chapter provides a detailed overview of the key changes in women's status since the postelectoral crisis, highlights policy and programming efforts to improve women's empowerment during the period, identifies remaining challenges to empowering women, and outlines opportunities for targeted policy action and reform.

7.2 Key trends in gender equality over the past decade

Women in Côte d'Ivoire face challenges across multiple domains of gender equality, including human capital, economic outcomes, and voice and agency. These challenges are often mutually reinforcing and embedded in contexts of restrictive social norms and discriminatory legal and regulatory environments. Notably, aggregate measures of gender equality in the country have shown inconsistent progress over the past decade (table 7.1). For example, the United Nations Gender Inequality Index indicates that although Côte d'Ivoire's score has improved modestly in absolute value over the past decade, it has somewhat worsened in the past six years.^{7,8}

7.2.1 Human capital

Education and literacy

Côte d'Ivoire has witnessed considerable improvements in its educational outcomes over the past decade.⁹ The primary school enrollment rate for girls increased from 67 percent in 2013 to 85 percent in 2017, while the rate for boys increased from 72 to 93 percent. Over the same period, the primary completion rate for girls improved from 48 to 70 percent and for boys from 61 to 80 percent. This is not only an increase in absolute levels of girls' primary school completion rates, but also a reduction in the gap relative to boys. This increase in girls' primary school completion rates is greater than any other WAEMU country except Niger. While the trend is positive, the size of the remaining gap is sobering—only 47.5 percent of primary school pupils were girls in 2017, and the primary school completion rate for girls is still lower than both the WAEMU and Sub-Saharan African averages.

There have also been improvements at the secondary level. Between 2013 and 2016, the progression rate to secondary

school for girls rose from 85 to 93 percent and for boys from 90 and 92 percent—again a reduction both in the level and gap, with girls now having the advantage. The lower secondary completion rate for girls increased from 30 percent in 2012 to 39 percent in 2017, while for boys it increased from 37 to 55 percent, an increase in completion but a widening of the gap between girls and boys. While there is less information on trends in upper secondary schooling, the data show modest improvements. The 2017 rate of out-of-school youth of upper secondary school age was 69 percent for girls and 57 percent for boys—a decrease in absolute terms compared with 2014 and 2016. But the gender gap has not improved.

Overall, Côte d'Ivoire has made significant strides in improving education among its youth, narrowing the gender gap in several areas, including in primary school completion and in progression to secondary school. However, substantial gender gaps remain in primary school enrollment (an outlier in Sub-Saharan Africa), in completion of lower secondary school, and in rates of out-of-school youth. On average, girls still attend fewer years of school than boys—7.8 years, compared with 9.8 years for boys.¹⁰ The cost of schooling—in addition to social norms that underpin parental preferences for schooling boys over girls, girls' greater domestic responsibilities, early marriage and childbearing among girls and women, and gender-based violence in schools—may contribute heavily to these gaps.¹¹ Moreover, the COVID-19 pandemic and related school closures threaten to exacerbate unequal access to learning opportunities and increase girls' vulnerability to permanently leaving school, early pregnancy, and child marriage. After the Ebola epidemic, for example, girls were less likely to return to school than boys, and evidence from Sierra Leone suggests that school closures increased the likelihood of adolescent pregnancies.¹² In addition, poverty and vulnerability to economic shocks can

Table 7.1. Côte d'Ivoire's Gender Inequality Index over time

Gender Inequality Index		Maternal mortality ratio (per 100,000 live births)	Adolescent fertility rate (per 1,000 women ages 15-19)	Seats in parliament (%)	Population with at least secondary education (% ages 25 and older)		Labor force participation rate (%)		
Rank	Value (smaller = better)				Female	Male	Female	Male	
2010	130	0.765	810 (2003–08)	129.9 (1990–2008)	8.9 (in 2008)	13.6 (2010)	25.2 (2010)	51.3 (2008)	82.4 (2008)
2013	138	0.632	400 (in 2010)	105.7 (in 2012)	11.0 (in 2012)	13.7 (2006–10)	29.9 (2006–10)	51.8 (in 2011)	81.2 (in 2011)
2019	157	0.657	645 (in 2015)	117.6 (2015–20)	9.2 (in 2018)	17.8 (2010–18)	34.1 (2010–18)	48.3 (in 2018)	66.0 (in 2018)

Source: UNDP 2019.

compel families to arrange marriages for their daughters earlier than they would otherwise.¹³

Improvements in Côte d'Ivoire's educational outcomes aim to foster a more literate population in the future. But how does the country fare on that metric now? Data are scarce but show a modest improvement for women in self-reported literacy over 2012–14—from 31 to 37 percent—while rates for men remain flat at around 51 percent. National survey data among the poor show a noteworthy breakdown by location (table 7.2). Both in absolute and relative terms, the situation is worse in rural areas. The persistence of illiteracy shows how important it is to invest in education early on, especially in rural areas where literacy outcomes are weakest.

Health

Côte d'Ivoire lags many regional comparator countries on key health indicators, including fertility and HIV/AIDS rates. Some progress has been made with respect to maternal mortality, estimates of which decreased by 12 percent between 2012 and 2017, faster than the 10 percent average decrease for Sub-Saharan Africa. However, the rates remain high, and less than a quarter of women of childbearing age use any contraception

(table 7.3). While there is a lack of complete comparator data for 2017, the rate of contraceptive use among adult women of childbearing age in Côte d'Ivoire is likely lower than in Sub-Saharan Africa overall.

The adolescent fertility rate witnessed a 5.4 percent reduction between 2012 and 2017 and now stands at 117.6 births per 1,000 women ages 15–19. Over the same period, the overall fertility rate decreased by approximately the same percentage—5.7 percent. But unlike the decline in maternal mortality, the decline in the adolescent fertility rate has been slower in Côte d'Ivoire than in Sub-Saharan Africa as a whole, as well as slower than in most other WAEMU countries. Over the same period, adolescent fertility declined by 8.1 percent in Sub-Saharan Africa and by 7.1 percent in WAEMU countries.

High rates of HIV have been a longstanding problem in Côte d'Ivoire,¹⁴ and the available data show stark and persistent gender gaps. Women were 2.5 times more likely than men to have HIV in 2012 and still twice as likely in 2018. Data from 2016 show that the higher prevalence of HIV among women is in keeping with overall differences in morbidity risks by gender, with young women nearly 70 percent more likely to die of communicable diseases, while men are twice

Table 7.2. Literacy rates among the poor by gender

	2008			2015		
	Men	Women	Total	Men	Women	Total
Abidjan	-	-	-	60.4%	42.3%	51.2%
Other cities	-	-	-	53.4%	33.5%	42.9%
Urban	54.1%	36.6%	-	-	-	-
Rural	34.0%	20.0%	-	34.7%	17.2%	25.6%
Total	38.8%	24.5%	-	42.9%	24.6%	33.3%

Source: INS/ENV2008; INS/ENV2015.

Table 7.3. Health indicators

Indicator	2012	2013	2014	2015	2016	2017	2018
Adolescent fertility rate (births per 1,000 women ages 15–19)	124	123	122	120	119	118	
Contraceptive prevalence, any method (% of women ages 15–49)	18.2				15.5	23.6	23.3
Contraceptive prevalence, modern methods (% of women ages 15–49)	12.5				14.3	18.9	19.6
Fertility rate, total (births per woman)	5.0	4.9	4.9	4.8	4.7	4.7	
Maternal mortality ratio (modeled estimate, per 100,000 live births)	702	691	676	658	636	617	
Prevalence of HIV, female (% ages 15–24)	1.5	1.5	1.4	1.4	1.3	1.3	1.2
Prevalence of HIV, male (% ages 15–24)	0.6	0.6	0.6	0.6	0.6	0.6	0.6

Source: World Bank Gender Statistics 2019.

as prone to injury-related deaths. While the high cost of services, shortages of medical personnel, and long distances to reach medical facilities affect both men and women's access to health services, additional constraints on women's time, mobility, and decision making over household spending for health care largely drive poor health outcomes for women.¹⁵ Though data on the topic are scarce, disproportionate impacts of lack of access to WASH for women may also underlie these gendered health patterns in Côte d'Ivoire.

7.2.2 Economic opportunities

Labor force participation

In Côte d'Ivoire, women constitute just over 40 percent of the labor force. Nearly half of working-age women (ages 15-64) work, while approximately two-thirds of working-age men do. And the female share of labor force participation has remained virtually unchanged over the past decade. Women's lower representation in the labor force than men is shaped both by preferences and by the additional constraints women face in entering the labor force and in maintaining employment, including challenges related to early marriage and childbearing.¹⁶ In particular, nearly one-third of girls report having had a pregnancy by age 19, which affects their choices and may lead them to abandon their studies or their professional activities. Women who do work, work on average four fewer hours per day outside the home than men do.

The structure of employment in Côte d'Ivoire has changed notably over the years. The share of both men and women working as contributing family workers has decreased, though proportionately less for women than for men (table 7.4). Being an own-account worker (defined as a self-employed worker without employees) has slightly increased in relative importance for women. Employment in agriculture has stayed flat over the past decade—employing 40 percent of working women—while female employment in aggregate has shifted away from industry and toward services. This pattern is interesting in comparison with other countries. Côte d'Ivoire is the only WAEMU country that has not witnessed a decrease in female employment in agriculture—the Sub-Saharan African average for this period decreased 4.2 percent. Moreover, Côte d'Ivoire has seen by far the largest decrease in the share of female employment in industry of any WAEMU country, a share that has risen for WAEMU and Sub-Saharan Africa as a whole. And the increase in the importance of services in female employment is over twice the Sub-Saharan African average—a 15.9 percent increase compared with a 6.1 percent increase overall.

There have been some reductions in the share of vulnerable employment for both genders—a 4.7 percent reduction for women and a 7.8 percent reduction for men. For both this category and the share of wage and salaried workers (that is, formal employment), the gender differences are striking. Women are less than half as likely to have formal employment in Côte d'Ivoire and are a third more likely to be engaged in vulnerable employment than men—85 percent for women

Table 7.4. Structure of employment in Côte d'Ivoire

Indicator	2012	2013	2014	2015	2016	2017	2018
Contributing family workers, female (% of female employment)	29.3	24.5	23.6	22.6	21.7	21.3	20.9
Contributing family workers, male (% of male employment)	14.2	10.1	9.7	9.3	8.9	8.6	8.3
Employers, female (% of female employment)	0.4	0.5	0.7	0.9	1.1	1.1	1.1
Employers, male (% of male employment)	1.3	1.1	1.5	1.9	2.6	2.6	2.6
Own-account workers, female (% of female employment)	59.5	62.2	62.6	63.1	63.5	63.6	63.7
Own-account workers, male (% of male employment)	55.0	58.5	57.7	56.8	55.8	55.6	55.5
Vulnerable employment, female (% of female employment)	88.8	86.7	86.2	85.7	85.1	84.9	84.6
Vulnerable employment, male (% of male employment)	69.2	68.6	67.4	66.1	64.7	64.2	63.8
Wage and salaried workers, female (% of female employment)	10.7	12.8	13.1	13.4	13.7	14.0	14.2
Wage and salaried workers, male (% of male employment)	29.6	30.3	31.1	32.0	32.7	33.2	33.6
Employment in agriculture, female (% of female employment) (modeled ILO estimate)	40.4	40.0	40.5	41.0	41.1	40.6	40.1
Employment in agriculture, male (% of male employment) (modeled ILO estimate)	49.0	48.5	51.8	53.5	54.2	53.8	53.5
Employment in industry, female (% of female employment) (modeled ILO estimate)	11.5	11.4	8.2	5.6	3.7	3.7	3.6
Employment in industry, male (% of male employment) (modeled ILO estimate)	11.9	12.1	9.7	8.7	8.1	8.1	8.1
Employment in services, female (% of female employment) (modeled ILO estimate)	48.1	48.7	51.3	53.4	55.2	55.8	56.2
Employment in services, male (% of male employment) (modeled ILO estimate)	39.1	39.4	38.6	37.8	37.7	38.1	38.5

Source: World Bank Gender Statistics 2019.

Note: ILO = International Labour Organization.

compared with 64 percent for men.¹⁷ Moreover, the ratio of female-to-male youth unemployment has changed in striking ways—between 2012 and 2018, there has been a 73 percent increase in this ratio, which now stands at 160.2 percent, with female adolescents substantially more likely to be unemployed than male adolescents. This increase is unique in magnitude among the WAEMU countries—and on average in Sub-Saharan Africa as a whole—highlighting the severity of female youth unemployment in Côte d’Ivoire.

In 2020, the COVID-19 pandemic presented a major shock to the Ivorian economy and labor market. An April 2020 survey revealed that the vast majority of household heads reported working reduced hours, facing unemployment, or experiencing other disruptions to their work, while only 20 percent of household heads had experienced no impact on their working hours or employment.¹⁸ Women’s labor force participation is likely to be hit even harder than men’s, due in large part to underlying social norms that lead women disproportionately to bear the burden of domestic and care duties.

Earnings and productivity

One of the most pronounced gaps between men and women in the labor force is remuneration—female workers in Côte d’Ivoire earn on average two-thirds of the wages that male workers do. According to national statistics, women’s monthly earnings amounted to approximately CFAF 94,000 (\$152) compared with CFAF 141,000 (\$240) on average for men. While part of the earnings gap can be explained by sectoral segregation—women tend to work in less lucrative or productive industries—gender gaps in educational levels also play a role, particularly in wage employment.¹⁹ In general, more educated individuals have a higher likelihood of working in wage employment and thus earn higher salaries commensurate with their education and age. But this pattern does not hold for women. Even with the same levels of education and age, women are two times less likely to work a salaried job than men and they earn 30 percent less from their salaries than men.²⁰

In key sectors, including agriculture and entrepreneurship, women also tend to have lower productivity and earn less than men. Agricultural households headed by women, for example, are 21 percent less productive on average than those headed by men, even when comparing households with similar socioeconomic characteristics. Despite their importance to the agriculture sector, women tend to farm less profitable crops than men, producing food crops over export market cash crops.²¹ This occupational segregation across crop types is the key driver behind the productivity gender gap in Côte d’Ivoire.²² In entrepreneurship, women’s concentration in informal enterprises is driven by several factors, including women’s lower levels of education and skills, access to finance, and discriminatory legal and regulatory hurdles.²³ Given that women entrepreneurs tend to operate informal and smaller

firms with fewer buffers, they are likely to have experienced more severe impacts in terms of closures, sales, disruptions in logistics, and access to inputs than male-owned firms.²⁴

However, over the past decade there has been notable progress in key areas. Donald, Lawin, and Rouanet show that the gap in agricultural productivity between male- and female-headed households decreased by 14 percent over the past decade.²⁵ This boost in women’s agricultural productivity is driven by improvements in productivity across crop types, but it is particularly remarkable for export crop productivity, which is likely due to increased adoption of fertilizer and pesticides by female-headed households. Despite these substantial improvements, female-headed households in the bottom half of the distribution—the poorest households—remain disadvantaged. Moreover, over the past decade, female-headed households did not transition into commercial agriculture and these households witnessed greater reductions in land area compared with their male counterparts. These results show that helping female-headed households—especially the poorest households—adopt export crops, access agricultural labor, and strengthen their land rights are three key policy options to reach gender parity in agriculture in Côte d’Ivoire.

