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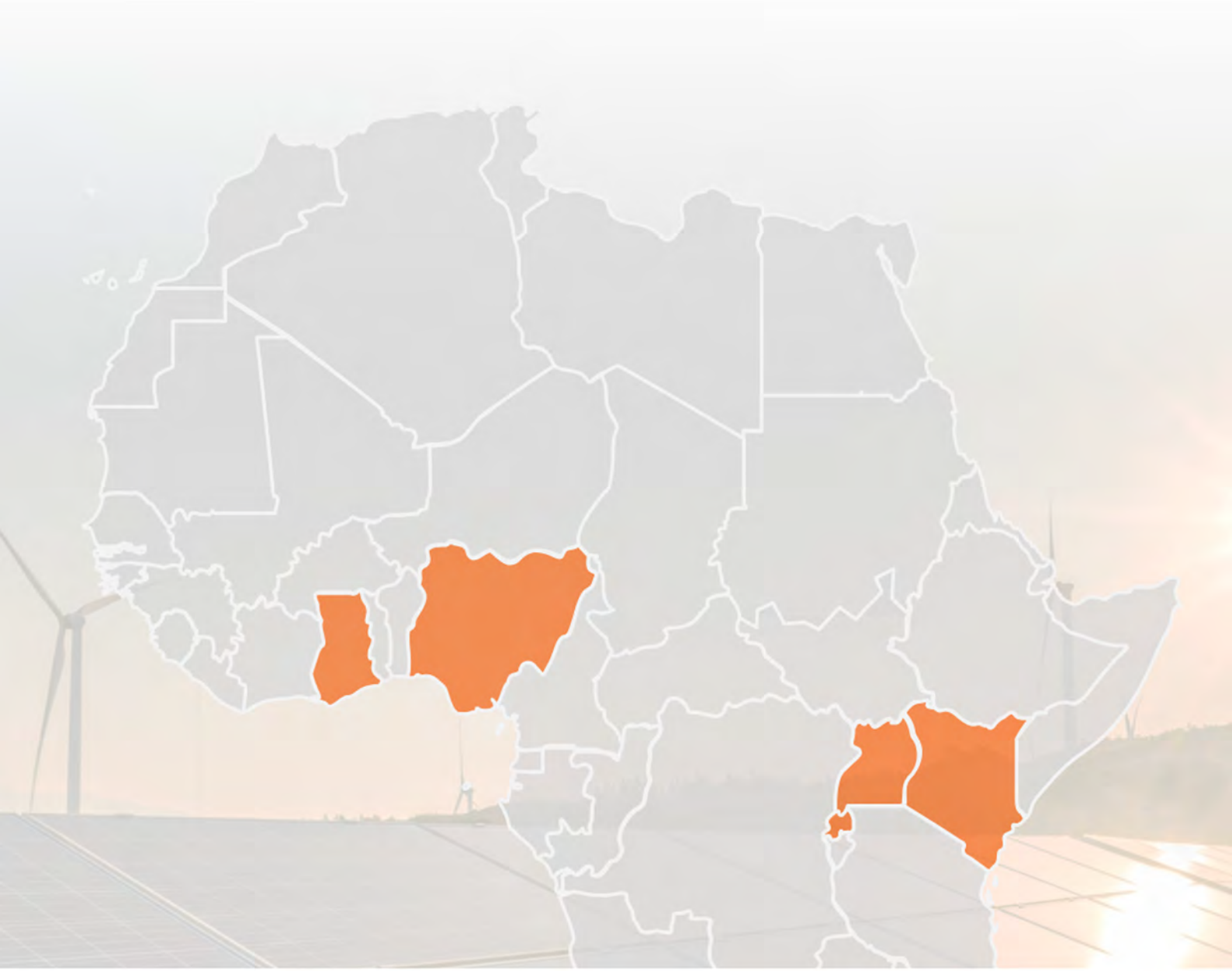

COVID-19 Investor Assessment for Ghana, Kenya, Nigeria, Rwanda and Uganda

Norad

Editorial

About UNDP

The United Nations Development Programme (UNDP) is the UN's global development network. It advocates for change and connects countries to knowledge, experience and resources to help people build a better life. UNDP aims to see our world radically changed for good and is the integrator of the United Nations Sustainable Development Goals (SDGs). UNDP is active in 176 countries and territories, working with governments and people on their own solutions to global and national development challenges and supporting country-level programs to achieve the SDGs.

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- **SDG Impact Management:** *Providing a means to better decisions that drive investment capital to where it is needed,* comprising SDG Impact Standards, an SDG Impact Seal and impact management education.
- **SDG Impact Intelligence:** *Producing data and insights needed for increasing financial flows to the SDGs,* offering SDG investor maps of investable business models via a searchable desktop platform.
- **SDG Impact Facilitation:** *Fostering matchmaking and collaboration to realize SDG investment opportunities,* focusing on investor and policy dialogue drawing on the UN presence in over 170 countries, deep sustainable development expertise and relationships with governments and other influencers.

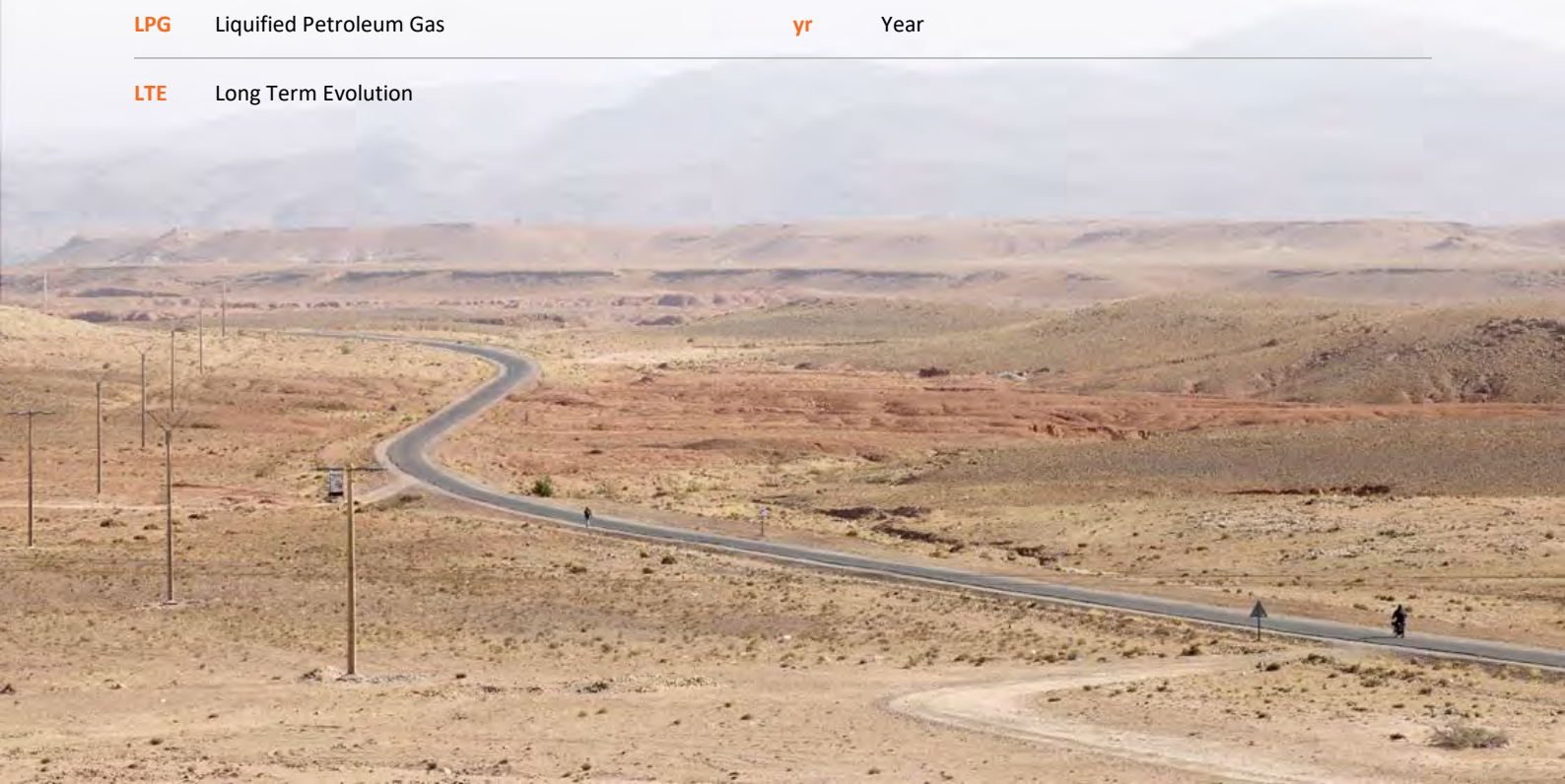
This Report was prepared by PwC Advisory spółka z ograniczoną odpowiedzialnością sp.k. ("PwC") under contract with UNDP. PwC was tasked with supporting the UNDP in creating a COVID-19 SDG Investor Map Rapid Assessment to supplement ongoing SDG Investor Maps for Ghana, Kenya, Nigeria, Rwanda and Uganda.

The Report provides a summary of the work conducted by an international PwC team of experts in close cooperation with UNDP country offices in Ghana, Kenya, Nigeria, Rwanda and Uganda. The report findings are based on 75 surveys taken by stakeholders from both the private and public sectors, further complemented with 27 in-depth, semi-structured interviews with private investors and desk research.

PwC accepts no responsibility or liability (including for negligence) to anyone other than UNDP in connection with this document. It is not possible to assess with any certainty the implications of COVID-19, both generally in terms of how long the current crisis may last and more specifically in terms of its impact on the economies of the countries covered by the Report. This document contains information obtained or derived from a variety of sources. Neither UNDP nor PwC has sought to establish the reliability of those sources or verified the information so provided.