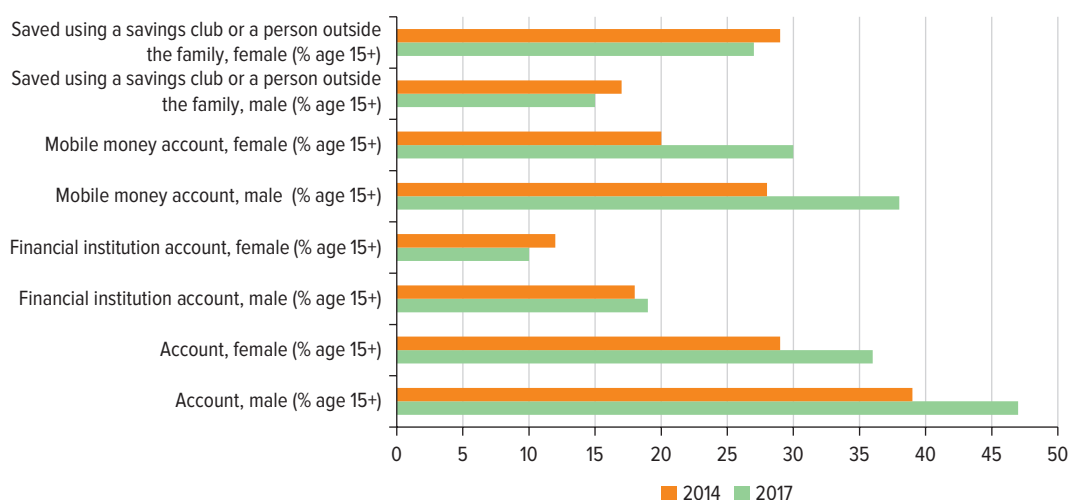
Productive assets

For economic advancement, two of the most important productive resources are access to land and access to finance. There are stark gender differences in both. Demographic and Health Survey (DHS) data from 2012 show that only 10.6 percent of women in Côte d’Ivoire own land individually, with the figure being 14.3 percent in rural areas.²⁶ Indeed, men are 1.5 times more likely than women to solely or jointly own land in rural areas, and 3.8 times more likely to own land individually. Women in Côte d’Ivoire are 21 percentage points more likely than men to express concern about being kicked off their property following divorce, and 35 percentage points more likely to express this concern in the event of widowhood.²⁷

In 2017, women in Côte d’Ivoire were less likely to have a financial account compared with men (47 percent of men versus 36 percent of women), though the situation improved somewhat compared with 2014 (figure 7.1). For formal account ownership, there was a small decrease for women—12 percent of women had accounts in 2014 versus 10 percent in 2017. There was also a small drop in informal ways of saving through savings clubs or acquaintances. Instead, the growth in female account ownership has been through mobile money, with a 10 percentage point increase in account ownership over the three years.

The share of women currently with a mobile account in Côte d’Ivoire is the highest among the WAEMU countries (29.9 percent compared with the 19.3 percent WAEMU average), while the share with a formal financial account is among the

Figure 7.1. Financial account ownership



Source: World Bank Global Findex Database 2017.

lowest (9.8 percent compared with the 16.4 percent WAEMU average).

Overall, the gender gaps are still dire. There is a 21 percent gender gap in mobile account ownership in 2017 and a 47 percent gap for formal financial institution accounts. How do the trends in financial account ownership affect savings outcomes for men and women? There is a sizable drop over time for both men and women in the proportion of individuals who say they have saved money in the past year. For women, this proportion fell from 59 percent having saved in 2014 to 47 having saved in 2017 (around 5 percentage points lower than men, who stood at 51 percent in 2017). The number of respondents who saved for old age is particularly worrying, standing at only 6 percent for women in 2017.

The last pattern to highlight is in emergency funds. While only 20 percent of men cited family or friends as their main source of emergency funds, 47 percent of women did the same. This highlights the importance of gendered networks for understanding economic behavior in Côte d'Ivoire, and the need to improve savings rates—not just account ownership—to increase welfare among women.

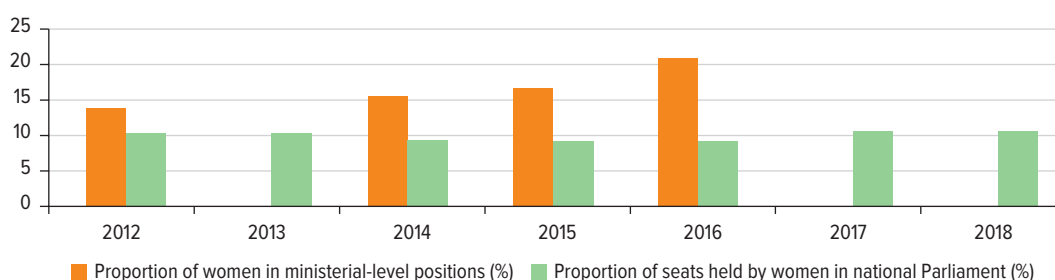
7.2.3 Voice and agency

Voice and agency remain a challenge for women in Côte d'Ivoire, as indicated by women's low political representation. In 2017, women comprised only 20 percent of ministerial positions, 11 percent of members of Parliament, and few leadership roles in local institutions, including just 5 percent of mayors. While there has been an improvement in the proportion of women in ministerial positions over the past decade, the share of seats held by women in the national Parliament has remained flat (figure 7.2). While

gender-disaggregated data on voter registration are scant, one data point suggests that women were the majority of registered voters in Abidjan in 2010.²⁸

Both as a cause and consequences of their limited economic opportunities, women often have little freedom to make decisions over their lives. While it is difficult to capture agency fully with currently available measures,²⁹ 2012 DHS data show that in most households, husbands are the sole decision makers over women's health, the purchase of household goods, and women's ability to visit their families. Forty-two percent of women participated in none of these three decisions. While longitudinal estimates are lacking, comparisons with other WAEMU countries reveal substantial heterogeneity. On this metric, Côte d'Ivoire is roughly in the middle of the pack, lagging Benin (22 percent) and Togo (25.9 percent). Moreover, domestic violence is broadly accepted, with almost half of women agreeing that men have the right to beat their wives. In cross-country comparisons, Côte d'Ivoire fares worse than Benin, Guinea-Bissau, and Togo.

Women often face discrimination and violence within their own households. Rates of intimate partner violence are high, with nearly one-third of women reporting that they have experienced emotional, physical, or sexual violence by their partner, with 22 percent experiencing physical and/or sexual violence in the 12 months preceding the survey.³⁰ While data on the incidence of gender-based violence throughout the COVID-19 pandemic are scarce, lessons from previous outbreaks suggest that violence against women and girls tends to increase during periods of isolation and economic stress.³¹ Although gender norms underlie issues of political representation and violence against women, in the case of gender-based violence, inadequate or poorly implemented laws serve to perpetuate the violence.³² The legacy of armed

Figure 7.2. Political representation

Source: World Bank Gender Statistics 2019.

conflict plays a role. Following the postelectoral crisis, the International Rescue Committee documented an increase in gender-based violence and a rise in sexual violence committed by armed groups, mostly among displaced

populations, including among women and children.³³ This highlights the importance both of preventing future violence and of addressing posttraumatic stress disorder (PTSD) among past victims.

7.3 Recent efforts to empower women

7.3.1 Legal and policy reforms targeting women and girls

In recognition of the challenges facing Ivorian women in achieving social and economic empowerment, the government has engaged in several legal and policy reforms to end discrimination and help women realize their full potential. According to *Women, Business, and the Law* (World Bank 2020b), Côte d'Ivoire scores highest (83.1) on the overall index related to laws that facilitate women's economic participation among its peer economies—compared with Burkina Faso (79.4), Ghana (75), the Sub-Saharan African average (69.9), and the global average of 75.2.³⁴ Its score has nearly doubled since 1970 (45.6), with most of its progress occurring since 2000.

Since the postelectoral crisis in 2011, major reforms and policy initiatives to support women's empowerment have included:

- ▶ The adoption of the law on marriage and the national strategy to combat trafficking in persons (2013).
- ▶ The establishment of the National Gender Observatory and the adoption of the national strategy against gender-based violence (2014).
- ▶ The prohibition of discrimination on the basis of sex in the constitution (2016).
- ▶ The allocation of \$1.7 billion to address women's constraints to development through the social program (2018–20).
- ▶ The adoption of the law on political representation of women in elected assemblies (2019).³⁵

These key legislative and political measures highlight the government's commitment to promoting gender equality across the domains of human capital, economic empowerment, and voice and agency. Other efforts also exist and are summarized below.

Human capital

Over the past decade Côte d'Ivoire has established laws and policies in education and health to increase women's access to and use of critical services. In 2015, Law No. 2015-635 made schooling compulsory until age 16 for all boys and girls. Women and girls were also allowed admission to the Technical Military Preparatory School (in 2013) and to the National Gendarmerie (in 2014). Six secondary schools were established for girls, and a growing number of science, technology, engineering, and mathematics scholarships are now available for girls. In 2014, Law No. 2014-131 established universal health care, and in 2015 a national program for maternal and child health was set up.

Economic opportunities

Several recent legal and policy reforms in Côte d'Ivoire aim to improve women's economic opportunities and strengthen women's status in society, including Law No. 2015-32 on the Labor Code (2015), the National Policy on Equal Opportunity, Equity, and Gender (2014–16), and the National Agricultural Investment Plan (2012–15).³⁶ In the past decade, Côte d'Ivoire removed restrictions on women conducting business without

their husband's authorization and on women owning and inheriting property.^{37,38} Côte d'Ivoire also introduced a law requiring that women receive equal remuneration to men for work of equal value, that women are entitled to 98 days of paid maternity leave, and that they return to equivalent positions following maternity leave. Legislation also exists mandating nondiscrimination in hiring and prohibiting sexual harassment in employment.³⁹ Yet, some jobs and industries are considered to be too hazardous, difficult, or morally inappropriate for women—mining, construction, and some factory work—and laws still prevent women from participating in these types of work.⁴⁰

Voice and agency

To enhance women's voice and agency, the government made legislative changes over the past decade related to marriage and family issues, gender-based violence, access to justice, and political representation. The 2012 Marriage Law gave women the same rights as men to choose their family residence and to include children in their fiscal declaration.⁴¹ Legislative limitations on wives being designated “head of household” and needing to produce a marriage certificate to apply for a passport were eliminated.⁴² In June 2019, laws were passed to enhance protections for widows by reinforcing their inheritance rights, and to give men and women equal rights to own and manage property during marriage.⁴³

Several efforts have focused on improving women's access to justice, including decrees on the decentralization of legal aid and efforts to increase access to justice for women in rural areas (2016), the establishment of a national committee to combat sexual violence related to the conflict (2016), and the creation of 32 gender desks at police stations (2012). The 2016 constitution also reaffirmed the principle of gender equality in access to justice.⁴⁴ In terms of representation, and to incentivize parties to put forward more female candidates, the government passed a law in 2019 requiring a quota of 30 percent representation of women on the electoral lists of political parties.

Passing legal reforms is not enough, since customary norms and institutions hold sway in legal pluralist countries such as Côte d'Ivoire. But formal laws and institutions can act as “magnets,”⁴⁵ pulling custom toward behaviors that are more favorable for women and encouraging adherence to legal provisions.

7.4 Remaining challenges, opportunities, and future priorities

Gender equality features as a key principle within Côte d'Ivoire's 2016 constitution, building on several key legal and policy reforms, including the Marriage Law, the National Policy on Equality of Opportunity, Equity, and Gender, and

7.3.2 Programming to support women and girls

Under the Country Partnership Framework FY16–FY21, Côte d'Ivoire and the World Bank have partnered to incorporate a gender perspective into several projects related to human development, employment, microfinance, and agriculture⁴⁶:

- ▶ The regional Sahel Women Empowerment and Demographic Dividend (SWEDD) Project supports safe spaces for both in- and out-of-school adolescent girls and young women ages 8 to 24 in Côte d'Ivoire. Accompanying measures include academic tutoring, support for income-generating activities, and parallel clubs for boys and men.
- ▶ The World Bank Land Policy Improvement and Implementation Project (PAMOFOR) land registration process includes one intervention encouraging men, through an informational video, to certify a plot solely in their wife's name and a second intervention in which customarily married couples enter a civil marriage under a community property regime.
- ▶ The Projet d'Appui au Secteur Agricole included an innovative gender intervention that encouraged men to involve their wives in cash crop farming and management.
- ▶ Increasing Access to Markets and Finance for Women-led Cooperatives and Enterprises in Côte d'Ivoire is another promising agricultural project under the Women Entrepreneurs Finance Initiative (We-Fi).

Previously, under the Country Partnership Strategy (CPS) FY10–FY14, the government-sponsored Gender Violence Project, financed under the State and Peace-Building Fund, provided support on gender violence issues to more than 3,000 women, surpassing the CPS target of assistance to 110 victims per month. The program also assisted civil society organizations working to prevent gender-based violence, supported beneficiaries in developing 243 bankable business plans (88 of them—36 percent—by women), and increased the number of women benefitting from AIDS programs. Antiretroviral treatment of HIV-infected pregnant women rose from 60 percent in 2008 to 92 percent in 2014, far exceeding the 75 percent CPS target.⁴⁷

the National Strategy to Combat Gender-based Violence.⁴⁸ Across the key dimensions of gender equality—human capital, economic empowerment, and voice and agency—the government and its development partners have advanced

measures to close gender gaps, such as introducing compulsory education, universal health care, and laws to eliminate discrimination in employment, marriage, and access to justice, in addition to programs that offer women and girls key training and support for income-generating activities—especially at critical periods during their lives, such as adolescence.

In certain cases, some headway has been made in narrowing gender gaps in education and agricultural productivity, while in others the challenges remain particularly entrenched. For example, despite growing efforts to increase access to enforcement and justice, gender norms prevalent among women and men around the acceptability of violence may pose an obstacle to reducing gender-based violence. In other cases, budgetary constraints limit progress. For example, despite the law on universal health care, only 10 percent of the population benefits from health insurance, and budget allocations are insufficient to cover all women and girls through public health insurance schemes.⁴⁹ Furthermore, several areas critical to protecting women's security and economic empowerment have yet to be enshrined in law. For example, Côte d'Ivoire has no laws criminalizing domestic violence or marital rape or prohibiting discrimination in access to credit based on gender.⁵⁰

The immediate question now is: Based on what we know about how women's status and gender equality have fared, what more could the government and its development partners do to promote women's empowerment? Overall, stark gender gaps that mutually reinforce each other remain in several domains. To enhance progress and to reduce the remaining gender gaps, the following areas should be key priorities:

- ▶ Enhance Ivorian women's human capital.
- ▶ Strengthen Ivorian women's economic opportunities and property rights.
- ▶ Reinforce Ivorian women's agency and reduce violence.

7.4.1 Enhancing Ivorian women's human capital

Looking ahead, policies and programs must hone-in on what works to increase girls' educational outcomes and overall human capital. A review of 117 studies (none about Côte d'Ivoire) found that girls' access to school is more responsive to changes in costs, distance, and health conditions, while girls' learning is more likely to be improved by structured pedagogy and interventions that help teachers to teach at the right level.⁵¹ Reducing the cost of schooling is likely the single most effective way to bring girls into school. Some successful interventions used conditional cash transfers, while unconditional cash transfers were the least effective.⁵²

Reducing indirect costs—such as reducing the commuting distance to school for girls by building nearby village schools—has been effective in increasing access. Paying for school uniforms in Kenya⁵³ and school meals in Burkina Faso and Uganda⁵⁴ helped increase girls' attendance and reduce dropout. Improving health conditions through better sanitation facilities or by controlling malaria tends to attract more girls to school as well. After a school-based program in Kenya to get rid of intestinal parasites, girls missed fewer days of school and were more likely to pass the secondary school entrance exam.⁵⁵

Other WASH interventions may also be beneficial if they are based on a careful analysis of local constraints. For example, another study in Kenyan schools found that promoting hygiene, improving water treatment, improved sanitation, and safe water storage was one of the most effective ways to increase girls' enrollment, but promoting hygiene and improving water storage alone reduced enrollment for girls.⁵⁶ Moreover, few girls reported missing school due to a lack of sanitary products in Nepal, and thus providing sanitary products did not increase girls' school attendance there.⁵⁷ However, in the context of the COVID-19 pandemic, having adequate water supply for handwashing stations and other hygiene measures is particularly important to prevent the spread of COVID-19 and avoid future school closures.

Other aspects to consider are social attitudes and motivations. In India, holding information sessions on job opportunities for educated women, and reserving seats for female leaders in village councils (so girls see women as role models) increased girls' school enrollment and changed girls' and parents' aspirations for the girls' futures.⁵⁸ A program in Kenya that provided merit-based scholarships to the top 15 percent of girls increased daily attendance and test scores for all girls, not just those already at the top of the class.⁵⁹

Creating safe spaces for adolescent girls to receive job or life-skills training tailored to their environment has been effective. In Uganda, the nongovernmental organization BRAC implemented girl-only clubs that delivered vocational and life-skills training. The clubs raised the likelihood of girls engaging in income-generating activities by 72 percent and decreased teen pregnancy by 26 percent.⁶⁰ Similar programs implemented in Sierra Leone (preceding the Ebola epidemic) and South Sudan (in conflict-affected areas, before conflict intensified) helped young women remain in school and avoid unintended pregnancies following the crises, suggesting that in the recovery phase of the COVID-19 pandemic these programs could be implemented to help buffer girls against future shocks. Moreover, in Liberia, a year-long program included six months of training—which covered socioemotional skills and either vocational or business skills training—and six months of follow-up support. Free childcare was provided during the classroom training, and participants received savings

accounts, a stipend for transportation, and a completion bonus. Employment and earnings increased substantially, and participants gained access to money, self-confidence, and reduced negative feelings.⁶¹ Those two interventions informed the design of the SWEDD project described in section 7.3.2.

Another model for delivering socioemotional skills training is currently being piloted by PRO-Jeunes, a five-year project (2017–21) targeting 10,000 vulnerable Ivorian youth ages 15–24 in Abidjan, Bassam, Korogho, and Tchologo. The project uses an e-learning platform, mentoring, and support for entrepreneurship and employment searching. In Togo, entrepreneurial mindset training to improve business practices plus socioemotional skills led to higher firm sales and profits for women microentrepreneurs.⁶² Entrepreneurial mindset training holds promise for adult women who will not benefit from school-based initiatives due to their age.

7.4.2 Strengthening Ivorian women's economic opportunities and property rights

Women's rights to and ownership of fundamental productive assets, notably land and financial accounts, need to be strengthened. Even though the 1998 Rural Land Law challenges traditional practices concerning women and land by granting women equal inheritance rights, customary systems still predominate. Under customary land tenure systems, whether patrilineal or matrilineal, women have virtually no access to property ownership.⁶³ The encouraging news is that small nudges can encourage men to cotitle their land in the names of both spouses, securing a route to stronger land rights for women. Preliminary results from a study in Uganda show that even in the absence of any incentive to do so, about 62 percent of households were willing to cotitle. Providing a subsidy for the title, conditional on the wife's name being included, raised the demand for cotitling by 50 percent without any negative impact on the overall titling rate. Providing an educational video raised the demand for cotitling by 25 percent.⁶⁴

Pilot results of the PAMOFOR project land registration process show how highlighting the benefits of women's land ownership for family harmony, economic efficiency, and security for the family can induce husbands to reallocate land to their wives. After being exposed to a short "edutainment" video featuring these themes, 67 percent of husbands agreed to certify a plot of land solely in the wife's name. These types of programs pave the way for broader-scale role model and media initiatives—including radio and television programming—to achieve social change.⁶⁵

Strengthening women's access to savings can be achieved through several means, including through formal financial savings accounts, lockboxes, and mobile money. A recent six-year study of the effects of access to a mobile savings platform found that impacts on poverty reduction were more pronounced for women than for men, especially for women heads of household.⁶⁶ Mobile money platforms can also help facilitate cash transfers and access to digital financial products, which could be especially important for issuing payments to foster the resilience of women and their households, as well as offer loans to women-owned firms to spur economic recovery following the COVID-19 pandemic. In Tanzania, training sessions for women-owned microfirms on M-Pawa—a mobile savings account linked to M-Pesa that also gives customers access to credit—had large impacts on investment and business outcomes. Women saved almost four times more on M-Pawa.^{67 68 69}

Access to a secure and private savings vehicle can also increase women's labor force participation. Women's productive incentives are bolstered by these types of mechanisms when they can hold on to what they earn, as they are less pressured to redistribute earnings to their husbands and other family members. Indeed, a recent impact evaluation with cashew-processing factories in the Toumodi and Dimbokro regions of Côte d'Ivoire shows that access to a private commitment savings account increased women's labor productivity and earnings by over 10 percent by reducing the "kin tax" on their income.⁷⁰ These results are from women working in agribusiness, a promising source of employment for women living in rural areas. Similar results were also found by Field et al. in India, where providing rural women with individual bank accounts and then depositing wages into these accounts increased women's labor supply, both in the program and in the private sector, without any change in market wages.⁷¹

Two additional priorities for increasing women's access to finance in Côte d'Ivoire are increasing trust in financial institutions through regulation of financial actors and decreasing the burden of identification needed to open an account.⁷² Beyond introducing biometric identification as an alternative to the current requirements to open an account—a birth certificate, a nationality certificate, a treasury certificate, and a residence certificate—the implications of using other documents such as utility bills should be considered. Utility bills are often in men's names, and using them would require that women disclose that they are opening a savings account, thus undermining the privacy that is so crucial for them to benefit fully from having access to finance.

7.4.3 Reinforcing Ivorian women's agency and reducing violence

Women's agency is constrained by a range of social norms that influence the types of roles and responsibilities that

are considered acceptable for men and women.⁷³ A review shows that across Africa there is little to no gender gap in voting during elections but a large gender gap in other forms of political participation.⁷⁴ Determinants of the gender gap in Western countries—such as income, education, and employment—have little relevance in explaining the gender gap in political and economic participation in Africa, where explanatory factors are intrahousehold bargaining power and norms. These factors can influence perceptions about the suitability of women to assume leadership roles, and may explain why less than 15 percent of firms have a top female manager, and roughly a quarter of firms have a woman participating in ownership in Côte d'Ivoire (figure 7.3).

Social norms can also govern the types of productive work in which women engage. For example, in business, this can be observed through a higher concentration of women in certain sectors and, in farming, a lower likelihood of women being included in cash crop markets. Micro-level analysis from Cherchi and Kirkwood in Botswana⁷⁵ and Alibhai et al. in Ethiopia⁷⁶ find that a large part of the earnings gap can be explained by sector choice, with male-dominated sectors being more profitable. This holds in both entrepreneurship and agriculture—in Côte d'Ivoire, a study of occupational segregation in farming found that women's lower adoption of export crops is the key driver of the remaining agricultural productivity gap.⁷⁷ What works to change this? Evidence on this is nascent, but some promising findings from Uganda suggest that engaging men is part of the solution.

In Uganda, an intervention designed to encourage husbands to transfer or register cash crop contracts in their wife's name increased women's integration into more lucrative value chains.⁷⁸ Forthcoming findings from an impact evaluation of the *Projet d'Appui au Secteur Agricole*—an intervention that encourages men to involve their wives in cash crop farming

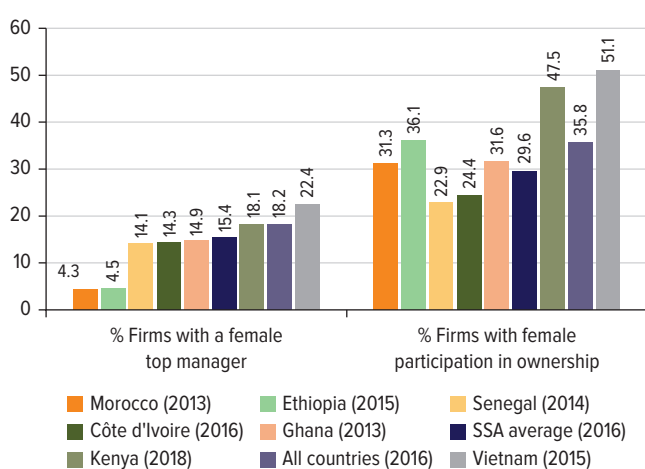
and management—should provide additional insight within the context of Côte d'Ivoire. Incentivizing and supporting couples' cooperation in agriculture, particularly in light of the COVID-19 pandemic, could help foster women's market inclusion and participation in higher-value agricultural activities, thus boosting agricultural productivity and accelerating economic recovery from the crisis.^{79,80}

Solutions that address women's time constraints due to their domestic responsibilities can ease women's participation in the labor force. In Kenya, subsidized center-based childcare improved women's labor force participation by 8.5 percentage points.⁸¹ While women in Côte d'Ivoire already have 14 weeks paid maternity leave, in practice it is estimated less than 10 percent are covered by maternity leave cash benefits.⁸² The Labor Code also entitles workers to 10 days' leave a year for family events, which working fathers can use for paternity leave.⁸³ A growing body of research shows that mandating parental leave for only women can lead to discrimination against them by employers and further entrench gender norms. Shifting to general parental leave—and encouraging men to use it, with politicians and other influential figures modeling such behavior—has the potential to narrow the wage gap.

Improving women's access to effective WASH interventions may both ease their time burdens, promoting greater economic participation, and reduce gender-based violence. A short-term study in Colombia found that eliminating families' financial barrier to purchasing a washing machine increased women's agency, labor force participation, and household income.⁸⁴ While the most appropriate method of easing women's time burdens needs to be context-specific (washing machines may not be suitable in the rural Ivorian context), the study highlights how interventions that shift women's time use can positively impact their (and their families') economic achievements. Moreover, though rigorous evidence is scarce, a recent review across low- and middle-income countries found that open defecation was linked to an increased risk of sexual exploitation.⁸⁵

Last, but of critical importance, is the issue of gender-based violence. A qualitative study reported that key contributors to intimate partner violence included changing gender roles, a lack of support networks, and tensions between traditional gender norms and those of the modern city. Urban poverty, and with it, unemployment, food insecurity, and housing instability, also played a role. The authors recommended strengthening formal and informal mechanisms for seeking help and using multimodal interventions that address economic stress and challenge inequitable gender norms.⁸⁶ More generally, while some services exist throughout the country for survivors of gender-based violence, there are insufficient direct services available for women and a limited number of adequately trained professionals to support families in dealing with the impacts. Preparing the health

Figure 7.3. Gender in firms



Source: World Bank. 2019a. Concept Note: Côte d'Ivoire Growth Study: A Country Economic Memorandum 2.0. Washington, DC: World Bank.

system to respond to gender-based violence by investing in gender-based violence response service providers is of critical importance, given that violence can increase during time of isolation and economic stress, such as during the COVID-19 pandemic. Following the postelection crisis in Côte d'Ivoire, a 2011 assessment by the International Rescue Committee found

that sexual and gender-based violence survivors were most commonly unable to access health or psychosocial services because of a lack of resources and the stigma associated with victimhood.⁸⁷ A World Bank–financed study found that adding a couples' gender discussion group to women's savings groups reduced overall women's PTSD symptoms.⁸⁸

7.5 Conclusion

Over the past decade, Côte d'Ivoire has experienced a remarkable period of economic recovery following the 2010–11 postelectoral crisis. However, inclusive economic growth remains a serious challenge as women continue to lag men across key dimensions of gender equality. Progress in narrowing gender gaps in some areas, such as primary school completion and agricultural productivity, has been counterbalanced by more intractable challenges for women that include youth unemployment, reproductive health issues, labor force participation, and political underrepresentation. Other areas, such as gender-based violence and intrahousehold bargaining power, lack the longitudinal data necessary to assess trends.

To move toward eliminating gender gaps in Côte d'Ivoire, current efforts must intensify and take into consideration evidence-backed policy innovations proven to have impacts on women's empowerment and economic opportunities. These options include interventions aimed at:

- ▶ Getting and keeping girls in school.
- ▶ Improving sexual and reproductive health as well as WASH outcomes for women and girls.
- ▶ Strengthening women's land tenure security by encouraging joint or individual certification.
- ▶ Boosting women's savings and ability to invest in businesses and take out loans.
- ▶ Encouraging men's engagement in shifting gender norms around women's market inclusion.
- ▶ Changing norms around women's domestic responsibilities and consequently their time use.
- ▶ Eliminating domestic violence.

In terms of sequencing, prioritizing educational attainment and skill-building among adolescent girls could address several challenges simultaneously, changing the trajectory

of girls' lives by delaying childbearing, opening economic possibilities, and reducing fertility. While a broad, multisectoral approach will be needed to fully empower women and girls in Côte d'Ivoire, strategically scaling up the types of policies and programs proven to unlock women's potential can help accelerate progress toward equality, which is what the women of Côte d'Ivoire deserve.

Although not all of this can or should be done by the government alone, government has a large role to play. First, government can further an enabling legislative framework, which may include mandating paid parental leave and encouraging more equal leave-sharing, criminalizing domestic violence and sexual harassment, prohibiting discrimination in access to credit, and reducing administrative hurdles for women to open safe and private bank accounts. Removing legal restrictions on women working in certain male-dominated industries may help close gender gaps in socioeconomic outcomes. Second, politicians can model gender-egalitarian attitudes by enforcing existing legislation on the representation of women on political party electoral lists and ensuring gender-balanced cabinets and state-owned company boards.⁸⁹

Third, government can invest in women's equality through subsidized childcare, cash transfers for girls' education, strengthened public health insurance schemes, and public infrastructure. Clean running water, more effective cooking fuel, and sanitation can reduce the amount of time women spend on household chores. Including gender-egalitarian content and methods in the basic and continuing education of teachers, strengthening the network of domestic violence shelters, gender-based violence service providers, and launching a 24-hour helpline service may also prove beneficial. Last, government can convene partnerships across the social sector, the private sector, and the media—and ensure that these partners consider gender in their data collection efforts. For problems to be solved, they must first be counted.

Annex 7.A Innovative, evidence-based policy options for accelerating progress toward gender equality

Human capital

Getting and keeping girls in school

- ▶ Addressing financial constraints: Providing free schooling and conditional cash transfers, and reducing the costs of uniforms, books, and meals.
- ▶ Addressing health constraints: Investing in deworming programs, sanitation facilities, and malaria prevention and treatment.
- ▶ Addressing mobility constraints: Increasing transportation options (for example, giving girls bicycles) or creating local community schools.
- ▶ Addressing social attitudes and motivations: Having women leaders and providing merit-based scholarships.
- ▶ Addressing skill constraints: Creating safe spaces for girls to receive tailored job or life-skills training and providing psychology-based business training that focuses on building socioemotional skills.