List of terms and acronyms

CDO	Chief Development Officer	**M&A**	Mergers and Acquisitions
CEO	Chief Executive Officer	**MFI**	Microfinance Institution
CAGR	Compounded Annual Growth Rate	**MSME**	Micro, Small and Medium-Sized Enterprises
CFO	Chief Finance Officer	**MT**	Metric Tonnes
CIO	Chief Investment Officer	**MW**	Mega Watt
COO	Chief Operating Officer	**ODA**	Official Development Assistance
CPI	Consumer Price Index	**P2P**	Peer to Peer
DFI	Development Financial Institution	**PMI**	Purchasing Manager's Index
FDI	Foreign Direct Investments	**pp**	Percentage Point
GDP	Gross Domestic Product	**PPP**	Purchasing Power Parity
GIIN	Global Impact Investing Network	**SDG**	Sustainable Development Goals
HDI	Human Development Index	**SME**	Small and Medium-sized enterprises
ICT	Information and Communications Technology	**SSA**	Sub-Saharan Africa
IOA	Investment Opportunity Area	**UNDP**	United Nations Development Programme
Kbps	Kilobit per Second	**WB**	Word Bank
kWh	Kilowatt Hour	**YoY**	Year over year
LPG	Liquified Petroleum Gas	**yr**	Year
LTE	Long Term Evolution		



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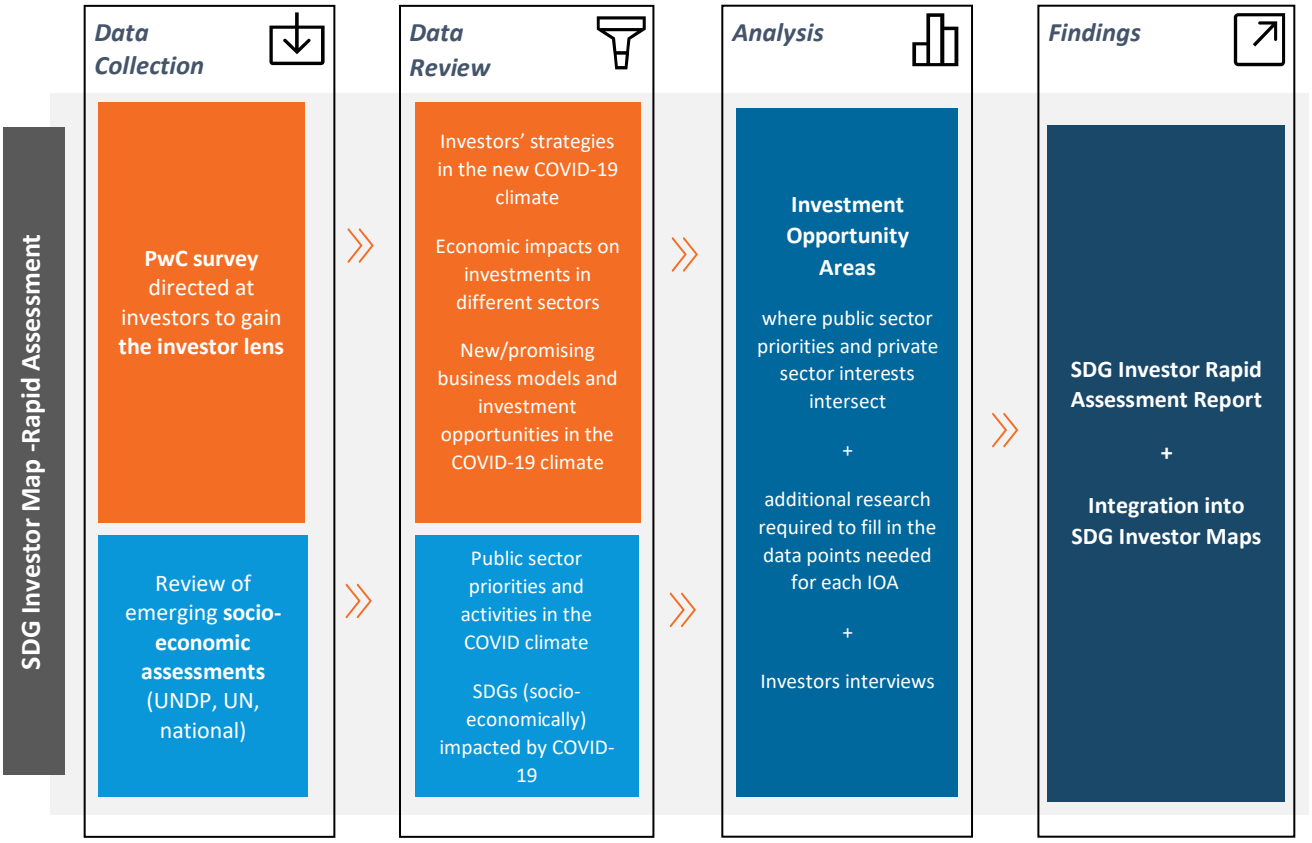
Introduction and Methodology

About the COVID-19 Rapid Assessment

This report summarizes the COVID-19 Rapid Assessment as a supplement to SDG Investor Maps conducted in Ghana, Kenya, Nigeria, Rwanda and Uganda to identify investors' perspectives concerning the impact of COVID-19 on current and planned investments. Furthermore, it also presents business models and investment opportunities where emerging public sector priorities, development needs and private sector interests coincide.

The assessment was performed following a mixed-methods approach that combines desk research with primary data from an online survey with in-depth interviews of active investors, and private sector and key public sector stakeholders in the countries. The surveys and interviews were conducted between mid-June and August 2020 for Kenya, Ghana, Nigeria and Uganda, and in September for Rwanda.

The Investment Opportunity Areas (IOAs) and business models presented in this report are the results of a synthesis of information received from the surveys, interviews with stakeholders, and primary and secondary data.



While the Report provides snapshot of the situation and the market sentiment for sustainable investments, further studies are necessary in order to better understand the far-reaching and not yet fully realized consequences of COVID-19 turmoil on the local and global economies.

The COVID-19 Investor Assessment

Includes a mapping of active investors and private sector in Ghana, Kenya, Nigeria, Uganda and Rwanda, who were targeted for the study. Over **120** surveys were distributed during June and September.

75 surveys were answered

The study includes a diverse group of key private sector and financial institutions stakeholders, as well as captures and integrates insights from the public sector

Additional insights about the impact of COVID-19 in the investment landscape were captured with

27+ in-depth interviews with private investors

Study Findings

COVID-19 Impact and Private Sector Role in Response and Recovery

Unprecedented turmoil caused by the COVID-19 pandemic has already had a negative global impact and is expected to affect substantially the economies of Ghana, Kenya, Nigeria, Rwanda and Uganda[1,2,3,4]. While the extent of this impact and key issues vary by country, region, and sector, there is one important commonality. Specifically, that the outbreak highlighted structural and development needs, particularly in sectors such as agriculture, healthcare, education, energy, and water & sanitation, each of which is crucial for the countries' growth and sustainable future. The existing development gaps in those sectors made the economies and populations less adaptable and more vulnerable to the crisis. At the same time, in all of the five countries under analysis, public sector capacities to implement stimulus packages for economies or to ease the burden for MSMEs and the population are limited. Under these settings, the private sector can play an important role in addressing the current challenges and supporting recovery efforts. Maintaining current investments and investing in new ones will support jobs, economic growth and countries' development in order to decrease the risks to a regressive path towards sustainable development and SDG targets. In each of the countries, there are investment opportunities combining commercial attractiveness with positive impact and supporting COVID-19 response and recovery.

The COVID-19 outbreak made more visible structural and development needs that were already key for the countries growth and sustainable future, such as:


Agriculture


Healthcare


Education


Decent Work and Economic Growth


Energy


Water & Sanitation

The COVID-19 outbreak will heavily impact development challenges and SDGs' attainment. The highest level of regression is expected for SDG 1: no poverty, SDG 2: zero hunger, SDG 3: good health and well-being, SDG 4: quality education, SDG 8: decent work and economic growth and SDG 10: reduced inequalities. Studies and projections demonstrate important regressions and negative impacts in almost all SDGs. UNDP Socio-economic impact assessments have also highlighted the relevance of expanding healthcare access and coverage, as well as guaranteeing food security, protect employments and the continuance of MSMEs, especially in countries characterized by poor-employment conditions, the presence of an informal sector, insufficient income generation and a need to protect vulnerable groups[5,6,7,8,9,10]. These realities are particularly relevant for the countries covered here, because major and important challenges remain in almost all SDGs [11].

Moreover, the public, private and international sectors have expressed the need to unlock capital and investment for COVID-19 response and recovery. In fact, the stakeholders included in this study mentioned that the most relevant SDGs that should be prioritized by investors are SDG 3: good health and well-being, followed by SDG 9: industry, innovation and infrastructure, SDG 1: no poverty, SDG 8: decent work and SDG 2: zero hunger.

Top Concerns about COVID-19 for Public and Private Sector in the Countries

Over two-thirds of the people surveyed were extremely concerned about COVID-19 (73% of the public sector and 62% of the private sector), while 27% and 23%, respectively, signaled moderate levels of concern.

The active investors and public sector actors included in the study from countries in question differ in regard to their main concerns associated with the pandemic. While a potential economic recession is the top worry in Ghana (55%), Kenya (47%) and Uganda (50%), in Nigeria and Rwanda, it is not regarded as one of the top problems. Instead, for surveyed actors in Nigeria is most apprehensive about the potential impact of the lockdown on business revenue (47%), whereas Rwanda is uneasy about high levels of uncertainty and a significant deterioration of financial liquidity (both with 40%).

High levels of uncertainty due to COVID-19 are the second greatest concern for business operations and investments in Ghana (42%), Nigeria (37%) and Kenya (35%). For Uganda, however, the reduction in workforce availability / productivity (42%) takes second place, particularly considering the country's reliance on manual labor and the government's strict lockdown measures imposed during the first two quarters of 2020.

The third greatest worry includes elements more associated with finances and the consequences of lockdown measures. In Nigeria, the significant deterioration of financial liquidity (32%) takes third place in its list of top concerns, whereas Kenyans' third most major anxiety is the lockdown's effects on business revenue (35%). In Uganda, however, investors highlighted the impact on business continuance (32%) as their third more pressing apprehension.

Likewise, in Rwanda the main worries are associated with supply chain disruption and the effects of lockdown measures on business revenue (33% each respectively). Additionally, stakeholders in Ghana position the disruption in supply chains in third place (42%).

Nigeria

Lockdown Impact on Business Revenue	47%
High Level of Uncertainty	37%
Significant Deterioration of Financial Liquidity	32%

Kenya

Potential Economic Recession	47%
High Level of Uncertainty	35%
Lockdown Impact on Business Revenue	35%

Uganda

Potential Economic Recession	50%
Reduction in Workforce Availability / Productivity	42%
Lockdown Impact on Business Continuance	33%

Ghana

Potential Economic Recession	55%
High Level of Uncertainty	42%
Supply Chain Disruption	42%

Rwanda

High Level of Uncertainty	40%
Significant Deterioration of Financial Liquidity	40%
Supply Chain Disruption	33%
Lockdown Impact on Business Revenue	33%

Impacts of COVID-19 on Current Private Sector Investments

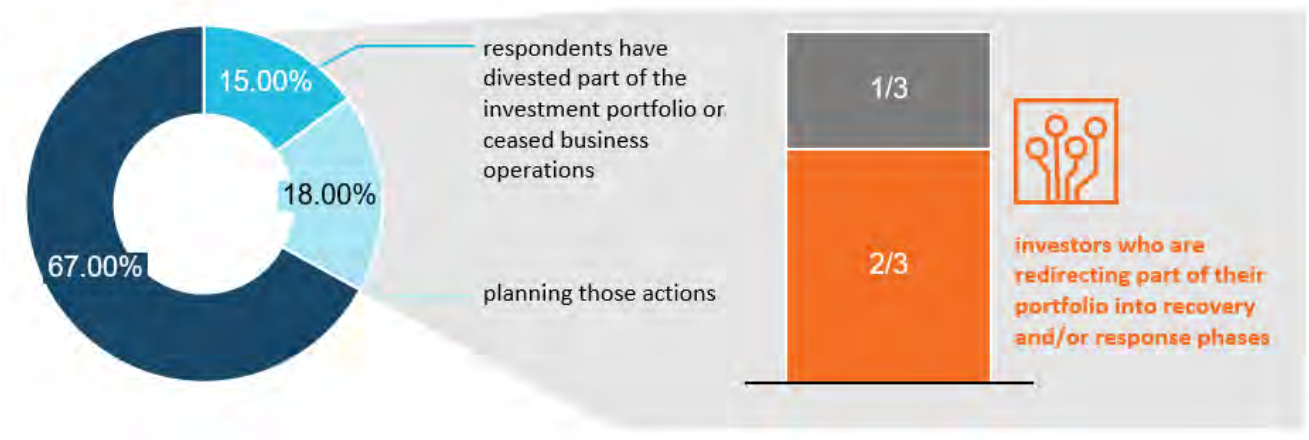
The perceived impact of and investors' responses to the effects of the pandemic vary across sectors. The pandemic is affecting mostly investments in sectors associated with non-essential goods and services, as well as those highly dependent on consumers' interactions and international supply chains. The retail, consumer goods, services (such as education, tourism, entertainment and commerce), and manufacturing and transportation sectors have had to re-think their operations and adapt as much as possible to lockdown measures, limited operations and liquidity challenges. In the case of sectors where investments have a shorter-term horizon, particularly dependent on seasonality or perishable goods (agriculture, finance, consumer goods), additional actions have been taken to control the consequences of the lockdown and supply chain disruptions to guarantee business efficacy.

The impact on sectors with longer-term investment timeframes, like those in infrastructure, and energy & renewables are not as pressing, and these extended timespans give investors additional opportunities to adjust and if necessary, develop contingency plans.

Additionally, sectors considered essential have seen a substantial increase in demand. For example, in the case **of solar power and telecommunications**, investors highlighted that the projects **are performing better than prior to the COVID-19 outbreak.**

Despite increasing concern about current effects and future challenges of the COVID-19 outbreak, there is an appetite to continue investing in Ghana, Kenya, Nigeria, Rwanda and Uganda. Most investors are adjusting to this new reality and looking for new investment opportunities or redirecting part of their portfolio into response and recovery efforts. While 85% of the surveyed actors from the private sector and 100% of the public sector actors expressed moderate or high level of concern about COVID-19, just 3 out of 60 investors explained that they have cancelled all new investment processes in the countries, and none of them have cancelled ongoing investment processes. Additionally, the majority of the interviewees mentioned that their companies were closely monitoring the situation to identify if new investment opportunities are emerging.

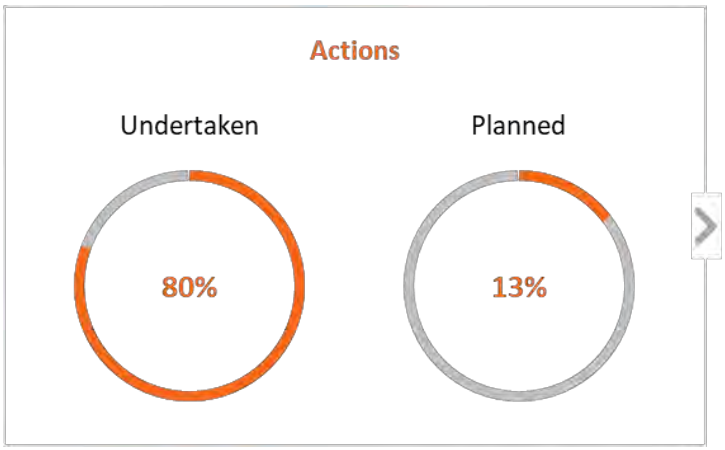
At the same time, 15% of the respondents have divested part of the investment portfolio or ceased business operations, while 18% are planning those actions. Over two-third of those investors are redirecting part of their portfolio into recovery and/or response phases.

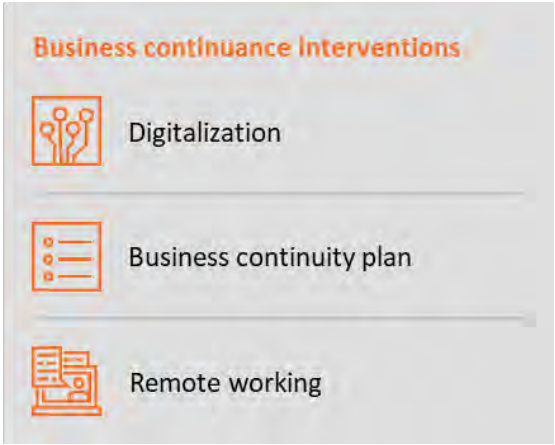


Actions Undertaken and Planned by the Private Sector due to COVID-19

The main priority for the private sector is to ensure the sustainability of their current investment portfolios in the countries, while their secondary priority is to allocate additional resources for emerging sectors and opportunities. Over 60% of private sector actors mentioned that they have modified investment priorities due to COVID-19, in particular by adding additional emphasis to technology & communications – digitalization and infrastructure - the most relevant sub-sectors to ensure business operations' continuity. Other relevant sectors include healthcare, services, financials, and agriculture. Investors and companies interviewed highlighted the pressing need to focus on rethinking / ensuring the success of their current and planned pipeline of investments.

For existing portfolios, the main actions that the private sector has taken and planned focused on guaranteeing business continuance, liquidity and cost reductions. The most common actions undertaken (80%) and planned (13%) by survey respondents were focused on business continuance interventions, such as digitalization, business continuity plan, and remote working.





Additionally, investors are implementing actions to rethink, reorient, and repurpose businesses, production lines, supply chains and local / regional value addition to products and services. In different sectors, business closures and remote working alternatives were introduced, putting additional pressure on already limited.

At least half of the actors in all the analyzed countries confirmed they have introduced investment strategy for changes and adjustments, there is a significant discrepancy between the results for Nigeria and Rwanda.

5 out of 9 private sector investors and companies shifted investment priorities in Ghana

8 out of 16 private sector investors and companies shifted investment priorities in Nigeria

7 out of 10 private sector investors and companies shifted investment priorities in Kenya

6 out of 11 private sector investors and companies shifted investment priorities in Uganda

11 out of 14 private sector investors and companies shifted investment priorities in Rwanda

Areas Where Investors Plan to Increase Priority over a 3-Year Horizon

Investors vary across countries and sectors in determining which areas they would add / increase priority. There is no clear pattern except that ICT is the only sector highlighted by investors in three out of the five surveyed countries (Uganda 67%, Nigeria 38%, Ghana 20%). **In Uganda priorities are rising in all sectors but one, where the level of investors' interest is expected to remain constant.**

Healthcare plays a major role during the COVID-19 pandemic. 50% of investors in Nigeria and 43% in Kenya increase priority in this sector. However, according to the survey results, healthcare is not listed among the sectors slated for increased priority in the other three countries, though this may be misleading.

It is worth emphasizing, however, that healthcare is an area where stakeholders are already present. Thus they maintain priority as demonstrated in the previous slides.

Other relevant sectors include agriculture and renewables & alternative energy. Agriculture was listed as the highest priority in two out of the five countries (Kenya 43%, Rwanda 30%). Also, in Kenya and Nigeria renewables & alternative energy are gaining more focus (43% and 38% respectively).

The other relevant sector is infrastructure, highlighted in Uganda and Nigeria (50% and 30% respectively).

Ghana

The following sectors were highlighted with the same rate of **20%**

- Healthcare
- Transportation
- Food & beverage
- Financials
- ICT
- Education

Kenya

Agriculture	43%
Renewables & alternative energy	43%
Healthcare	43%

Uganda

ICT	67%
Infrastructure	50%
Resource Transformation	50%

Rwanda

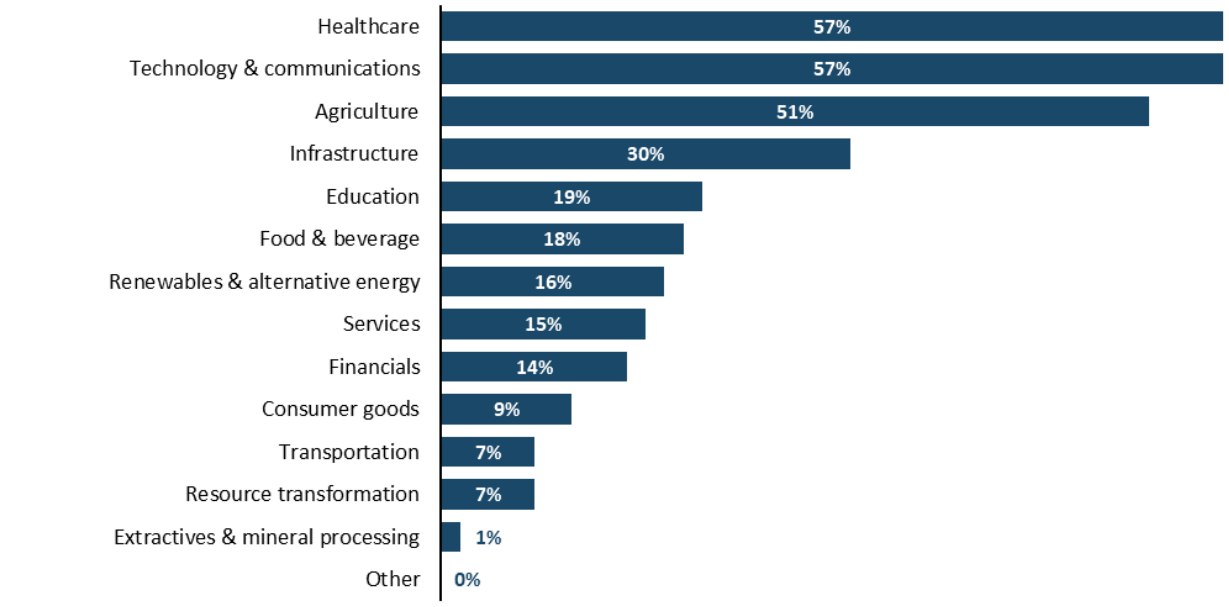
Agriculture	30%
Infrastructure	30%
Extractives & mineral processing	30%

Nigeria

Healthcare	50%
Renewables & alternative energy	38%
ICT	38%

Sectors Presenting Opportunities for Sustainable Investments in the Next 12 Months

Figure 1. The top 3 sectors presenting opportunities for sustainable investment in the next 12 months to recover from the impacts of COVID-19 in the country