Improving sexual and reproductive health outcomes for women and girls

- ▶ Addressing financial constraints: Providing free basic maternal and sexual and reproductive health services, especially targeting adolescents, and providing free HIV treatment to women.

Economic empowerment

Strengthening women's land tenure security by encouraging joint titling

- ▶ Addressing financial constraints: Offering fully subsidized land certificates to couples on the condition that the wife's name is included.
- ▶ Addressing information constraints and social norms: Providing an educational video on the benefits of certifying a plot in the woman's name.

Boosting women's savings and ability to invest in a business and take out a loan

- ▶ Addressing information/technology constraints: Improving women's access to mobile-based banking platforms or formal financial accounts and providing trainings on how to use them.

Voice and agency

Encouraging men's engagement in shifting gender norms around women's market inclusion

- ▶ Addressing social attitudes and motivation: Providing nudges in the form of cooperative trainings for spouses.

Changing norms around women's domestic responsibilities

- ▶ Addressing time constraints: Providing subsidized center-based childcare.

Eliminating domestic violence

- ▶ Addressing social attitudes and motivation: Strengthening formal and informal mechanisms for help-seeking and utilizing multimodal interventions that address economic stress and challenge inequitable gender norms.

Legal reform and enforcement

- ▶ Allowing women to work in the same industries as men.
- ▶ Simplifying procedures to open financial accounts.
- ▶ Criminalizing domestic violence.
- ▶ Introducing shared parental leave.
- ▶ Prohibiting gender-based discrimination in access to credit.
- ▶ Enforcing legislation on representation of women on electoral lists.

Notes

1. World Bank 2019a.
2. World Bank 2019a.
3. Using the international poverty line of \$1.90 purchasing power parity.
4. UNDP 2019.
5. World Bank 2017.
6. This chapter addresses multiple facets of *women's empowerment*, with a specific focus on *women's economic empowerment*. While women's empowerment broadly refers to the improvement in women's ability to exercise their voices, make decisions, and influence outcomes over their own lives, women's economic empowerment focuses on expanding women's control over their choices and achievements in the economic domain, including over their participation in the labor force, earnings, productivity, and asset ownership.
7. UNDP 2019.
8. While the data collected by the Gender Inequality Index are primarily meant to be compared across countries and within years, due to potential changes in indicator definition, they can nevertheless be an instructive tool in examining the big picture and identifying important drivers of inequality over time.
9. Unless stated otherwise, all data for this chapter are sourced from the World Bank's Gender Data Portal: <https://datatopics.worldbank.org/gender/>.
10. Christiaensen and Premand 2017.
11. World Bank 2017.
12. Bandiera et al. 2018a.
13. Wodon et al. 2017.
14. Babalola, Tambashe, and Vondrasek 2005.
15. World Bank 2015a; World Bank 2017.
16. World Bank 2015a.
17. Vulnerable employment refers to the sum of employment groups of own-account workers and contributing family workers, according to the International Labour Organization.
18. World Bank 2020c.
19. Christiaensen and Premand 2017.
20. World Bank 2017; Christiaensen and Premand 2017.
21. Croke and Smith 2013.
22. Donald, Lawin, and Rouanet 2020.
23. World Bank 2015a.
24. World Bank 2020c.
25. Donald, Lawin, and Rouanet 2020.
26. Gaddis, Lahoti, and Li 2018.
27. PRINDEX 2019.
28. <https://reliefweb.int/report/c/C3%B4te-divoire/womens-vote-important-factor-ivory-coast-elections>.
29. Donald et al. 2020.
30. This statistic stems from the 2011–12 Demographic and Health Survey (DHS). Updated figures on these agency and violence measures will be available once the 2020 DHS data is released. The survey remains ongoing as of February 2021.
31. Peterman et al. 2020.
32. World Bank 2015a.
33. IRC 2011.

34. World Bank 2020b.
35. UN OHCHR 2019a.
36. UN OHCHR 2019b.
37. Campos et al. 2019.
38. To advance women's property rights further, in 2016, Decree No. 2016-590 established the Rural Land Agency, which has issued land certificates to nearly 300 women (UN OHCHR 2019b).
39. World Bank 2019b.
40. World Bank 2020b.
41. World Bank 2017.
42. World Bank 2019b.
43. World Bank 2020b.
44. UN OHCHR 2019b.
45. Aldashev et al. 2012.
46. World Bank 2015b.
47. World Bank 2015b.
48. World Bank 2017.
49. UN OHCHR 2019b.
50. World Bank 2019b.
51. Evans and Yuan 2019.
52. Baird, McIntosh, and Özler 2011.
53. Duflo, Dupas, and Kremer 2015.
54. Alderman, Gilligan, and Lehrer 2012.
55. Baird et al. 2016.
56. Garn et al. 2013.
57. Oster and Thornton 2011.
58. Beaman et al. 2012.
59. Kremer, Miguel, and Thornton 2009.
60. Bandiera et al. 2018b.
61. Adoho et al. 2014.
62. Campos et al. 2017.
63. McCallin and Montemurro 2009.
64. Cherchi et al. 2019.
65. La Ferrara 2016.
66. Suri and Jack 2016.
67. Bastian et al. 2018.
68. Campos, Goldstein, and McKenzie 2015.
69. Carranza et al. 2018.
70. Field et al. 2019.
71. When rolling out the financial account mentioned in Carranza et al. (2018), many of the woman took years to trust the program enough to open an account, due to two separate instances of a fraudulent financial institution fleeing with their money.
72. Marcus and Harper 2014.

73. Konte, Osei Kwadwo, and Zinyemba 2019.
74. Cherchi and Kirkwood 2019.
75. Alibhai et al. 2017.
76. Donald et al. 2020.
77. Ambler, Jones, and O'Sullivan 2018.
78. Das and Kotikula 2019.
79. Clark et al. 2019.
80. ILO 2014.
81. ILO 2014.
82. Garcia-Jimeno and Pena 2017.
83. Saleem, Burdett, and Heaslip 2019
84. Cardoso et al. 2016.
85. IRC 2011.
86. Annan et al. 2017.
87. Along the lines of the "Ikuboss" phenomenon in Japan: <https://www.japantimes.co.jp/news/2013/09/10/business/economy-business/seeking-to-change-mens-mind-sets-to-spur-on-prosperity-for-all-japanese/#.XmawkKhKhgY>.

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CHAPTER 8

Include youth

8.1 Introduction

Job creation is central to accelerating poverty reduction, and for this, a focus on youth is essential. Early work experience affects work and well-being throughout life. Youth employment has spillovers across society, affecting social and political stability and future generations. Today's youth population is the largest the world has known. The size of the challenge and the economic opportunity are unprecedented, especially in lower income countries.

Labor demand and job creation in any sector depend on the growth and labor intensity of production and are subject to domestic and global influences. In an interconnected global economy, regional and sectoral labor demands shift due to a variety of factors—urbanization, labor-saving technological change, the global interconnection of jobs, or the transition to energy-efficient production and consumption. To improve the prospects for labor supplies to adjust to changing demands, most developing countries are progressing toward universal primary education. But many are less successful in improving the transition from primary to secondary education and in improving the quality of schooling. Vocational education and training are often inadequate due to insufficient funding, perceived low returns and stigmatization, poor monitoring and evaluation, and weak links with private sector skills. Côte d'Ivoire is experiencing these problems.

The World Bank Group has been developing the Côte d'Ivoire Jobs Agenda Operationalization Initiative with the government's consultation and oversight. As part of the Initiative, a World Bank team has reviewed labor market interventions, assessing their effects and outcomes.¹

Côte d'Ivoire has experienced strong growth since 2012, but this rapid expansion has not led to major improvements in youth well-being. Young people ages 15–29 account for more than a quarter of the total population, and those under 40 constitute over 80 percent of the population, but 15–29-year-olds constitute a vulnerable group.

Young people lag in learning outcomes and educational attainment, and they face challenges in the labor market. Skill mismatches confine them to precarious jobs and prevent them from being well integrated into the national economy.

8.2 Interventions

Skill building and other extension activities—along with access to finance, labor market counseling, employment exchange services, and business development services within labor-intensive public works programs—could improve youth employability. But the design

They also face significant health risks—the youth mortality rate far exceeds African and global averages. Early pregnancy is also a concern because of the damaging effects it has on adolescent girls' education and employment prospects.

In Côte d'Ivoire, 87 percent of jobs (8.9 million) are in microenterprises. These jobs have low productivity and earnings, leaving many underemployed. Low labor productivity and earnings in self-employment and the informal economy limit sustained poverty reduction. Only 9 percent of jobs (about 900,000) are in small and medium enterprises (SMEs) or large firms, and these are generally more stable and productive.

Large informal economies are embedded in the structures of Sub-Saharan African countries, and this includes Côte d'Ivoire, where the informal economy employs more than three-quarters of the working age population.² Because of the informal sector's size, policies addressing youth employment have to consider it.

In countries where most youth live in rural areas, increasing agricultural productivity and nonfarm rural activities are helpful. Rural–urban migrants are often worse off than urban youth, but investment in rural areas can prepare youth for more successful migration to urban areas. Low productivity is related to inadequate learning for youth in the informal economy. But in basic formal education, gender gaps in enrollment and the poor quality of education contribute to low earnings. Pro-employment economic and social policies can stimulate and build on structural change.³

Programs to improve youth employability may have limited or no impact in a low-growth environment. Better youth employment outcomes require stimulating employment-intensive growth—reforms ranging from business and labor regulation to digital transformation to economic diversification and industrial and trade policies. Where most of the labor force is in the informal economy, reaching youth can only be achieved by targeting productivity, skills, social safety nets, and labor market functioning in the informal economy, as well as by reinforcing their position in the value chain.

of basic public works programs is difficult, and there is only limited international evidence on their effectiveness. Public works programs often aim at short-term effects and do not develop long-term employment opportunities.

Reaching youth may require flexible course delivery and customized training. For training programs to be effective, skill training needs to be combined with life and employability skill training and on-the-job experience. Adjusting programs to the capacities and interests of different groups improves outcomes and can reduce dropout. So, vocational education and training systems and second-chance education can help address skill shortages and mismatches. Skill development policies need to extend to youth in agriculture and in the informal economy, where programs can build on existing informal training and recognize informally developed skills.

Job interventions should increasingly address multiple constraints by combining more than one approach through integrated job programs. Approaches that simultaneously address supply- and demand-side constraints have the potential to create synergistic effects, with poorer population groups often the primary beneficiaries. Integration of these programs typically happens around a space or a product. In Côte d'Ivoire, much can be done in 11 secondary cities—Abengourou, Anyama, Bouaké, Daloa, Divo, Gagnoa, Korhogo, Man, San-Pedro, Soubré, and Yamoussoukro—with potential interventions in four categories:

- ▶ Enterprise support and finance.
- ▶ Infrastructure and land.
- ▶ Skills and innovation.
- ▶ Institutions and regulations.

Evidence is growing that secondary cities can contribute more to poverty reduction than primary cities such as Abidjan.⁴ About a quarter of Côte d'Ivoire's working-age population lives in urban areas outside Abidjan, and more than half are in rural areas. So, more than 11 million Ivorians can directly or indirectly benefit from more and better jobs in secondary cities. And the potential of these secondary cities depends on their poverty levels, their industrial composition, the labor intensity of the dominant sectors, and their levels of connectivity, trade, and economic diversification.

Integrated job interventions also can be organized around a sectoral approach. More than 8 million Ivorians—most in rural areas with high poverty rates, many being subsistence farmers—can directly or indirectly benefit from more and better jobs along value chains. About 5 million Ivorians are self-employed in the agriculture sector, and 3 million in the nonagriculture sector. By improving the productivity and market access of subsistence farmers, value chain development has the potential to promote inclusive growth. A set of criteria—job content, change potential, and levels of competitiveness and sustainability—helps to identify the job potential of a value chain.

Interventions can simultaneously address binding constraints on the labor supply and demand side in high-potential value chains by focusing on improving the business environment

(infrastructure investment, institutions, and regulations) and by addressing value chain actor-specific constraints (skills, access to finance, and so on).

The rest of this chapter presents findings and policy recommendations from a review of programs and interventions based on the World Bank Group Initiative and Côte d'Ivoire Jobs Diagnostic Report of 2017.⁵ The analyses are based on Côte d'Ivoire's employment data, impact evaluations, and World Bank Group guidelines for integrated labor supply- and demand-side interventions.⁶ Global policy lessons from developing countries are also synthesized for consideration. Individual thematic notes are available from the World Bank Group team.

8.2.1 Support for formalization

Programs that support firms' formalization have shown little or no impact on the number of firms formalizing or on formalized firms' performance. The programs' target populations are the nonagricultural self-employed and some wage-employed Ivorians—informal workers in formal and informal firms. Potential beneficiaries represent up to 33.2 percent of all jobs, or 4.7 million Ivorians.

The six programs that aimed for firm formalization were analyzed, using six types of strategies:

- ▶ Increasing awareness about how and why to formalize.
- ▶ Reducing costs (registering, permits, and so on) related to formalization.
- ▶ Reducing costs related to being formal (taxes and so on).
- ▶ Increasing the benefits of being formal (access to finance, training, and so on).
- ▶ Instituting financial incentives.
- ▶ Instituting coercive measures (inspections by local government officers).

Analysis of the programs concluded that:

- ▶ Raising awareness had no impact on the decision to formalize.
- ▶ Reducing the costs related to formalizing or to operating formally did not lead to a decision to formalize in the medium term.
- ▶ Financial incentives and coercive measures are the most effective means to increase formalization. So, among these programs, the interventions for formalization had little effect.

Priorities on the demand side are interventions that address productivity constraints—rather than formalization per se—and focus on micro- and small enterprises. About 4 million

jobs in Côte d'Ivoire are in microenterprises in the nonagriculture sector, and 700,000 jobs are in SMEs. Most of these are informal low-productivity jobs. For low-productivity firms, formalizing and operating in the formal sector are too costly.

Programs that incentivize or force firms to formalize have had negligible effects on employment. These programs tend to be effective in pushing firms to formalize if they already have a profile—for instance, in terms of firm age, revenue stream, and number of employees—very close to that of formal firms. Analysis suggests that boosting the productivity of informal firms is a first step toward formalization.⁷ Policies to increase productivity for micro- and small enterprises should facilitate access to finance and markets, and strengthen financial, business, and managerial skills.

If the goal is increased productivity, formalization is not an end in itself, since the effectiveness of formalization on productivity is unproven. Given the modest results of formalization, firms are increasingly encouraged to formalize through incentives to overcome productivity constraints. Policies to increase productivity should be favored over attempts to formalize firms. Targeting informal firms with a profile closer to that of formal firms seems to improve the effectiveness of formalization programs. Firms formalize based on the costs and benefits of formalization—costs or legal obstacles may explain the difficulty in encouraging firms to formalize, and incentives have little impact under these circumstances.

8.2.2 Programs for microenterprises

For micro- and small enterprises to improve productivity, barriers to success must be eliminated. These firms may be encumbered by limited access to credit or markets and by inadequate financial, business, and managerial skills. There are programs that target these weaknesses for populations who are wage-employed, self-employed in the nonagriculture sector, or unemployed—they represent 42 percent of the working-age population, or 6 million Ivoirians. These Ivoirians are potential beneficiaries of the government's micro-, small, and medium enterprises (MSME) support programs. Many enterprises support these programs, especially with grants and training programs.