N: All surveyed actors, base 300%

Technology & Communications, Healthcare and Agriculture are the top 3 sectors

representing opportunities for sustainable investments

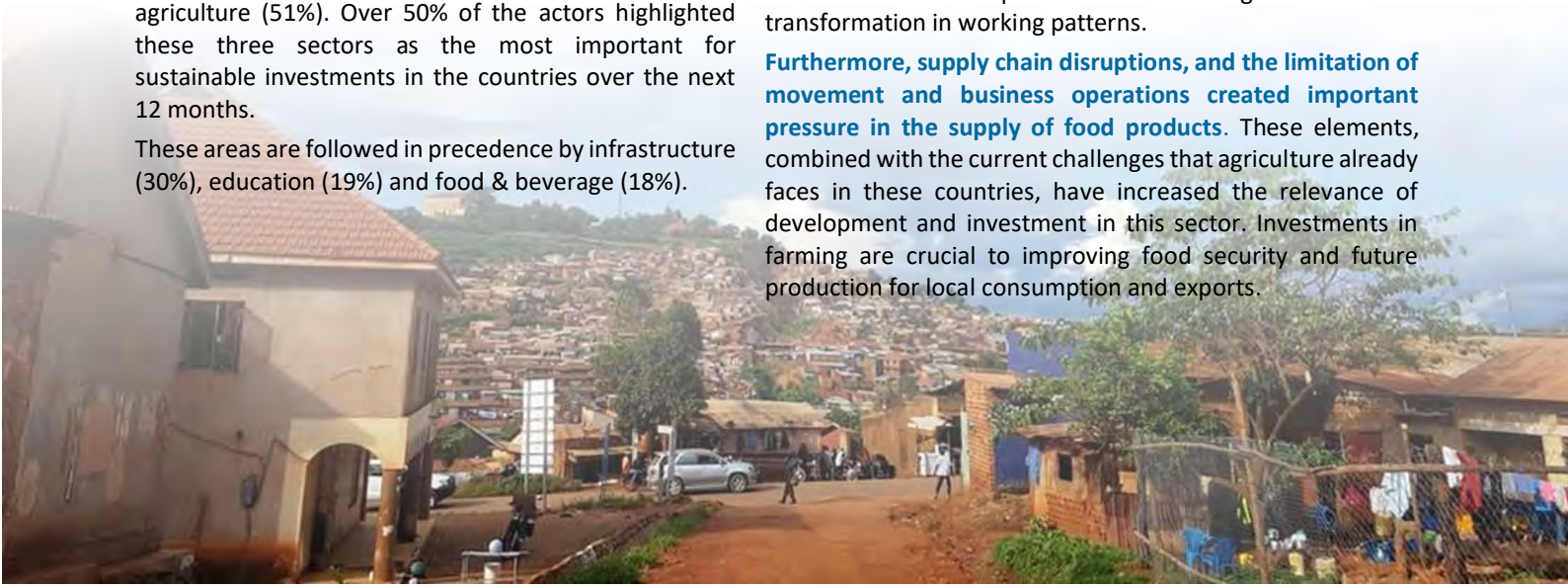
According to survey results the top 3 sectors where investors foresee opportunities are technology & communications (57%), healthcare (57%), and agriculture (51%). Over 50% of the actors highlighted these three sectors as the most important for sustainable investments in the countries over the next 12 months.

These areas are followed in precedence by infrastructure (30%), education (19%) and food & beverage (18%).

Renewables & alternative energy (16%), services (15%) and financials (14%) constitute a third group in terms of opportunities. Despite the relevance of energy as a key resource for livelihoods and business development, stakeholders did not perceive it as one of the driving areas of investments in the next 12 months.

The top three sectors are directly associated with COVID- 19 and the challenges and needs that the outbreak made even more visible. The development of a strong and accessible healthcare system will help contain and treat viruses and reduce the impact of health threats to the population and the countries' growth. Additionally, lockdown measures and their consequences on lives and business continuity exacerbated the need for a rapid transition to digitalization and transformation in working patterns.

Furthermore, supply chain disruptions, and the limitation of movement and business operations created important pressure in the supply of food products. These elements, combined with the current challenges that agriculture already faces in these countries, have increased the relevance of development and investment in this sector. Investments in farming are crucial to improving food security and future production for local consumption and exports.



Critical Countries' Needs Aligned with Investors Priorities for COVID-19 Response and Recovery

In each of the five countries the investment opportunities identified combine commercial attractiveness with positive impact, and also support COVID-19 response and recovery. The Investment Opportunity Areas emerging for COVID-19 Response and Recovery can be categorized into two main groups:

1) **Opportunities in critical sectors impacted by the outbreak**
2) **Opportunities in cross-cutting sectors as key enablers for growth and development**

1) Opportunities in critical sectors impacted by COVID-19: The first group of investment opportunities includes areas such as healthcare, food & beverage, agriculture, education, resource transformation and services - all of them negatively impacted by the outbreak, lockdowns, supply chain disruptions and shifts in consumption patterns. Immediate and mid-term opportunities for investors were identified in those sectors to support countries' economies, job retention, business continuance, and the development of platforms and solutions to tackle challenges associated with relevant services as healthcare, education and remote work.

- **Services, healthcare and education present investment opportunities** for copying and adapting to new challenges posed by the virus. These include telemedicine, solutions for e-learning, delivery services, e-commerce and platforms to allow business continuance.

- Additionally, business opportunities to tackle already existing sub-sectoral bottlenecks - intensified by the pandemic - were listed, particularly in **agriculture, food & beverage and resource transformation**. Investing in these sectors is key for the countries' development taking into consideration the level of contribution to GDP, employment generation and food security. Special focus is needed in the agriculture value-chain, high value crops, transportation, storage and logistics, as well as in resource transformation. This will ensure the availability of personal protective equipment and medical supplies - all articles with a current high level of demand .

2) Opportunities in cross-cutting sectors: The second group of investment opportunities is formed by key underinvested sectors that are central to ensuring growth and development such as **technology & communications, renewable energy, infrastructure, and financial sector**.

- Despite the rapid expansion of the **technology & communications sector**, particularly in access to mobile phones and mobile-payment systems, affordable and reliable access to internet and electronic devices is fairly limited in the countries. The coronavirus accelerated the need and demand for connectivity and telecommunications, with survival of many businesses dependent on the digitalization of business processes.

- Even though **infrastructure** has been a priority in recent years for the countries, the COVID-19 outbreak made the needs and demands for access to **electricity, water, gas and waste management systems** even more pressing. The necessity for reliable, affordable, and clean grid and off-grid energy sources throughout the countries has spill-over effects in each of the other sectors.

Critical Countries' Needs Aligned with Investors Priorities for COVID-19 Response and Recovery

Today, even in urban areas connected to the grid, the access and cost of energy are challenging, directly impacting business operations, the well-being of citizens and further human development. Limited and unreliable access in peri-urban, rural and remote areas has stymied the establishment and continuance of MSMEs, healthcare delivery and educational facilities, and developments in remote schooling and working. This has led to increased demand for **off-grid solar energy generation,** further growing the private sector's attention to this solution. Moreover, the crisis highlighted the need for affordable access to water, gas and proper waste management programs, and dramatically increased the demand for these types of services.

Due to the limitations posed by COVID-19, investors are implementing new approaches for project evaluation, despite new investments in broadly understood infrastructure projects relying on due-diligence, the physical access of experts and on-site specialists.

Likewise, the **financial sector** has been identified as one of the key areas for the facilitation of business development and operations, as well as for ensuring liquidity and continuity for thousands of MSMEs on the continent. Stakeholders highlighted emerging investment opportunities for providing microfinancing, affordable short-term loans for MSMEs to provide liquidity, and mid-term loans for business recovery.

Business Models and Emerging Investment Opportunities for Ghana, Kenya, Nigeria, Rwanda and Uganda

There is high need for non-CAPEX intensive models for response, and more CAPEX intensive models for COVID-19 recovery. Opportunities exist to focus sustainable investments for COVID-19 response with non-CAPEX intensive investments, such as telemedicine, e-learning alternatives, digitalization, platform development and services. These types of models represent lower risk and higher agility to deploy resources and implement them rapidly, thereby supporting business continuance and job preservation and covering current needs. However, there are also high CAPEX investments for the recovery phase such as the creation of processing facilities for agricultural products and dairy, storage and packaging infrastructure, gas and water infrastructure, and waste management & recycling facilities.

Even though business models heavily depend on sectors of investments, there is significant interest in co-investing with the private sector, blended finance and patient capital. A critical mass of those surveyed and interviewed mentioned that they changed the parameters for risk assessments of investment opportunities in the countries. Investors are interested in innovative business models to mitigate the risks for investments in the countries. Models where the public sector and / or DFIs co-invest are becoming especially attractive to ensure investment in sectors with higher risks and long-term investment timeframes.

The list of the Investment Opportunity Areas presented in the next section for each of the countries is the product of mixed methods approach, which benefited from results of the survey taken among private and public stakeholders, open discussions with investors who contributed to the sectoral prioritizations and desk research covering –publicly-available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies and National Policies/responses to the COVID-19 outbreak.

The analysis has demonstrated that advancing in the SDGs and tackling the main development needs are becoming even more urgent due to COVID-19 turmoil. At the same time, a number of areas was revealed in the selected sectors where business potential, policy priorities and development needs aligned.