The World Bank Group reviewed programs that included innovative MSME support and focused on job-related outcomes. For example, one training program delivered personal initiative training, another program delivered specialized training to firms—focusing on finance or marketing only. However, these programs had limited impact on job creation and on firm performance.

Support to improve the quality of low-productivity informal sector jobs and to increase the survival rate and profitability

of micro- and small firms could accelerate poverty reduction. As much as 80 percent of the 1.7 million wage jobs in MSMEs operate at low levels of productivity in the informal sector, and more than 3 million people in the nonagriculture sector are self-employed or run small businesses. Self-employment is particularly common among rural Ivoirians with low levels of education.

Among these programs to address capacity and information gaps, access to finance, and coordination failures among micro- and small enterprises, skill development programs that address capacity constraints have shown only modest results. More promising results were realized from innovative approaches in South Africa and Togo. In South Africa, specialized training in marketing or finance skills tailored to firm profiles showed results. In Togo, entrepreneurship training that focused on psychology-based personal initiative modules complemented by mentoring also showed results.

ASPIRE, a multicountry program, addressed capital constraints of young first-time entrepreneurs. A business plan competition identified entrepreneurs with high potential who were awarded grants to develop their businesses. Another program developed a process to select high-potential entrepreneurs and provided them with grants based on their business plans. Both these programs show promising results for job creation and firm performance.

Personal initiative training has shown promising results for entrepreneurial practices and microenterprise firm performance. Most programs were cost-efficient, with the break-even point at five years. Some recommendations for improving these interventions include initial screening for grant applicants, and prioritizing personal initiative training over standard entrepreneurship training. Specialized or customized and more intense training programs to address a specific constraint might be the most effective. Female participation in the business plan competitions was low—less than 20 percent—and results for woman-led MSMEs are modest compared with male-led MSMEs. So, support during outreach and implementation should explicitly address women-specific needs for when women start or grow their businesses. Instead of spending resources to convince firms to formalize, the Ivoirian authorities should shift their resources to support measures, well-designed training, and assistance for access to finance for MSMEs. The analyses show that these three interventions have created jobs and raised firm productivity.

8.2.3 Apprenticeship programs

The education system was heavily affected by the 2010–11 postelectoral crisis, and the resulting shortage of skilled workers acts as a constraint for many firms. Some 80 percent of the working-age population has at best primary education. Beyond the basic education system, there are few

opportunities for skill development for young Ivorians who are not in education, employment, or training. Building the skills of these Ivorians beyond the basic education system and supporting their school-to-work transitions is an important agenda.

Apprenticeship programs, such as the one developed under PEJEDEC, are an example of supporting school-to-work transitions for youth. These programs target low-skilled urban youth and build their technical and practical skills. There are approximately 2.8 million potential beneficiaries—1.1 million in Abidjan and 1.6 million in urban areas outside Abidjan. Among the potential beneficiaries, as many as 1.7 million have no more than a primary education. Of these, 1 million are young women.

The objective of the PEJEDEC program is to prepare apprentices to start their own businesses or to access wage jobs in their technical field. It offers 12–24 months of training, leading to a certificate. Youth are placed in micro- or small enterprises for on-the-job training. The PEJEDEC evaluation shows that it is financially profitable for firms to take on apprentices, even if they pay the apprentices a premium. Even when considering crowding out, the program increases the number of youth in apprenticeships—the crowding-out effect appears to be relatively small, and few nonprogram apprentices were replaced by program apprentices.

There are opportunity costs associated with participating in an apprenticeship, and a monthly stipend is important for enrolling young people in the program. No incentives are needed to encourage firms to participate since apprenticeship programs are financially beneficial to the firms. It was found that, because of apprentices' weak business and social skills, it was important to enforce apprentices' accountability to their host companies.

8.2.4 Economic inclusion and public works programs

In 2015, about 46 percent of the Ivorian population lived below the poverty line—CFAF 750 a day (\$1.30). Two programs—one on economic inclusion and another on public works—have improved the living standards of the poor.

Poor households often face multiple obstacles to improving their earnings. Economic inclusion programs, such as PRISE, are designed to simultaneously support the poor and reduce productivity-related constraints. Economic inclusion programs have improved welfare by increasing poor people's assets and consumption. Such interventions are usually a combination of coaching, consumption support, entrepreneurship training, and improved access to saving options and assets. While these programs have been tested on a small scale, the cost-effectiveness and feasibility of large-scale programs are at the core of current policy debates, as

are the potential synergies on earnings and job opportunities of combined economic inclusion and market development approaches.⁸ This combined economic inclusion and market development approach is being tested under the World Bank Group's Côte d'Ivoire Economic Inclusion into Value Chains pilot project.

The second program is the poverty-targeted labor-intensive public works “plus.” It assists those in the working-age population with no or little schooling—potential beneficiaries encompass the 60 percent of the working-age population that has not completed primary education. Most are self-employed, often with low productivity. Two types of labor-intensive public works (LIPW) programs exist: the basic model and the “plus” model. Each offers a temporary job for one to six months in public or community works to those considered vulnerable. To sustain the impact beyond the public works jobs, the “plus” programs add general training (job search, entrepreneurship), awareness activities (civics and citizenship, HIV), technical training (electricians, trash collection), or financing (matching grants, support for creating an activity).

Those with low education in the agriculture sector have limited job opportunities and are vulnerable to shocks and crises, especially as agricultural work is subject to seasonality. Programs in this sector act as a short-term safety net, providing additional revenue so that the most vulnerable individuals benefit the most. In the medium term, these programs also slightly increase beneficiaries' productive investments. In the short term, the programs had positive effects on the beneficiaries' behavior and well-being, and women seemed to benefit more than men. However, the program did not improve the quality or quantity of jobs in the medium term, and the general training had modest value added.

The effectiveness of LIPW as a safety net can be improved by adjusting the selection modalities:

- ▶ Targeting based on poverty levels and vulnerability.
- ▶ Targeting the program geographically—including rural areas and regions with higher poverty rates.
- ▶ Adjusting the level of remuneration, although analysis suggests this would not improve targeting much.

More recently, LIPW programs, such as PEJEDEC's THIMO Plus, added measures (“plus”) to public works. The “plus” aims to increase the beneficiaries' human and financial capital. LIPW “plus” programs might have the potential to sustainably improve earnings and job opportunities for the poor and promote women's participation. A quota is not always necessary (women's participation has exceeded 50 percent in several programs). LIPW programs tend to be most effective for women and other vulnerable population

groups. Both programs include entrepreneurship training. In the past, entrepreneurship training has not proven effective. Experience from other countries suggests that the most effective entrepreneurship training combines “core” business administration skills, such as accounting, with “softer” entrepreneurial skills, such as problem solving. It is important to screen youth for latent or active entrepreneurial characteristics, such as passion, innovative thinking, leadership attributes, and results orientation. Training also needs to include support services, such as coaching, mentoring, and financing. Programs should separate training from financing functions by forming partnerships with financial institutions to provide and manage credit for youth.

To improve their ability to benefit from trade liberalization and foreign investment, entrepreneurs also need skills for developing their networks and for linking with higher levels of the value chain. Youth entrepreneurship and self-employment promotion also require increased access to credit by strengthening financial infrastructure, bank competition, and nonbank financing. The financial sector typically lacks the banking skills needed for dealing with microenterprises, and thus the costs of small-scale lending are high. To reduce red tape and increase transparency, youth microentrepreneurship promotion also requires reform and more consistent enforcement of business regulations.

8.3 Recommendations

8.3.1 Growth

Job-rich inclusive growth is central to youth employment in the long term. Although job-rich growth is a major challenge, authorities can consider strategies to expand labor demand to complement interventions by targeting short-term and youth-specific goals such as skills training. Macro and growth policies need to stimulate private investment, especially in labor-intensive sectors or sectors with large employment multipliers. For developing countries, examples of such policies include reducing relative labor costs and promoting more labor-intensive agricultural crops, rather than relying on the traditional subsidies on wages and fuel.

In recent years, the call in developing countries for targeted trade and industrial policy has increased, especially since in the context of globalization, many developing countries have failed to reap sustained benefits from international trade and investment. Specifically, policies should facilitate firms and sectors employing a country’s relatively abundant production factors. In Côte d’Ivoire this means labor-intensive production activities. To reduce coordination failures that inhibit productivity increases, Harrison and Rodriguez-Clare call for “soft” industrial policy that facilitates collaboration between government, industry, and cluster-level private organizations.⁹

As part of a growth strategy, measures supporting or assisting high-growth enterprises facilitate the creation of abundant wage jobs. Ivorian evidence shows that few microenterprises create new jobs. To develop job opportunities, it is important to allow entrepreneurs to identify or incubate high-growth firms among small and medium enterprises and to define effective policies to support their expansion. But jobs in high-growth firms tend to be less accessible to the poor and less educated. Yet, high-growth firms can boost productivity

growth, and support economic transformation that increases the overall number and quality of jobs.

A recent study of high-growth firms identifies the factors that establish the foundations for growth—skills, networks, innovation, financial development, and managerial experience.¹⁰ An intervention in Nigeria developed a promising approach to identify potential high-growth firms. Providing capital (depending on funding needs identified in their business plans) led to successful job creation and firm expansion. The Nigerian example also showed how important it is to consider the specific needs of women entrepreneurs. Building on these findings and tailoring the approaches to the Ivorian context may represent an opportunity for the Ivorian government. But the costs and benefits would need to be carefully weighed against industrial policies in the wider mixed international experience.

8.3.2 Skills

Skill shortages and mismatches can be addressed on several fronts, including formal and nonformal general education, vocational education and training (VET), and apprenticeship training. For training programs to be effective, hard skills training needs to be combined with life and employability skills training, and on-the-job experience. Adjusting programs to the capacities and interests of different target groups improves outcomes and can reduce dropout.

Improving literacy skills through better primary education is a high priority. Education policies should also improve secondary education for disadvantaged youth. They are constrained by the cost of schooling and, in the case of young women, by social and cultural barriers. Mentoring and remedial teaching in primary education can improve literacy and numeracy skills, but also social skills, self-esteem, and motivation for further education.

Unfortunately, there is little evidence on mentoring programs in developing countries and their longer-term impacts on employment and earnings.¹¹

For the youth cohort who have already passed basic secondary schooling age, second-chance education is an option to overcome literacy and numeracy deficiencies. Information and communications technology, especially radio and mobile phones, can reach disadvantaged youth.¹² New technologies in education and open educational resources could provide flexible course delivery and customized training for specific groups.

In Côte d'Ivoire, especially for the self-employed, measures to improve their situations may take many forms, from capacity building and training, to social protection through improved access to social services, to improved access to finance. Well-designed interventions should be targeted to their needs, integrating several components. Programs can also address empowerment as a way to provide informal workers with tools for defending their interests and rights in the long term. Empowerment can have individual forms and collective ones—as in small workers or employers' associations, and cooperatives. An example of this approach is India's Self Employment Women's Association, which offers support services, coordinates local organizations, and gives poor, self-employed women a voice.

Policies that increase the permeability of education systems can allow youth to move between levels and types of education. Mobility in education and training facilitates social mobility, such that youth can re-enter education later in life. Permeability is not only about institutional and bureaucratic barriers. Family background and choices and early tracking systems can influence education and training choices and careers. Mobility would also allow students to move between VET and other tracks and this could increase the attractiveness of VET.

Since the benefits of formal VET depend largely on the relevance of skills to actual demand in the private sector, a widely heard policy recommendation is to build public-private partnerships in the design and provision of VET. Almost by definition, however, formal VET programs cannot address challenges for the majority of youth in the informal sector.

Skill development should include youth in agricultural and nonagricultural informal employment, where poverty reduction could be most effective. This could be achieved by improving and expanding apprenticeship schemes, for example through local training committees and training schemes for agricultural or related occupations. Existing education and training by informal actors should be identified and strengthened before developing new schemes. Educational bodies should recognize and certify skills acquired in nonformal learning and integrate nonformal

schemes in their strategies. And regulations should be introduced for traditional apprenticeships to limit the years of training and daily and weekly working hours.¹³

Evaluations of existing training programs establish that programs are more effective if they combine complementary interventions. Training programs are effective only if they integrate work experience, rather than just focusing on skills first and jobs later.¹⁴ In Côte d'Ivoire, where the informal economy is dominant, employment services may not add value. Alternative channels—such as local media and advertising—could be more beneficial for disseminating information on the labor market and job opportunities.

Program evaluations show that pace, components, content, and teaching approaches should be adapted to the capacities and interests of different types of youth. Some important characteristics are male versus female youth, younger versus older youth, and married versus unmarried women. Youth should be actively engaged in the design, implementation, and evaluation of programs. Graduation rates can be improved by reducing common reasons for dropping out, such as transportation costs and lack of family support.

Experience with youth programs shows that soft skills—communication, teamwork, responsibility, motivation—matter for improving youth employability. To develop soft skills, they should be integrated into all program activities. The quality of trainers appears to be of crucial importance, as they often serve as role models. Nevertheless, there is still uncertainty on how these skills can be imparted, what they include, and if and how they can be assessed.

8.3.3 Regulation

In designing policies for youth employment, there is a trade-off between short-term increases in temporary or part-time jobs on the one hand, and the risk of decreasing the quality of employment in the long term. Youth wage subsidies or extended periods of fixed term and other flexible contracts may induce firms to hire more young workers, but they also lengthen the time it takes for youth to reach job security.¹⁵

In Côte d'Ivoire, with its robust informal economy, strong regulation can create dualism between formal and informal labor markets. Reforms of labor regulation can facilitate entrance of workers into the formal sector and encourage hiring of youth, but unfortunately evidence on the impact of minimum wages and employment protection legislation in developing countries is mixed. There is little information about the presence and impact of regulation specifically targeted at youth in developing countries.

Policies should seek to improve labor market information and increase transparency and fairness in hiring. Countries may have laws requiring firms to announce their job openings publicly, but these laws are difficult to enforce.

In Côte d'Ivoire's predominantly informal labor market, information laws bear little relevance. Nonetheless, informal networks are embedded in job searches. New, particularly mobile phone-based technologies could help to expand job

search networks for youth, linking formal and informal networks and increasing the effectiveness of these networks. This is an area where progress can be made if governments encourage private services.

8.4 Conclusion

With the National Youth Policy 2016–20, the country has a promising opportunity to reduce obstacles that hinder the prosperity of youth. To improve youth employment prospects, the authorities will need an integrated approach involving different levels of government and linking to development policies that reach beyond the labor market and the education sector.

The government should complement short-term and youth-specific measures with longer-term policies to stimulate labor-intensive growth. In a low-growth or natural resource-intensive growth environment, programs to improve youth employability are likely to be less effective. Youth entrepreneurship would benefit from increased access to credit, business regulation reform, and entrepreneurship programs that combine different types of skills training—including hard and soft skills—with support services such as coaching and mentoring. Livelihood self-employment should be targeted separately from entrepreneurship and address the specific needs of vulnerable groups of self-employed workers.

The authorities can encourage the use of new technologies to expand job search networks for youth in the informal economy, partly by enabling private employment exchange services. In formal labor markets, youth would benefit from increased transparency and fairness in hiring through regulation and better enforcement of laws. A lesson from policies aimed at stimulating youth labor demand is that

short-term measures, such as lowering restrictions on temporary jobs, may come at the cost of lower job quality in the long term. Furthermore, regulation can aggravate formal-informal dualism in countries with large informal economies.

Côte d'Ivoire, characterized by high informal employment and limited formal sector jobs, faces the challenge of realizing labor-inclusive structural change to increase demand for low- and medium-skilled workers in private enterprises. Another challenge is the low rates of primary and especially secondary school completion. Poor quality education is the reason young people are trapped in subsistence work. When most of the labor force is in the informal economy, reaching vulnerable youth can best be achieved by targeting productivity, skills, social safety nets, and labor market functioning in the informal economy, as well as by reinforcing their position in the value chain.

Given the importance of SMEs, the challenge includes fostering growth and productivity for SMEs with the potential to develop and link them with markets and supply chains. In the short term; however, the main challenge is to improve the productivity, earnings, and well-being of young agricultural and informal workers. Because of the complexity of labor markets and the diversity of income-generating activities, youth employment challenges require action beyond education and labor markets in areas such as credit markets, infrastructure, business regulation, and rural development.

Notes

1. Under the Direction Générale de l'Emploi (DGE) at the Ministry of Employment and Social Protection, and the Bureau de Coordination des Programmes Emploi (BCPE) at the Ministry of Youth and Youth Employment, the Initiative hired an Abidjan-based expert through Innovations for Poverty Action and parallel funding from the Government Partnership Initiative of the Abdul Latif Jameel Poverty Action Lab. The expert supported the World Bank Group team in consulting counterparts and partners on the contents of several thematic notes. The mobilization of parallel funding through the Agence Française de Développement allowed additional technical assistance to the DGE and the BCPE on monitoring and evaluation of employment policies and programs. The multi-partner approach uses evidence-based policy dialogue to design employment policies and programs in Côte d'Ivoire. As part of the Initiative, the team has synthesized evidence on the design, population targets, and outcomes for Ivorian interventions. This chapter describes the context and the team's findings.
2. AfDB (2012).
3. ILO 2013.
4. Christiaensen and Todo 2013.
5. Christiaensen and Premand 2017.
6. Datta et al. 2018.
7. Recommendation 2 refers to the formalization of firms, and not the status of the workers. Formal firms can employ informal workers, who do not contribute nor have access to social protection instruments. Little is known about the impact of firm formalization on the status of the employees of these firms.
8. Unveiling new paths to create more Jobs for the Poor, 2018.
9. Harrison and Rodriguez-Clare 2010.
10. Grover Goswami, Medvedev, and Olafsen 2019.
11. Rodriguez-Planas 2012.
12. UNESCO 2012.
13. UNESCO 2012.
14. ILO 2012.
15. ILO 2012; UN 2011.

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CHAPTER 9

Strengthen resilience

9.1 Introduction and summary

Over the past 50 years, Côte d'Ivoire has experienced impressive economic performance but struggled with the consequences of a lack of inclusive growth. Despite high growth and sustained poverty reduction in the 1970s, an economic downturn in the following decades, along with a loss of key political leadership, led the country into a period of political uncertainties. That eventually led to the collapse of its so far prosperous development model and to a period of civil war (2002–04), the de facto division of the country (2004–10), and a postelection crisis and armed conflict (late 2010–April 2011). An unfavorable economic context and the degradation of the governance framework that was holding the country together reinforced the country's social divisions and regional disparities.

After years of political and economic crises during the 2000s, Côte d'Ivoire has regained political stability since mid-2011 and sustained its economic recovery. The current vibrant growth attests to the country's resilience, and current projections show that Côte d'Ivoire is transitioning to an emerging economy in 2020.¹ But despite noteworthy efforts by the government to tackle the root causes of violence and conflict, Côte d'Ivoire is still experiencing social and economic dynamics that could lead the country back into instability.

The foundation of natural resources underpinning Côte d'Ivoire's recent economic performance is diminishing. Between 1990 and 2014, the country's natural capital per person fell by 26 percent. The unrestrained use of natural capital could impede economic growth in the long run and increase its vulnerability to climatic and economic shocks. Adequate natural resource management and sustainable development are more salient given the impacts of climate change, which are expected to aggravate existing challenges. The country thus needs to take immediate action to build resilience to environmental and climate change risks.

This chapter analyzes the climate, conflict, and environment risks in Côte d'Ivoire and identifies policy solutions to further strengthen the country's economic resilience to these factors over the next decade. Resilience is the ability to resist, absorb, accommodate, and recover from the effects of hazards in a timely and efficient manner.² The chapter analyzes economic resilience along the three dimensions of a country's wealth: natural capital, physical capital, and human capital.³

Climate change is expected to undermine Côte d'Ivoire's resilience given the extent of its impacts on the country and the country's lack of preparedness. It is projected that by 2050, the country will face the combined effects of hotter average temperature, greater variability in rainfall, and higher sea levels. Climate change could reduce gross domestic product (GDP) by CFAF 380 billion by 2040 and by CFAF 770

billion by 2100. Already by 2030, climate change could add an additional million people to the country's 6 million poor today.

Particularly vulnerable assets are Côte d'Ivoire's forests. The forest cover decreased from an estimated 37 percent of the country's territory in 1960 to less than 14 percent in 2010, making soils more vulnerable to climate change and reducing the ecosystem's capacity to absorb greenhouse gas emissions. Deforestation in Côte d'Ivoire is caused to a large extent by the rapid development of agriculture. Cocoa is the main driver of deforestation, particularly in the southwest, where most of Côte d'Ivoire's remaining forests are located.

Agriculture, the main driver of Côte d'Ivoire's economy, employs more than two-thirds of the workforce and contributes about 28 percent of GDP and 10 percent of tax revenues. Côte d'Ivoire is the world's largest producer and exporter of cocoa, which accounts for 58 percent of export revenues and provides income to about one-fifth of the population. Deforestation reduces the productivity of cocoa farming by depleting nutrient sources, changing rainfall patterns, and decreasing biodiversity. Climate change is expected to aggravate this challenge. The expected changes in temperature and rainfall patterns may reduce soil fertility, increase evaporation, and result in drying soils, while also increasing pests and diseases. Yields may start to decline by 2030, and if temperatures rise by 2.3 degrees Celsius by 2050, production in major cocoa-producing areas could fall substantially. This would deprive farmers of their major source of income and the government of a major source of foreign currency.

Côte d'Ivoire's coast is highly vulnerable. The coastal zone, home to 7.5 million people who make up 30 percent of the population, concentrates around 80 percent of the country's economic activity. The ports process more than 90 percent of foreign trade in volume and value, which corresponds to about 60 percent of GDP. But erosion affects two-thirds of Côte d'Ivoire's coastline, threatening people, their livelihoods, and key economic assets. The economic cost of flooding on the coast, estimated at 2.9 percent of GDP for 2017, increases to 4.9 percent if combined with the costs of other types of environmental degradation in the coastal zone. Sea level rise is expected to further aggravate this situation.

Spatial disparities are pronounced and impede development. Decentralization has made little progress, access to public goods is highly heterogeneous, and gaps are more pronounced in the north and northwest. The poorest regions tend to be remote areas, while the leading regions are more urbanized or in rural areas with large-scale farming operations. Insecurity, particularly in urban areas, remains an issue.

Despite strong economic performance, inequalities remain, with limited improvements in living standards. Economic growth has not been sufficiently inclusive, and one of the key challenges is to shift from the quantity of growth to its equality. Key issues relate to the unequal distribution of growth and service delivery, the difficulties for young people to find quality jobs, and the limited pro-poor public and social expenditures.

The government has demonstrated awareness of the country's current and future vulnerability and has started to take action by developing policies and legislation, engaging in regional and international dialogue, and making investments on the ground. It has presented one of Africa's most ambitious climate risk reduction strategies. Its Nationally Determined Contribution (NDC), submitted to the United Nations Framework Convention for Climate Change in 2015, identifies water resource management, agriculture, forests and land use, coastal zones, and energy as key areas for reducing vulnerability. To reduce deforestation, the government has adopted a new Forest Code, which provides a regulatory framework for implementing the Forest Policy, which seeks to promote public-private partnerships for forest management, agroforestry, and tree tenure security. To increase the resilience of agriculture, it is preparing a system for tracing

cocoa to reduce deforestation and improve the income and resilience of producers. Further action is needed to reduce Côte d'Ivoire's vulnerability.

The transition from war to peace is a long and complex process that in Côte d'Ivoire remains incomplete, blurred, and uncertain, especially because the country has chosen to respond to a political crisis by economic solutions. The civil war lasted 10 years, but casualties and infrastructure destruction remained limited.

Experience shows that it takes a long time for even the most developed countries to achieve reconciliation after a civil war, as in Northern Ireland. Countries that have been successful at building lasting peace have focused for decades on preventing violent conflicts and promoting reconciliation. Therefore, despite some real progress, more efforts are needed to reintegrate former armed groups, rebuild trust between citizens and the state, address exclusion, and reduce perceived horizontal inequalities. Two areas for peacebuilding are particularly weak: the stalled efforts in reforming state institutions, and the lack of redistributive policies. These two aspects, if left unaddressed, could undermine the establishment of a strong and inclusive social contract that is critical for preventing tensions and violence in the medium and long terms.

9.2 Natural and physical capital

9.2.1 Resource depletion, degradation, and resilience

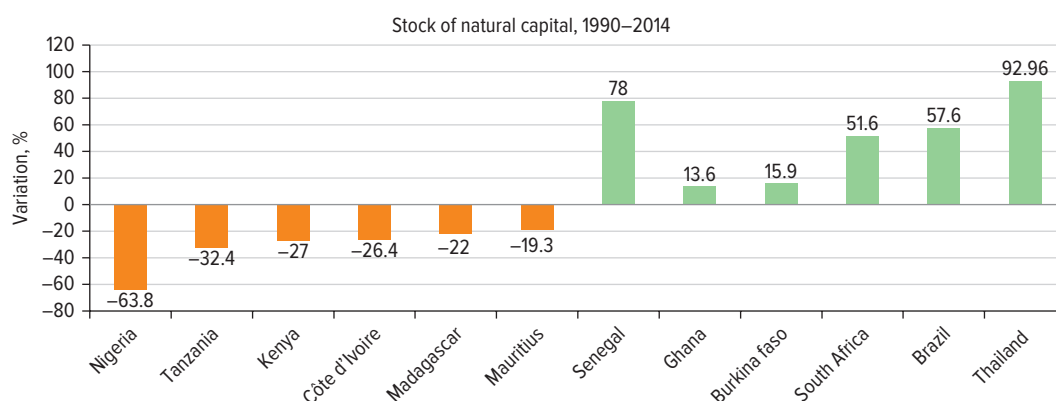
Côte d'Ivoire's natural capital is in decline, exposing the country to additional environmental and economic risks and reducing its capacity to manage a wide range of hazards. The World Bank's *The Changing Wealth of Nations 2018* values the country's natural capital at \$11,016 per capita for 2014, which corresponds to 45 percent of the total wealth per capita (\$24,485).⁴ This is within the average range for low-income countries but around 22 percent higher than in middle-income countries, which have higher shares of produced and human capital. Côte d'Ivoire's major natural assets are cropland (\$4,545 per capita), pastureland (\$3,011), protected areas (\$1,661), and timber (\$1,006). The methodology used by the World Bank is not exhaustive, since it does not include resources such as water and wildlife and uses only approximate prices. But it is able to capture trends, estimating that between 1990 and 2014 Côte d'Ivoire's natural capital declined by more than 26 percent (figure 9.1).

Forest cover, estimated at 37 percent of the country's territory in 1960, fell to less than 14 percent in 2010, making soils potentially more vulnerable to the negative impacts of climate

change and reducing the ecosystem's capacity to absorb greenhouse gas emissions.⁵ Forests provide environmental services that are important for agriculture, but deforestation in Côte d'Ivoire is caused largely by the sector's rapid development, particularly slash-and-burn agriculture for cocoa farming. Agriculture is the main driver of Côte d'Ivoire's economy. It employs more than two-thirds of the workforce and contributes about 28 percent of GDP and 10 percent of tax revenues. Côte d'Ivoire is the world's largest producer and exporter of cocoa, which accounts for 58 percent of the country's export revenue and provides income to about one-fifth of its population. Côte d'Ivoire is also the source of 40 percent of global cocoa exports (figure 9.2).⁶ Its economy is thus highly dependent on agriculture, making it vulnerable to dropping commodity prices, adverse weather, and climate change.

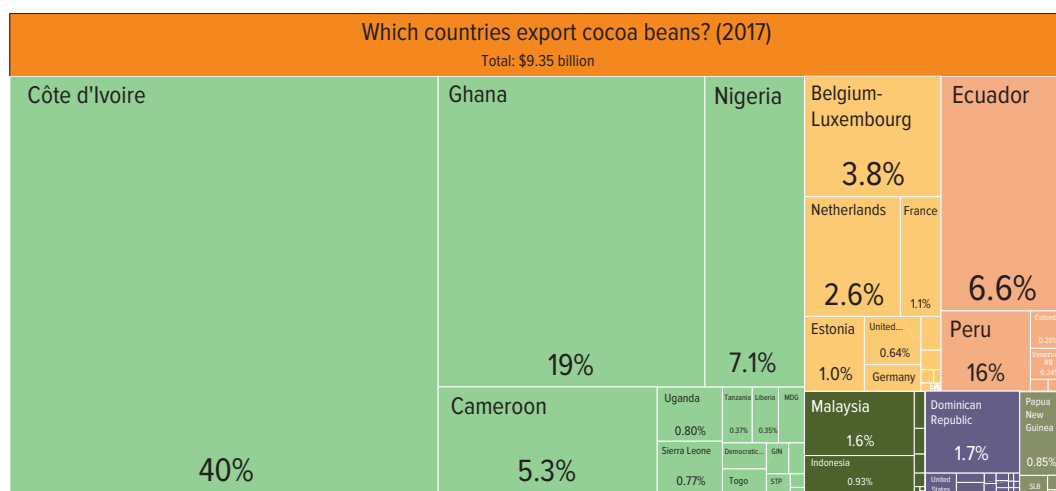
Highly vulnerable to climate change, the coastal zone is home to 7.5 million people, 30 percent of the population, and around 80 percent of economic activity. Ports process more than 90 percent of Côte d'Ivoire's foreign trade in volume and value, which corresponds to about 60 percent of GDP. Today, though, two-thirds of Côte d'Ivoire's coastline is affected by erosion, threatening people, their livelihoods,

Figure 9.1. Changes in the stock of natural capital in selected countries



Source: World Bank 2018a.

Figure 9.2. Global cocoa bean exports, by country



Source: Observatory of Economic Complexity: Cocoa Beans data. Last accessed February 25, 2020.

and key economic assets. Sea-level rise is expected to aggravate this situation.

9.2.2 Climate change in Côte d'Ivoire

Temperatures increased between 0.5°C and 0.8°C between 1970 and 2000. Precipitation has become more frequent in the dry season, while there have been more rainless periods in the wet season.⁷ The Intergovernmental Panel on Climate Change (IPCC) estimates that climate change could reduce GDP by 2 to 4 percent across Africa by 2040 and by 10–25 percent by 2100.

Projections estimate that by 2050, Côte d'Ivoire will face the combined effects of hotter average temperatures (+2°C), greater variability in rainfall (–9 percent in May and +9 percent in October), and higher sea levels (+30 centimeters).