Ghana

Ghana has a population slightly exceeding 30 million people. It is perceived as one of the most politically stable countries on the continent, with wide freedoms for the press and speech. Although Ghana is categorized as a lower-middle-income country with a GDP per capita above 2,200 USD, it has one of the fastest GDP growths in Africa at 6.5% in 2019.794 The country is in the medium human development group category, with an HDI value of 0.596.[12]

In 2019 services accounted for almost 45% of Ghana's GDP, higher than industry and agriculture, which contributed 32% and 17% respectively.[13]

HDI
142nd* place
*out of 189

Population
30 m

GDP
67 bn $

Investment Opportunity Areas

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Agricultural Development & Innovation	*Supply high-quality seeds and fertilizers to farmers or to government supporting its agricultural programs*	15%-24%		2, 12, 15
	Processed Foods	*Investing in sustainable fish processing factories*	13%-27%		2, 12, 14
	Food Retailers & Distributors	*Creating mobile platforms to connect food producers with markets and provide agricultural information*	30% - 50%		2, 9, 12
	Storage & Packaging Infrastructure	*Building cold storage and transportation infrastructure for agriculture*	48%		2, 12
Healthcare	Healthcare Distribution	*Investment in telemedicine & mobile consultation and emergency response systems*	23%-27%		3, 5
Infrastructure	Gas Utilities & Distributors	*Building LPG bulk storage infrastructure and distribution systems*	20%-47%		7, 11, 15
	Water Utilities & Services	*Construction of water pipelines in low-income and informal settlements*	19%-23%		1, 3, 6
Financials	Consumer Finance	*Providing affordable loans for preserving farmers and MSME's liquidity through digital solutions*	18%		1, 8, 9

Detailed information can be found in the appendix section

Kenya

Kenya – a country located in the eastern part of Africa - has a population exceeding 52.5 million people which grows at an annual pace of 2.3%. It is a third largest economy in Sub-Saharan Africa after Nigeria and South Africa.[7,9,8]. Although Kenya is classified as a lower-middle-income economy by the World Bank, its HDI result of 0.579 puts the country in the medium human development group.[14]

The sector with the highest contribution to GDP is services (43.2%) whereas industry and agriculture contribute 16% and 34%, respectively. The informal sector constitutes around 88% of total employment.[15]

HDI
147nd* place
*out of 189

Population
52.5 m

GDP
95.5 bn $

Investment Opportunity Areas

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Food Retail & Distribution	*Creating platforms to connect food producers with markets*	20%-30%		
Healthcare	Healthcare Distribution	*Investment in telemedicine centers, hospitals, mobile consultation services, & emergency response systems*	18%-22%		
	Medical Equipment & Supplies	*3D printing farms for the production of PPE and medical spare parts*	18%-22%		
Infrastructure	Water Utilities & Services	*Water pipelines for low-income settlements*	16%-20%		
Financials	Consumer Finance	*Provide affordable credit and loans to support financial liquidity of MSMEs and agriculture*	18%		
	Insurance	*Providing affordable health and property microinsurance via mobile phone*	13%-18%		
Education	Digitalization of Education	*E-learning solutions via mobile platforms*	19%-23%		
ICT	Software & IT Services	*Digital remote work solutions for companies offering a wide range of services*	17%-21%		
	Internet Media & Services	*Extending existing broadband ranges across impoverished regions of the country/digital inclusion*	14%-18%		
Renewable Resources & Alternative Energy	Solar Technology & Project Developers	*Off-grid and mini-grid solar power generators to rural communities*	15%-20%		

Detailed information can be found in the appendix section

Nigeria

Nigeria has the biggest population on the continent with over 200 million inhabitants and an annual growth exceeding 2.5%. According to the World Bank, it is the largest economy in Africa.[802] However, Nigeria's HDI value for 2018 is 0.534, putting the country in the low human development category[16].

Services account for approximately half of the Nigerian GDP with agriculture generating slightly more than one-fifth of it. The share of the non-oil industry in the total GDP has increased in the last few years and, according to the World Bank, has reached almost 20%[17].

HDI
158nd* place
*out of 189

Population
200 m

GDP
448 bn $

Investment Opportunity Areas

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Agricultural Production	*Agroprocessors for adding value to raw farm production*	16%-20%		2, 9, 12
	Storage & Packaging Infrastructure	*Storage infrastructure for grains and crop value chains*	57%		2, 3, 12
	Transportation & Logistics	*Logistics services for transporting raw agricultural produce*	19%-23%		2, 12
	Fishery	*Fishery terminals*	20%-25%		1, 2, 3
Healthcare	Healthcare Delivery	*Production of COVID-19 tests*	21%-25%		3
Infrastructure	Electric Utilities & Power Generators	*Electricity generation from refuse derived fuel from main cities*	18%-22%		7, 11, 12
	Waste Management	*Clinical waste management facilities*	12%-18%		11, 12
	Waste Management	*Investments in recycling facilities*	12%-18%		3, 12, 14
Financials	Consumer Finance	*Provide short- and medium-term loans for financial liquidity to MSMEs and agriculture*	16%-20%		1, 8, 9
Renewable Resources & Alternative energy	Solar Technology & Developers	*Standalone solar systems for MSMEs, public education & healthcare facilities and households, delivered to remote areas*	15%		7, 11, 13
Resource Transformation	Chemicals / Biomass	*Construction of LPG and Ethanol / Methanol Plants*	10%-15%		3, 7, 11
Services	Professional & Commercial Services	*Platforms offering delivery services & payments processing*	*		8, 12

* Revenue information for this IOA can be found in the appendix section

Detailed information can be found in the appendix section

Uganda

Uganda has a rapidly growing population of almost 45 million people, characterized by one of the world's highest fertility rates at 5.59 children per woman in 2018. It is categorized as a low-income country with a GDP per capita of 776.8 USD, much lower than its neighbors.[806] Uganda's HDI value for 2018 is 0.528, putting the country in the low human development category[18].

Services constitute almost half of Uganda's GDP, whereas industry accounts for around 30%. The lowest share belongs to agriculture, comprising only one-fifth of the economy[19].

HDI
159nd* place
*out of 189

Population
45 m

GDP
34 bn $

Investment Opportunity Areas

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Agricultural Production	*Production of bio-fertilizers*	15%		
	Agricultural Production	*Investment in dairy processing facilities*	15%-19%		
	Storage & Packaging Infrastructure	*Collection of milk from smallholder farmers and storage of dairy products*	17%-21%		
	Storage & Packaging Infrastructure	*Storage for agricultural production*	57%		
Healthcare	Medical Equipment & Supply	*Financing for healthcare facilities*	14%-18%		
	Medical Equipment & Supply	*Manufacturing first aid supplies & medical disposables*	19%-23%		
Infrastructure	Waste Management	*Facilitating cooperation between waste collectors and landfills*	12-18%		
	Waste Management	*Investments in recycling facilities*	12%-18%		
Financials	Consumer Finance	*Provide affordable loans to support financial liquidity of MSMEs and agriculture*	18%		
Services	Professional & Commercial Services	*Platforms offering delivery services & payments processing*	*		
Food & Beverage	Non-Alcoholic Beverages	*Investments in facilities and distribution of distilled water*	12%-16%		

* Revenue information for this IOA can be found in the appendix section

Detailed information can be found in the appendix section

Rwanda

Rwanda, a land-locked country located in the eastern part of Africa, has a fast-growing population of 12.6 million people [810]. The country ranks 29th in the world in terms of the ease of doing business and is the only low-income economy within the top 30 locations [811]. It is categorized as low income country with GDP per capita at USD 801.7 in 2019. Rwanda's HDI value was only 0.536, putting it in the low human development category [812].

In 2019, services constituted nearly a half of the country's GDP, while agriculture and industry accounted for 24.1% and 18% of GDP respectively [813]

HDI
157nd* place
*out of 189

Population
12/6 m

GDP
10 bn $

Investment Opportunity Areas

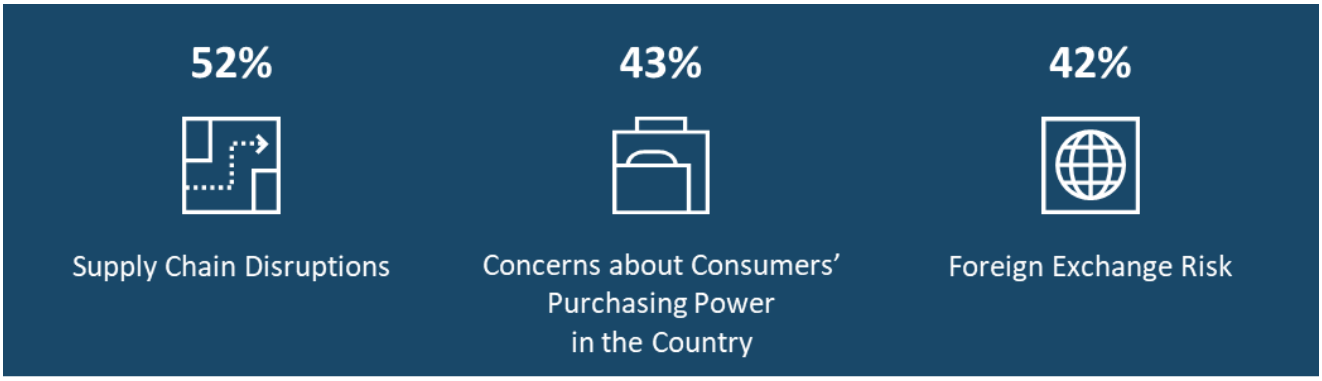
Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Processed Foods	*Agricultural processing for staple crops adding value of production*	14%-18%		
	Meat, Poultry & Dairy	*Investment in dairy processing facilities*	25%-35%		
	Storage & Packaging Infrastructure	*Storage infrastructure for agricultural products and crops*	50%		
Healthcare	Medical Equipment & Supply	*Manufacturing of first aid health products and medical equipment*	19%-23%		
Infrastructure	Waste Management	*Investment in facilities and upscaling the recycling and reprocessing rate of plastic disposables*	12%-18%		
Financials	Consumer Finance	*Affordable loans for agriculture and MSMEs*	18%		
Renewable Resources & Alternative Energy	Solar Technology & Project Developers	*Off-grid and mini-grid solar power generators for rural communities*	15%-20%		
Consumer Goods	Household & Personal Products	*Production of soap and detergent*	20%-40%		

Detailed information can be found in the appendix section

Risks and threats to Sustainable investments

Diffused and changing policies and regulatory environments in the countries concerned are, according to investors, the main risks for current, planned and potential investments. There is need for a stable, clear and transparent regulatory environment in these countries. Several private sector actors highlighted the difficulties they face due to shifting regulations, and different tax frameworks and regimes, that exacerbate uncertainties in an already turbulent and complex international reality. Additionally, although some sectors are underinvested by governments, the private sector is reticent to invest due to poor regulations, management and accountability challenges. For example, in the case of healthcare, some investors mentioned the difficulties around some inadequate regulations for care providers and insurers.

Over half of the public and private sector actors included in the study consider supply chain disruptions as the most important threat to sustainable investments in the countries. Threats associated with supply interruptions are particularly relevant in the case of Kenya, where two-thirds of the actors surveyed highlighted this as the most relevant concern (+12 pp) and Rwanda (+6 pp). In the case of Nigeria, it is considered the second greatest main threat (-5 pp), and third largest for Ghana (-7 pp) and Uganda (-12 pp).



Additionally, **43% perceived consumers' purchasing power as one of the top three biggest threats in their respective countries.** This concern is ranked first for Uganda (50% +7 pp), and second for Nigeria and Kenya (47% +4 pp). Moreover, **42% of the surveyed actors consider foreign exchange risk as a main threat.**

Biggest Threats to Investment Capacity for the Private Sector

Supply chain disruptions and foreign exchange risk are perceived as the most severe threats to capital deployment in the analyzed countries (49% and 46% respectively). According to the survey, Nigeria (62% +16 pp) Ghana (56% +10 pp) and Rwanda (46%) perceive foreign exchange risks as the biggest threat to investment capacity in their respective countries. Similarly, concerns regarding possible supply chain disruptions affect investors in Rwanda (62% +13 pp), Nigeria (50% +1 pp) and Kenya (50% + 1 pp).