If no action is taken, sea levels could even rise to 1.2 meters in the Greater Bassam and Abidjan areas. There will be more flooded areas, leading to heavy loss of life and the forced relocation of families and economic activity. Droughts in the semi-arid northern savannah region and floods in the south are expected to become more frequent and weather events less predictable. By 2030, 2 to 6 percent more households could slide into extreme poverty due to the adverse impacts of climate change, adding 1 million people to today's 6 million poor.

Infrastructure—including housing, roads, schools, and health centers—could also be affected. Agriculture is particularly vulnerable, especially to the expected temperature increases, which could dry out soils and reduce their fertility. The impacts of climate change, particularly on agriculture and along the coast, may increase the number of climate

migrants in Côte d'Ivoire. While internal climate migrants may constitute only a fraction of the projected levels of other migration, they may lead to additional pressure in certain hotspots.

9.2.3 Côte d'Ivoire's response framework for climate risks

With international support, Côte d'Ivoire has started to tackle the challenges to its forestry sector, seeking to reverse deforestation and forest degradation, addressing vulnerability, and reducing greenhouse gas emissions. The National Development Plan 2016–20 includes the “Development of Infrastructure Distributed in a Standardized Manner across the Country and Environmental Conservation” as one of five lines of development, providing for the stabilization of forest cover at 20 percent of the country by 2030, the conservation of biodiversity, and the governance of forests. This is in line with the European Union's Forest Law Enforcement, Governance, and Trade action plan, and the sustainable management of forest resources in the new Forest Code.

Since 2011, Côte d'Ivoire has participated in Reducing Emissions from Deforestation and Forest Degradation (REDD+), supported by bilateral and multilateral donors, including the World Bank. Benefiting from financial support from the Forest Carbon Partnership Facility, Côte d'Ivoire received assistance in preparing a national REDD+ strategy and policy framework, establishing an emissions baseline, and setting up a system for measuring, reporting, and verifying emission reductions. The National REDD+ Strategy, issued in 2017, seeks to reduce deforestation in protected forests and other areas by 80 percent and to replenish 5 million hectares of degraded land by introducing trees to agricultural and rural landscapes. Given the country's progress in the readiness process, the \$230.5 million Emissions Reduction Program for the Tai National Park in the southwest in 2020 is a first step in implementing the strategy.⁸ The country will thus be able to receive performance-based payments for future emission reductions.

Côte d'Ivoire also participates in the Forest Investment Program of the Strategic Climate Fund, which mobilizes financing for readiness reforms and leverages public and private investment to support REDD+ efforts, while also supporting climate change adaptation and other development efforts. Côte d'Ivoire's Forest Investment Plan, supported by the Forest Investment Program with \$80 million in 2016, supports a vision to balance economic interests with sustainable forest management and to promote action in sectors that drive deforestation. The government is also working with the private sector through the Cocoa and Forest Initiative to reduce the overall production of cocoa while raising productivity and formalization.

Côte d'Ivoire's response to climate change is defined in the NDC submitted to the United Nations Framework Convention for Climate Change in 2015.⁹ By 2030, it aims to reduce emissions by 28 percent, compared with a business-as-usual scenario that would see emissions increase by 44 percent. In the transition to “zero-deforestation agriculture,” reductions will be achieved by modernizing agricultural practices, using high-yield seeds, and improving soil management—and by reducing deforestation and forest degradation, through activities such as community participation in forest management.

The country's NDC also includes provisions for adapting to climate change by identifying key areas for reducing vulnerability—in energy, agriculture, coastal zones, forests and land use, and water resource management. For agriculture, the document proposes to build resilience by improving soil fertility, developing storage for harvest yields, providing access to climate-resilient species, and promoting manure and compost management. The forestry sector will be supported through sustainable land management and landscaping approaches that preserve water and soils. In addition, the National Climate Change Program for 2015 to 2020 assessed the challenges that climate change poses for selected sectors and proposed a strategy for managing them.¹⁰

9.3 Sector challenges: Agriculture, forests, and coastal flooding and erosion

Conflict, climate, and environmental risks affect forestry, agriculture, land ownership, and coastal flooding and erosion.

9.3.1 Agriculture—cocoa

Given its importance for Côte d'Ivoire's economy and its climate dependency, the agriculture sector presents key challenges for increasing the country's resilience. Variations

in temperature and precipitation affect farmers' income and contribute to economic volatility. Some crop-growing areas are expected to become less suitable or even unsuitable for production because of rising temperatures. This would require a shift to other crops or production areas, potentially creating uncertainty and risk for the livelihoods of farmers and for the economy. Agriculture is highly exposed to natural hazards because of the limited use of modern

irrigation techniques and extensive rather than intensive land use.

The expected changes in temperature and rainfall patterns may reduce soil fertility, increase evaporation, and result in drying soils, while also increasing pests and diseases. The southwest will be harmed, but areas at higher altitudes may become more fertile. If coffee and cocoa plantations have to relocate to higher altitudes with cooler temperatures, this could accelerate deforestation. Yields may start to decline by 2030 and production in the lowlands—where the major cocoa-producing areas of Agneby, Moyen-Comoe, and Sud-Comoe are located—could decline substantially.¹¹ This would deprive farmers of their major source of income and the government of a major source of foreign currency.

The government recently established standards for the organization of cocoa producers to improve their income and resilience, to improve the quality and traceability of their products, to combat child labor, and to help tackle deforestation and climate change. The standards are expected to increase the resilience of the sector and of individual farmers by supporting agroforestry, increasing productivity, promoting good agricultural practices, reducing uncertainty around land tenure, and fostering community participation in forest management. The government intends to collaborate with the private sector to establish a system for tracing cocoa and verifying that it complies with the new standards. As a result, the number of hectares of forest loss is expected to decline from 112,887 hectares in 2018 to 90,000 hectares in 2021.

Priority actions for agriculture

Actions to build resilience in Côte d'Ivoire's agriculture sector need to allow the country to secure income from agriculture, particularly through exports, until diversification is possible. They also need to protect people whose livelihoods depend on agriculture as a means of subsistence or income.

Research needs to be supported on crop varieties that can withstand higher temperatures and cope with changes in precipitation. Technological innovation can intensify production and compensate for climate change, as through the increasing use of machinery and irrigation. Farmers will also require support in accessing new markets, improving agricultural practices, and reducing risk from crop failure through income diversification, microcredits, and insurance systems. These areas may benefit from promoting cooperatives for smallholders. Climate and carbon finance instruments could provide incentives for sustainable landscape management. Even so, gradually moving cocoa plantations to areas that will become or remain climatically favorable in the medium and long term—while avoiding exacerbating deforestation—could be unavoidable. This may not

only help solve climatic pressures, but could also contribute to reducing the current occurrence of crop diseases.¹²

The orientation note on zero deforestation in Côte d'Ivoire presents a roadmap that includes developing geotracking systems to enable traceability for the value chain, reforesting rural areas in collaboration with local farmers associations, and launching pilot projects around the Parc de Taï in Bianouan and in Aboisso and Diégonéfla.

9.3.2 Forests

Côte d'Ivoire has one of the world's highest rates of deforestation, with the average annual rate increasing from 1.5 percent in 1900–80 to 4.3 percent in 1990–2015. Sixty percent of forests disappeared between 1990 and 2015. In 2000–08, during the political crisis, the rate in classified forests reached 25 percent. The encroachment rate in these areas increased from 18 percent of the total area in 1996 to 50 percent in 2014. The root causes of deforestation include the expansion of slash-and-burn agriculture, the uncontrolled harvesting of firewood and other forest resources, accidental or intentional bushfires, and mining—particularly illegal small-scale gold mining. Increasing urbanization in the forested part of the country and high poverty rates in rural areas put further pressure on forests. In a promising reversal, after a large increase in primary forest loss in 2018, Côte d'Ivoire reduced the loss by more than 50 percent in 2019, likely thanks to REDD+ programs and pledges by the government and major cocoa and chocolate producers to end deforestation.¹³

Cocoa is the main driver of deforestation, particularly in the southwest, where most of Côte d'Ivoire's remaining forests are located (figure 9.3) and where farming accounts for 80 percent of deforestation. In 2016, an uncontrolled increase in cocoa production in Côte d'Ivoire led to an oversupply in the global cocoa market, triggering a sharp decrease in international prices. Farmers responded by increasing the size of plantations, which contributed to further deforestation. Cocoa plantations have even encroached on protected forests. Blurring borders complicate enforcement of forest protection but also lead to uncertainty for farmers over land rights. Landholders lack incentives to protect the remaining tree cover, and the processes for farmers to claim ownership over the trees they plant are cumbersome and inhibit afforestation. In a vicious cycle, reducing the forest cover harms the productivity of cocoa farming by depleting nutrient sources and decreasing biodiversity.

Rising temperatures will increase the vulnerability of forests and undermine their ability to deliver environmental services, such as regulating temperatures, helping generate rainfall, and purifying air and water. Yet, tropical forests, given their carbon-storing abilities, are key for combating climate change.

Figure 9.3. Tree cover, deforestation, and cocoa production in West Africa



Source: Mufson 2019.

The new Forest Code provides a regulatory framework for implementing the forest policy. It seeks to promote public–private partnerships for forest management, agroforestry, and tree tenure security. It also introduces agroforests as a new land zoning type where farming will be permitted under strict rules that would halt or even reverse deforestation. Complementary regulation for creating and managing agroforests is under preparation. The government intends to incentivize afforestation by establishing a legal framework for farmers to receive property rights for the trees they plant. The government recently published the spatial limits of national parks, natural reserves, and classified forests to reduce land-use conflicts and the uncertainty that undermines investment by farmers. In a next step, it plans to define the new agroforests, reclassify land, and bring zoning maps in line with current de facto land uses.

Priority action on forests

To reduce deforestation and stabilize the forest cover, thus increasing the resilience of ecosystems and the people and economic activities that depend on them, the government will need to continue implementing the existing strategies and policies—notably the 2019 Forest Strategy—and building on the lessons learned under the REDD+ process. Achieving zero-deforestation agriculture will be key. But this will require establishing standards for sustainable cocoa production, which will then limit deforestation and protect the incomes of the 5 million people working in the cocoa value chain. Such standards could also boost international private investment in the cocoa sector by

allowing companies to honor their corporate commitments to purchase deforestation-free cocoa.

Concrete activities include developing and implementing forest management plans and reforestation initiatives with community participation, introducing or improving sustainable forest management techniques, and introducing systems of payment for ecosystem services to incentivize local communities to engage in forest conservation. Coordination between the Ministry of Environment and Sustainable Development and its national agencies should also be further improved. Environmental concerns—including deforestation—need to be better incorporated into the activities of other ministries. Côte d’Ivoire’s mining sector may serve as a model for effective interministerial coordination.

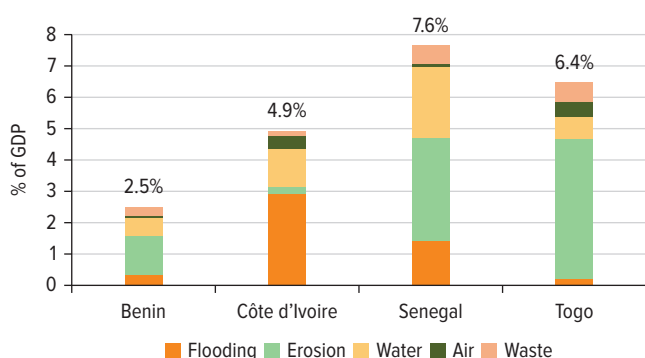
International best practices can be expected to yield positive results for Côte d’Ivoire. Applying landscape approaches, and ensuring co-management of forests in collaboration with local communities and other stakeholders, would improve the chances of success of restoration and conservation. The approach balances competing land-use demands with environmental concerns, while taking into account livelihoods, food production, and restoration.

The 2019 Forest Strategy includes a detailed action plan that lays out the steps to be undertaken through 2030. These include improving the monitoring of forest cover through remote sensing, creating awareness by integrating forest conservation into school curricula, supporting private and community forests in and around population centers, and building a cadaster for forested areas.

9.3.3 Coastal flooding and erosion

Côte d'Ivoire has 566 kilometers of coastline, much of it threatened by human activity through pollution, destruction of mangroves, and overexploitation of aquatic resources—and by natural hazards, beach erosion, sea level rise, and storm surges. In 2017, flooding on the coast had an estimated economic cost of 2.9 percent of GDP, which when combined with the costs of other types of environmental degradation in the coastal zone, amounted to 4.9 percent of GDP (figure 9.4). In addition to the average coastal retreat of 1 to 2 meters a year, extreme events have increased erosion by up to 20 meters.

Figure 9.4. Estimated costs of environmental degradation in the coastal areas of Benin, Côte d'Ivoire, Senegal, and Togo, 2017



Source: Croitoru, Miranda, and Sarraf 2019.

These phenomena destroy homes and disrupt livelihoods. They also harm the country's economy and are expected to threaten industrial assets—for example, major ports, Abidjan's international airport, some of the biggest hotels, and the facilities of Côte d'Ivoire's national refining company, Société Ivoirienne de Raffinage. The city of Grand-Lahou, whose historic center has already disappeared under water, had to be relocated in 1973 to higher ground. Grand-Bassam, listed as a United Nations Educational, Scientific and Cultural Organization World Heritage site, is also threatened. The loss of natural flood protection infrastructure such as beaches and dunes exacerbates the threats. A case study for the Port-Bouët area estimated the costs of erosion and marine submersion at CFAF 1.4 billion for 2015 alone. Rising sea levels are estimated to increase the damages due to a 20 centimeter rise by 2050 to about CFAF 460 billion a year for Abidjan alone.

Priority action on coastal flooding and erosion

Côte d'Ivoire has laws and regulations to manage risks to the coastal zone, but many of them require integrated

management and protection—as with Law 2017-378 on planning. In 2011, the Interministerial Committee for the Fight against Coastal Erosion (Comité Interministériel de Lutte contre l'Erosion Côtière, CILEC) was created, and in 2014 the Interministerial Committee for State Action at Sea (Comité Interministériel de l'Action de l'Etat en Mer, CI-AEM) was formed. Decree 2012-988 established the National Platform for Risk Reduction and Disaster Risk Management (Plateforme Nationale de Réduction des Risques et de Gestion des Catastrophes). Ensuring effective action may require strengthening the National Agency for Integrated Coastal Zone Management (Agence Nationale de Gestion Intégrée du Littoral, ANGIL) and finalizing the Coastal Zone Management Plan (Plan d'Aménagement et de Gestion du Littoral, PAGLI).

Given the regional character of many of these challenges, coordination with other countries in the region needs to be strengthened, in line with the Master Plan for West Africa's Coastal Zone (Schéma Directeur du Littoral Ouest Africain, SDLOA), which provides a coordinated and forward-looking vision for managing coastal risks. Côte d'Ivoire is one of six client countries in the World Bank's West African Coastal Areas Resilience Investment Project (WACA ResIP), which includes a regional component that focuses on promoting regional integration on coastal zone management.