49% of the private sector actors think that the biggest threats for the investment capacity are related with supply chain disruptions

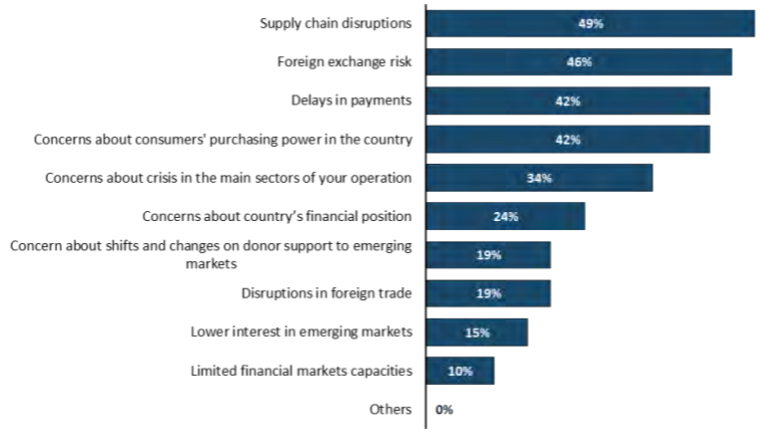
Anxieties surrounding consumers' purchasing power are particularly common in Uganda (55% +13 pp), Nigeria (50% +8 pp) and Ghana (44% +2 pp). A decreasing currency's purchasing power leads to serious economic consequences such as the rising costs of goods and services, high interest rates and falling credit ratings, which in turn may deepen the crisis.

Possible delays in payments is another concern highlighted by 42% of private investors. It is particularly expressed for Rwanda (54% +12 pp), Uganda (50% +8 pp), Ghana (44% +2 pp) and Nigeria (44% +2 pp). A payment deferred until a later date requires the investor receiving payments to plan for greater illiquidity and may result in multiple inconveniences.

Although concerns about lower interest in emerging markets are generally perceived as one of the less significant threats, 33% of the survey participants in Ghana expressed such fears.

Similarly, a high level of diversity has been observed with regard to investors' concerns about shifts and changes in donor support to emerging markets. In Rwanda and Ghana, only 8% and 11% of the investors respectively considers this factor to be a threat (-11 pp and -7 pp). However, it was highlighted by 19% of investors in Nigeria (0 pp), 18% in Uganda (-1 pp) and as much as 40% in Kenya (+21 pp).

Figure 2. Which do you think would be the 3 biggest threats to the investment capacity in the country?



N: 60 - Private Sector, base 300%

Regulatory Framework Challenges and Key Enablers for Investments in the Countries

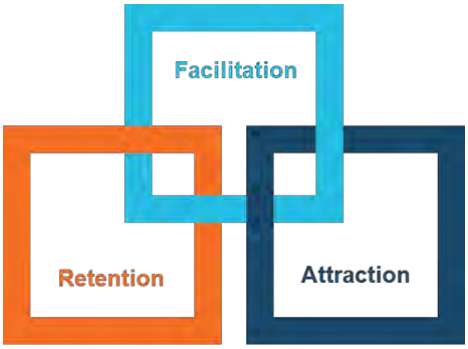
Need exists for clear regulations to ensure the proper interpretation of norms, particularly in customs and taxation. A critical mass of technology, machinery, equipment and supplies is needed to develop businesses in almost every sector on the continent. Therefore, customs activities and pronouncements are highly relevant and have a direct impact on the timeline and costs of projects. Several actors mentioned that despite there being specific regulatory frameworks in the countries analyzed there are issues related to different readings of those norms and agreements. Hence, there is need for further directives and instructions to reduce instances of inappropriate interpretations - especially in structures for customs, imports and exports.

Structural challenges and regulatory frameworks represent some limitations to invest in the education, agriculture, and healthcare sectors. These sectors play an enabler role for countries' sustainable development. The promotion of integrative and partnership-oriented regulations can further attract investors and support advancing on SDGs. Investors highlighted the need for the revision and further facilitation of access to integrative data covering these sectors.

There are opportunities for foreign investors to partner with local investors and companies, and to leverage their local knowledge about enablers and risks, as well as key challenges to reduce those risks. Collaboration and partnership between foreign and local companies are a common practice, yet foreign investors highlighted the difficulties with identifying the right partners, as well as some challenges related with governance structure and skills gaps. There is need to generate better awareness about successful cases, financial returns and the social impact of particular investments, opportunities and partners in local markets.

There is high need for enhancing partnerships, promoting capacity building, technical assistance, knowledge sharing and human capital development to guarantee adaptability, sustainability and recovery. Most of the investors interviewed highlighted the need for technical assistance and strategic support to help the private sector adapt, recover and re-think their business models to ensure their sustainability. The involvement of the public sector and international institutions to facilitate this strategic support will be key in enabling the future of businesses in Ghana, Kenya, Nigeria, Rwanda and Uganda.

Key Actions from the Public Sector and International Actors to Support Sustainable Investments



The actions that public sector and international development institutions should take to mitigate risk for investments must be centered around three concepts: facilitation, retention and attraction. The actions needed to support investments in the five countries are related with the facilitation of current, planned and future investments, as well as the establishment of additional incentives to keep active investors in the country, attract new investment from already active investors and show potential opportunities to new actors.

The public sector should aim to reduce the risk for investments in the countries analyzed, focusing on creating stable, attractive, and transparent regulatory and taxation regimes. Private sector survey and interview participants highlighted that the public sector should play a key role in reducing and mitigating the risks for current and planned investments. They also expressed a need to do so for sustainable investments in the COVID-19 response and recovery phases. Participants also mentioned several actions associated with regulations and tax incentives that can support cost reduction, particularly focusing on tax exemption for imported equipment, revisiting fiscal incentives regimes to promote investment and exploring the possibility of establishing preferential tax regime for investment projects in the coming years.

49%	35%	32%
Support for new innovative business models	Liquidity supporting facilities	Preferential tax regime for investment projects in the next years

The most highlighted action to mitigate the risk for sustainable investments in the next 12 months in the countries concerned is support for new innovative business models including public sector co-financing / co-investing along with private investors (49%). This option is considered the top action in each of the five countries, highlighting the importance of public sector engagement to actively stimulate investments for sustainable recovery, and confirms the demand for public-private cooperation.

The establishment of liquidity support facilities is the second most important recommended action (35%). Such support facilities were particularly highlighted in the case of Uganda (50% +15 pp). Additionally, **the creation of preferential tax regimes for investment projects in the coming years (32%) is another suggested measure.** This effort has higher support in Nigeria (42% +10 pp) and Ghana (36% +4 pp). However, it is considered less relevant with lower rates of backing in Kenya (29%), Rwanda (25%) and Uganda (20%). The final highlighted step is revisiting fiscal incentives regimes to promote investment (30%).

Investors highlighted the role of Development Financial Institutions as being a key player for de-risking investments. DFIs are key actors in mitigating the risk and impact of COVID-19 on current, planned and potential investments in the

region. Due to high levels of uncertainty, supply chain disruptions and foreign exchange risks need the support of DFIs to de-risk and co-finance high risk sectors and projects. This will allow private sector investors to consider investment opportunities that otherwise will not meet their internal fund regulations. Additionally, Development Financial Institutions can support risk underwriting for banks, thereby providing financing for investments.

Appendices

Appendix I
Survey results

Public Sector Respondents' Profile

The survey and in-depth interviews included a number of public entities, the majority of which characterized themselves as national. Two claimed to be sectoral organizations, and one entity listed itself as an investment authority.

Public sector – Survey

x3	x1	x7	x3	x1
Nigeria	Uganda	Kenya	Ghana	Rwanda

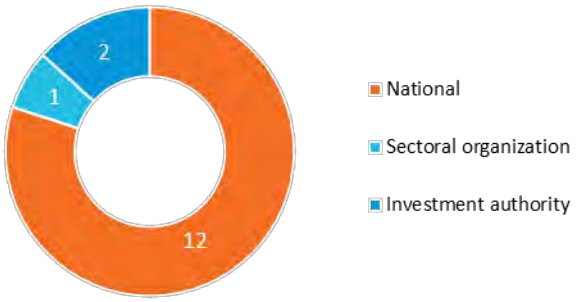
The share of sustainable investments in the organizations' portfolio varies among respondents. Of the 47% of public entities surveyed that allocate between 20 - 50% of their portfolio to sustainable investments, the majority is based in Kenya (4 entities).

However, none of the public entities allocate less than 5% for sustainable investments (figure 4).

The public entities' top three priority sectors, in terms of investments, are infrastructure (73%), agriculture (47%), healthcare and technology and communications (both with 27% respectively). Those sectors are followed by education, resource transformation, consumer goods and extractives and mineral processing (20%).

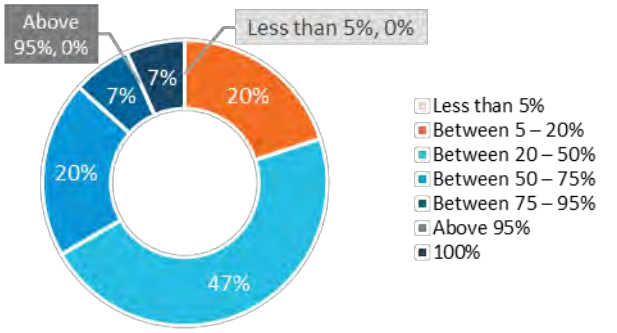
None of the public organizations which took part in the survey focus on the transportation sector. Similarly, 0% have no priority sectors (figure 5).

Figure 3. Which category best describes the main scope of your organization?



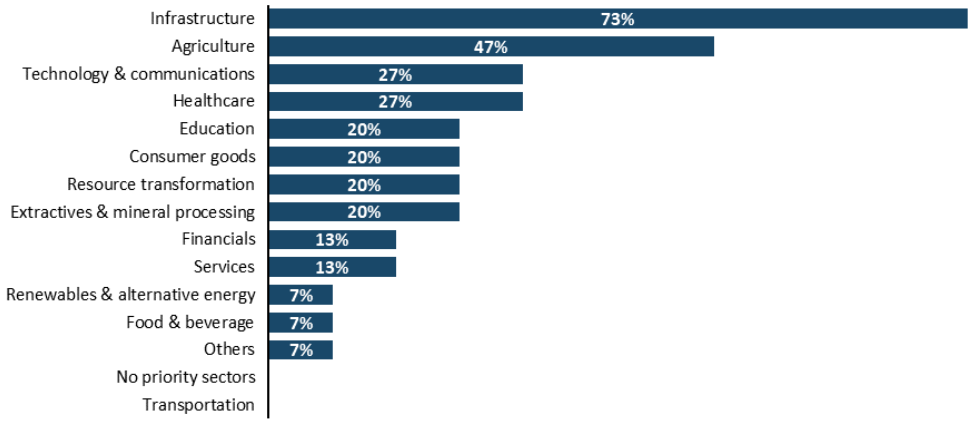
N: 15 - Public Sector

Figure 4. Current value of your portfolio allocated to sustainable investments?