Studies have identified five hotspots that should be priorities for investment projects promoting coastal resilience—Abidjan, Assinie, Grand-Bassam, Grand-Lahou, and San Pedro. Pilot activities are under preparation as part of WACA ResIP but need to be complemented by additional action and require scaling up to the other hotspots. For Grand-Lahou, a detailed Multisectoral Investment Plan (MSIP) has already been developed, but similar assessments are required to identify the needs for the other affected areas. The MSIP for Grand-Lahou proposes action that may also be relevant for other hotspots—dredging, working on sediment control and stabilizing river mouths, consulting with local communities on adaptation measures (planning relocation and constructing canals), and defining metrics and methodologies for local coastal monitoring.

In 2014, to ensure coherent implementation in the coastal zone, the government created the National Program for Managing the Coastal Environment (Programme National de Gestion de l'Environnement Côtier, PNGEC) and developed an action plan for protecting the coastline based on the National Strategy for Managing the Coastal Environment (Stratégie Nationale de Gestion de l'Environnement Côtier, SNGEC).

9.4 Spatial inequalities and urban insecurity

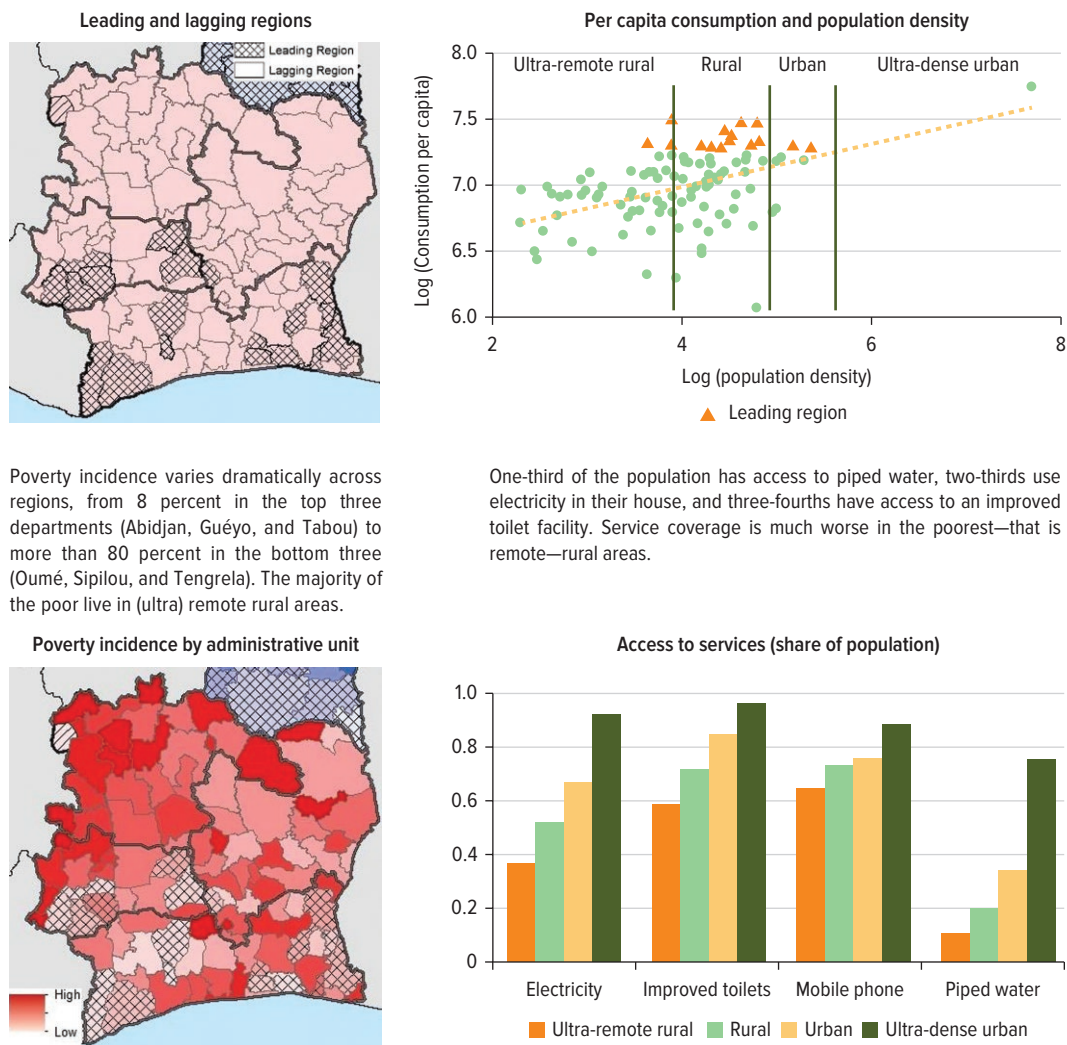
Pronounced spatial disparities impede Côte d'Ivoire's development. Decentralization has made little progress, as it requires strong political will at the central level and institutional capacity at the local level.¹⁴ Access to public goods is highly heterogeneous, and gaps are more pronounced in the north and northwest. In urban areas, 73 percent of the population has primary education, compared with 65 percent of people in rural areas—the rate is only 50 percent in the north and 56 percent in the northwest.¹⁵ These variations reflect and further perpetuate the pronounced socioeconomic inequities between north and south and rural and urban areas.

The poorest regions tend to be remote, while the leading regions are more urbanized or located in rural areas with large-scale farming operations (figure 9.5).¹⁶ Part of the differences in development between regions can be attributed to geographical and climatic differences. Although the south and west have historically been covered by tropical forests and are now dominated by cocoa and coffee crops, the north is covered by savanna, used for cattle breeding as well as for cotton and sugar plantations. The reduction of regional inequalities in Côte d'Ivoire will necessarily involve the economic development of the north.¹⁷ Obstacles, such as distances to ports, will have to be taken into account.¹⁸

Figure 9.5. Unequal distribution of poverty in Côte d'Ivoire

Of 107 departments in Côte d'Ivoire, only 19 report a per capita consumption higher than the national average, indicating wide geographic disparities.

The poorest regions tend to be remote or very remote areas, while the leading regions are either urban or in rural locations with large-scale farming operations.



Source: World Bank 2017C.

9.5 Human capital

Côte d'Ivoire ranked 165 of 189 countries on the Human Development Index (HDI) for 2018, which puts the country in the low human development category.

9.5.1 Poverty and service delivery

The national poverty rate has declined, estimated to be 44.5 percent in 2017 against 51 percent in 2011 and 46.3 percent in 2014–15.¹⁹ Poverty is mostly rural, along the north–south divide. In 2015, 57 percent of the rural population lived in poverty, compared with 35 percent in urban areas. Poverty is mostly concentrated in the north, with a poverty rate of 69 percent.²⁰ It mostly affects farmers, larger families, the uneducated or poorly educated, women-led households, and households with lower access to basic infrastructure and services.

Despite impressive growth rates since 2012, Côte d'Ivoire's economic performance has not been sufficiently inclusive and sustainable. The lack of inclusion and lack of efficiency gains in the use of public resources are outlined as major concerns in the National Development Plan 2016–2020. Poverty rates have not declined as fast as GDP has grown, leading to more inequality. So one of the key challenges is to shift from a quantitative to a qualitative growth process.²¹ Côte d'Ivoire's strategy is based on the assumption that rapid economic growth will have positive effects on the population through a trickle-down process, but this model depends on the redistributive nature of growth.²²

One-third of the population has access to piped water, and two-thirds use electricity in the house, with service coverage much worse in the poorest and remote rural areas.²³ High costs and distance to schools have a strong impact on school enrollment and dropouts, with household spending on educational fees reaching 34 percent of total spending. For maternal health services, 67 percent of respondents cited cost as the major barrier,²⁴ ranging from 83 percent in rural regions to 64 percent in urban Abidjan. Differences in primary school enrollment exist, but the most pronounced disparities are in secondary education, to which rural residents and the poor have limited access.

The Ivorian population's access to improved sanitation is especially critical, with only 22 percent of the population in 2015 having access, and as little as 10 percent for the rural population. A lack of adequate infrastructure and financing hamper the development of sanitation facilities in rural areas, while most urban cities lack sanitation master plans.

9.5.2 Unemployment and the challenges of finding quality jobs

Côte d'Ivoire has a large working-age population, with the vast majority employed. In 2015, the unemployment rate stood at 7 percent, and 93 percent of working-age Ivorians declared that

they were employed.²⁵ So, finding a job is not in itself a major challenge. The real issue is securing a quality job. Most Ivorians work long hours without earning an income that would give them the opportunity to enjoy a decent standard of living. In 2015, the average monthly income was approximately CFAF 97,266 (\$197), lower than the average in Africa.

The expansion of formal businesses and the creation of new ones remains limited, at around 5–10 times slower than in Nigeria or Rwanda. The formal labor market, public and private sectors combined, provides fewer than 1 million jobs for a labor force that is close to 9 million people and 300,000 young people entering the labor market every year.²⁶ Employment creation is undermined by the mismatch between the skills provided by the education system and those required by the economy.

Job opportunities are unequally distributed, penalizing youth, women, and urban residents.²⁷ Although unemployment remains low by international standards, unemployment rates are higher among youths, reaching 7.9 percent of the labor force for the 25–34 age group, and 13.6 percent for the same age group in urban areas. Women face higher rates of unemployment (9.4 percent) than men (4.5 percent). Taken together, 66 percent of adult women are working, a much smaller share than the 77 percent of men. In addition to facing constraints in entering the labor force, women also face hurdles in accessing employment once in the active population, including in terms of occupational choice.

9.5.3 Limited pro-poor public and social spending

The bulk of social protection and labor (SPL) spending does not go to poor individuals and households, and program coverage is limited. Overall SPL spending was 6.3 percent of total public spending, 94 percent of which went to pension schemes, which are not considered pro-poor government spending.²⁸ Results are similar even when excluding spending on the private sector pension fund (co-financed by employers and employees) from the analysis. By contrast, spending on subsidies and transfers—including fuel price subsidies to the national oil refinery and for electricity, and budget transfers to cover pension fund deficits—was double SPL spending.

Although Côte d'Ivoire's national employment policy strategy for 2016–20 lays out key priorities for enhancing access to quality jobs, particularly for youth, coverage is limited. With more than 80 percent of the labor force employed in the informal sector, labor regulations protect fewer than a fifth of workers. Public expenditures have started to shift toward a more targeted approach to poor and vulnerable households. Within the framework of the National Social Protection Strategy, new national initiatives are providing the tools to identify the poorest households and their needs—and to deliver investments and services to them.

Reforms in the risk management system can improve living standards and strengthen resilience to social, climate, and other risks. The system comprises social insurance and assistance programs—to manage such risks as disease, disability, death, poverty, and unemployment—and labor programs to improve jobs and earning opportunities. An integrated risk management framework should focus on:²⁹

- ▶ Expanding coverage of social insurance to informal workers—using programs that rely on new information and communication technologies to

provide identification for, profile, enroll, collect contributions and savings for, and make payments to workers—as well as using programs that improve financial literacy and that give workers behavioral nudges.

- ▶ Rationalizing and integrating redistributive arrangements between social assistance and social insurance programs.
- ▶ Promoting wage and self-employment among vulnerable workers, particularly in rural areas, using labor programs that rely on investment subsidies.

9.6 Recommendations

To strengthen resilience to conflict, environmental, and climate risks, policy makers should focus on four key areas of reform.

- ▶ *Strengthening resilience to climate change.* To ensure viability, the agriculture sector needs to adapt to the projected impacts of climate change. Research will be necessary into resilient crop varieties and technological innovations. Farmers will require support in accessing new markets, improving agricultural practices, and reducing risks from crop failure. To stabilize the forest cover, the 2019 Forest Strategy will need to be rigorously implemented, with achieving zero-deforestation agriculture key in this regard. Concrete activities may include developing and implementing forest management plans, strengthening sustainable forest management techniques, and improving coordination between government agencies. Increasing coastal resilience will require a joint effort with other countries in the region given the transborder challenges. Investment will be needed particularly in hotspots and should build on the experiences from pilot projects now under implementation.
- ▶ *Improving Governance.* The structural and institutional reforms have stalled. As a result, corruption impedes the development of a thriving private sector and a vibrant civil society, while preventing the country from achieving its economic and social goals. These reforms are also important at a time when Côte d'Ivoire is facing lower cocoa prices and higher hydrocarbon prices. The system's overcentralization, multiple ineffective controls, limited devolution of funds, and weak implementation and follow through on important governance and institutional reforms are major concerns. The policy dialogue between the government and donors should be more concerted and open, and monitoring the impact of donor programs more systematic.

- ▶ *Promoting redistributive policies.* Rebuilding trust between the government and its citizens is crucial. It requires improving access to high-quality basic social services and infrastructure, as well as implementing a social safety net program. And that requires giving renewed momentum to the decentralization and devolution agenda. Indeed, sufficient resources should be allocated at the local level to ensure that local needs are adequately covered. Lagging regions and cities receive too little attention, since the priority is investing in Abidjan and its region. Given the regional nature of the tensions that led to the civil war and the increasing perception that the poor and the lower-middle class do not reap the benefits of economic growth, a concerted dialogue with the government is essential. In addition, it is essential to reform risk management systems to mitigate the risks to individuals and households such as a disease, disability, death, poverty, and unemployment—and to improve jobs and earning opportunities. An integrated risk management system should expand the coverage of social protection and labor policies to the informal sector, integrate social insurance and social assistance programs, and provide labor programs, especially to rural areas.

- ▶ *Ensuring the success of the upcoming election.* As in any country with a relatively recent history of tensions and civil war, elections represent a risk. Even if the population seems generally unwilling to engage in political violence, some groups might be attracted by a narrative of fear aimed at redressing injustice and use violence as a disruptive strategy. An early coalition of the private sector, civil society, and the international and regional community could ensure that transparency, accountability, and fairness are maintained during the preparations for the election. So, adequate support for this should be mobilized early, as in Kenya in 2017.

Notes

1. Christiaensen and Premand 2017.
2. This definition of resilience is based on the terminology used by the United Nations International Strategy for Disaster Reduction. See, for example: United Nations International Strategy for Disaster Reduction 2009: UNISDR Terminology on Disaster Risk Reduction, Geneva.
3. The concept of national wealth and income is derived from the World Bank's Changing Wealth of Nations report: National income and well-being are underpinned by a country's assets or wealth—measured comprehensively to include produced capital, natural capital, human capital, and net foreign assets (Lange, Wodon, and Carey 2018).
4. Lange, Wodon, and Carey 2018.
5. World Bank 2018a.
6. Observatory of Economic Complexity: Cocoa Beans data. Last accessed February 25, 2020.
7. World Bank 2015a.
8. FCPF 2019.
9. UNFCCC 2015.
10. Ministère de l'Environnement, de la Salubrité Urbaine et du Développement Durable de Côte d'Ivoire 2014.
11. CIAT 2011.
12. World Bank 2019.
13. Global Forest Watch 2020.
14. Interview.
15. OECD 2016.
16. World Bank 2017a.
17. Despite the fact that the current President comes from the North of the country, no particular efforts were made to support the economic development of this region. This was clearly established during interviews carried out in June 2018.
18. OECD 2016.
19. World Bank 2017a.
20. World Bank 2017a.
21. World Bank 2015a; World Bank 2017a.
22. Ehrhard 2015.
23. World Bank 2017c.
24. UNICEF 2011.
25. World Bank 2015b.
26. Polle 2017.
27. Christiaensen and Premand 2017, p. 21.
28. Elgazzar, Robalino, and Tullis 2019.
29. Elgazzar, Robalino, and Tullis 2019.

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