N: 15 - Public Sector

Figure 5. Which are the top 3 priority sectors for your organization in terms of investment / business operation in the country?



N: 15 - Public Sector, base 300%

Private Sector Respondents' Profile

The survey and in-depth interviews covered a range of investors and company sizes with current portfolios going from less than 5 million dollars (18%) up to more than 100 million (40%).

Private sector – Survey

x16	x11	x10	x9	x14
Nigeria	Uganda	Kenya	Ghana	Rwanda

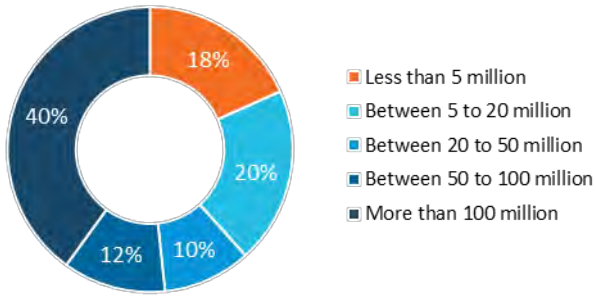
The investment portfolio sizes allocated in each country vary. While 33% of the investors and companies have a current total investment portfolio of more than 100 million (figure 7), 33% of them are in Nigeria (33%), followed by 25% in Uganda, 20% Rwanda, 10% in Kenya, and none in Ghana.

The second largest group (22%) represented is those with portfolios between 5 to 20 million USD (figure 7). This segment includes 5 active companies in Rwanda, 3 in Uganda, 2 in Kenya and Ghana (respectively), and 1 in Nigeria.

Additionally, 20% have investments or business of less than 5 million USD (12 companies) locally, while just 7% are between 50 to 100 million USD (representing 4 companies).

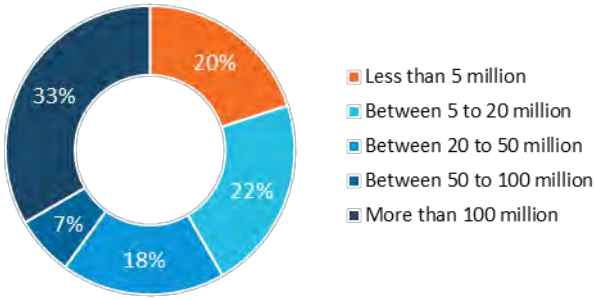
The top three sectors where they invest and/or operate in the country are services (42%), infrastructure (38%) and agriculture (35%), followed by financials (32%), healthcare and renewable and alternative energy (each with 22%).

Figure 6. Current value of your total investment portfolio



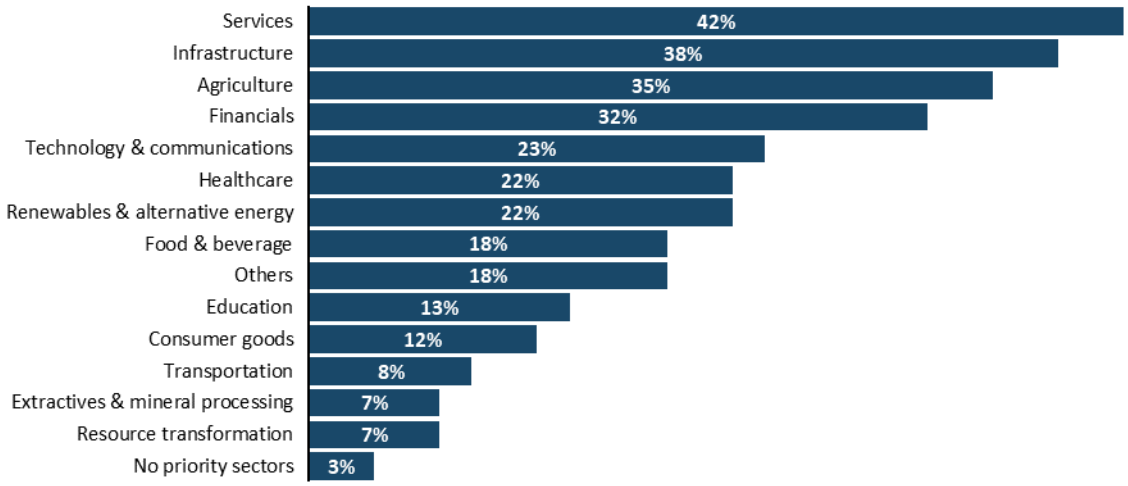
N: 60 - Private Sector

Figure 7. Current value of your investment portfolio/ business in the country



N: 60 - Private Sector

Figure 8. Which are the top 3 priority sectors for your organization in terms of investment / business operation in the country?



N: 60 - Private Sector, base 300%

Private Sector: SDGs & Sustainable Investment

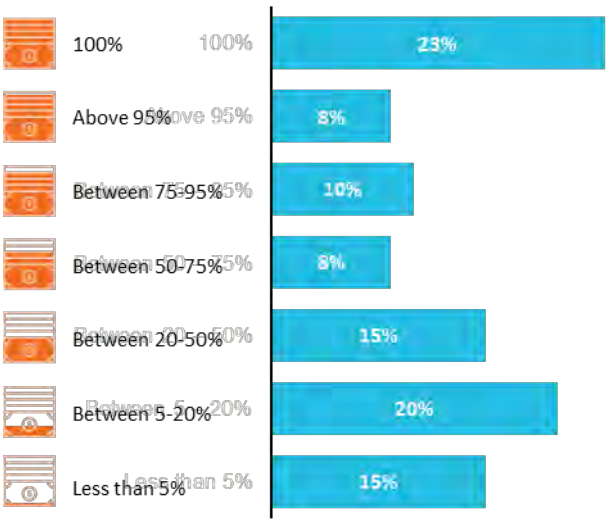
The integration of Sustainable Development Goals (SDGs) to national policies and to private sector growth in Africa is increasing yearly[20,21,22,23,24]. Despite several challenges posed by institutional constraints, complex environmental and regulatory frameworks, socioeconomic characteristics, young democracies and growing integration/ interdependence with international markets, African countries have been experiencing positive development results.
Policies, country development plans and the private sector have been integrating SDGs lenses into their agenda. Higher levels of investment and capital mobilized including a social and/or environmental component is becoming more prominent on the continent, as is a thriving tendency for impact investing in the region[25].

Sustainable Investments

Any investment made with the intention to generate positive, measurable social and environmental impact, and/or contribute to Sustainable Goals attainment alongside a financial return.[26]

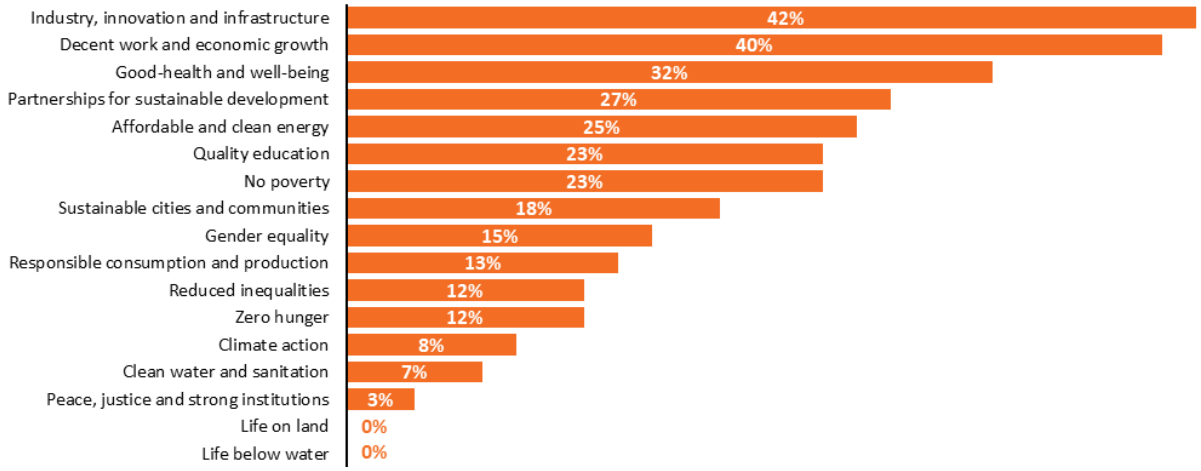
The survey focused on capturing insight from private sector actors on sustainable investments. Those polled have a diverse portfolio (figure 9) in terms of maturity and engagement with this type of investment, where **half of the investors has 50% or more of their capital allocated to sustainable investments. Six investors have between 75% and 95% allocated to such investments, while 23% of the group has all their investments in that category.**

Figure 9. Approximately, what percentage of your organization's investment portfolio / your business is allocated to sustainable investments?



Over one-third of the companies and investors surveyed have up to 20% allocated to this type of investment (15% have less than 5%, and 20% have between 5 to 20% of their total portfolio dedicated to this category).
Investors perceived that their investments or business targets are firstly, SDG 9 "Industry, innovation and infrastructure" (42%), second, SDG 8 "Decent work and economic growth" (40%), and in third place with 27%, SDG 3 "Good-health and well-being." These are followed by SDG 7 "Affordable and clean energy" (25%), and SDG 1 "No poverty" and SDG 4 "Quality education" (23% respectively). However, none of the actors identified SDG 14 "Life below water" or SDG 15 "Life on Land" as goals targeted by their investments.

Figure 10. Which of the following SDG-aligned impact themes do you think your investment / business targets?



N: 60 – Private Sector, base 300%

Concerns about COVID-19

Over two-thirds of the people surveyed were extremely concerned about COVID-19 (73% of the public sector and 62% of the private sector), while 27% and 23%, respectively, signaled moderate levels of concern.

Despite this overall trend, it is possible to observe variations in levels of concern regarding the outbreak per country and sector. Whereas actors from the public sector present higher degrees of concern (answering exclusively that they are moderately and extremely concerned categories), the answers from the private sector have some variability. These differences are particularly country specific. In Kenya 90% of the respondents manifested to be extremely concerned, while 64% in Uganda, 57% in Rwanda, 56% in Ghana and just half (50%) of actors in Nigeria.

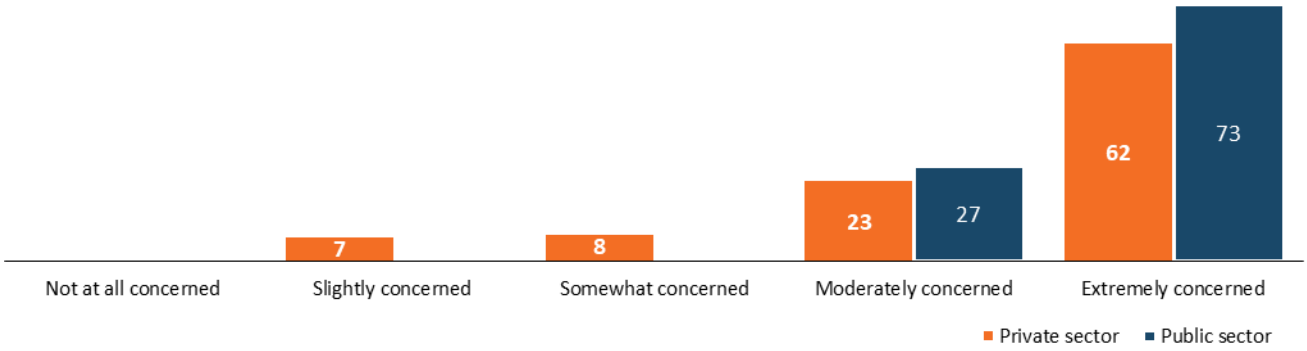
Following international measures taken by countries hit hardest by the virus, African governments acted quickly to limit the level of exposure and spread of the virus ordering strict internal and external border controls.

Lockdowns, curfews, movement restrictions, border closures and limitations of business operations were some of the measures adopted in all the countries under analysis.

Stakeholders expressed that their greatest concern is a potential economic recession (37%), followed by high levels of uncertainty (36%), the lockdown's impact on business revenues (35%), and supply chain disruptions (31%) (figure 12). These results align with global trends and economic projections from different national and international financial institutions.

Both groups also expressed anxieties associated with **the deterioration of companies' financial liquidity (26%), the effects of the lockdown on business continuance (22%), the possibility of a humanitarian crisis (18%) and a reduction in workforce availability / productivity (18%)** (figure 12).

Figure 11. What is the current level of concern related to COVID-19?



N: 75 – Private and Public Sector

Figure 12. What are your top 3 concerns with respect to COVID-19?

N: 75 – Private and Public Sector

Top Three Concerns about COVID-19

The countries in question differ in regard to their main concerns associated with the pandemic. While a potential economic recession is the top worry in Ghana (55%), Kenya (47%) and Uganda (50%), in Nigeria and Rwanda, it is not regarded as one of the top problems. Instead, Nigeria is most apprehensive about the potential impact of the lockdown on business revenue (47%), whereas Rwanda is uneasy about high levels of uncertainty and a significant deterioration of financial liquidity (both with 40%).

High levels of uncertainty due to COVID-19 are the second greatest concern for business operations and investments in Ghana (42%), Nigeria (37%) and Kenya (35%). For Uganda, however, the reduction in workforce availability / productivity (42%) takes second place, particularly considering the country's reliance on manual labor and the government's strict lockdown measures imposed during the first two quarters of 2020.

The third greatest worry includes elements more associated with finances and the consequences of lockdown measures. In Nigeria, the significant deterioration of financial liquidity (32%) takes third place in its list of top concerns, whereas Kenyans' third most major anxiety is the lockdown's effects on business revenue (35%). In Uganda, however, investors highlighted the impact on business continuance (32%) as their third more pressing apprehension.

Likewise, in Rwanda the main worries are associated with supply chain disruption and the effects of lockdown measures on business revenue (33% each respectively). Additionally, stakeholders in Ghana position the disruption in supply chains in third place (42%).

Nigeria

Lockdown Impact on Business Revenue	47%
High Level of Uncertainty	37%
Significant Deterioration of Financial Liquidity	32%

Kenya

Potential Economic Recession	47%
High Level of Uncertainty	35%
Lockdown Impact on Business Revenue	35%

Uganda

Potential Economic Recession	50%
Reduction in Workforce Availability / Productivity	42%
Lockdown Impact on Business Continuance	33%

Ghana

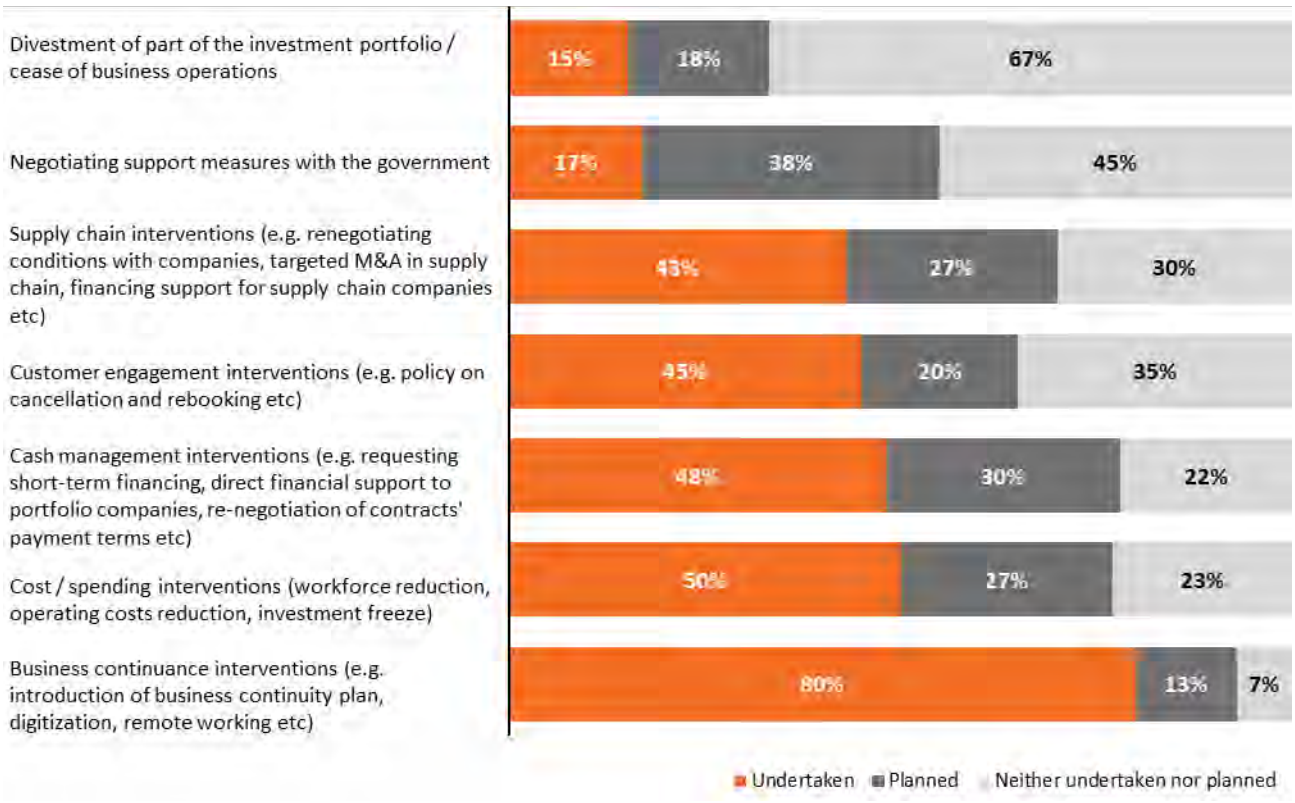
Potential Economic Recession	55%
High Level of Uncertainty	42%
Supply Chain Disruption	42%

Rwanda

High Level of Uncertainty	40%
Significant Deterioration of Financial Liquidity	40%
Supply Chain Disruption	33%
Lockdown Impact on Business Revenue	33%

Actions and Responses to the Outbreak

Figure 13. Which of the following actions have been undertaken by your organization in response to the COVID-19 outbreak?



N: 60 – Private Sector

The main actions, taken and planned, by the private sector to adapt to and mitigate the direct and indirect effects of the pandemic on enterprises focused on business continuance, liquidity and cost reduction.

The most common interventions were related to business continuance such as digitalization, business continuity plan, remote working, among others. 80% mentioned that they had implemented such actions and 13% expressed having to do so.

The second and third actions undertaken or planned focus on ensuring liquidity and cost savings. 78% of the investors and companies are currently or will be taking cash management measures such as financial support, specifically direct or short-term loans and renegotiations of contracts and payment terms. Just 22% of them mentioned that such interventions are neither undertaken nor planned. This trend is common among companies and investors in each of the countries included in the study (figure 13).

The third most popular kinds of interventions are related to costs and spending actions. 50% of those surveyed or interviewed affirm that measures related with workforce reduction, operating cost reductions and investment freezes have already been taken, while 27% mention that such actions are planned. In regard to the countries analyzed, there are observable distinctions pertaining to the undertaking of these measures. In the cases of Kenya (70% taken or planned), Uganda (over 80% taken or planned), Ghana (88% taken or planned) and Rwanda (93% taken or planned), over two-thirds of private sector actors claim that these interventions are in motion. Whereas in Nigeria, less than two-thirds highlighted these type of actions (31% taken and 25% planned).

Actions and Responses to the Outbreak

Due to the interconnections and linkages with regional and global economies and external players, these countries are heavily hit by supply chain disruptions.[16, 17]

Therefore, over two-thirds of private sector survey participants mentioned that different interventions to adapt to and mitigate the effects of these disruptions are being undertaken or planned (44% and 27% respectively). These actions include renegotiations of conditions and contracts with suppliers and other companies, targeted mergers and acquisitions (M&A) related to supply chains, as well as financial support for companies in the area (figure 13).

Additional measures have been taken (46%) and planned (20%) around customer engagement, such as policies regarding cancellation, rebooking, refunds and consumer protection.

Except for Rwanda, the least frequently implemented actions relate to negotiations supporting measures with the government (17% undertaken, and just 39% have those planned) (figure 13). In fact, just 19% of respondents in Nigeria, 20% in Kenya, and 36% and Rwanda mentioned that they are currently in negotiations with the government. However, 57% of the investors in Rwanda mentioned that such actions are planned. Meanwhile, 44% of the respondents mentioned that such measures have neither been taken nor planned, especially in Uganda and Kenya where over 70% and 60% of respondents, respectively, responded negatively.

One third of the private sector (20 stakeholders) included in the study mentioned that **they had undertaken actions or have planned to divest part of their investment portfolios or cease operations.**

33% **of the surveyed private sector actors**

Have undertaken actions or are considering to divest part of their investment portfolios or cease operations

Only in Ghana has divestment or ceasing operations neither been taken nor planned by investors. Here too, we can observe differences between the countries under analysis, particularly for the private sector in Rwanda, where 57% have taken or plan to implement these plans, followed by 37% in Nigeria, 36% in Uganda and 20% in Kenya.

15% of the investors surveyed expressed that they are currently divesting part of their investment portfolios or ceasing operations, while 18% mentioned that they are considering such measures (figure 13). In Rwanda, 5 investors and companies expressed that they have undertaken these measures and 3 of them have planned to implement them. Likewise, 4 companies in Uganda have taken or have planned these actions, and 6 companies in Nigeria are following the same approach.

Of the 20 companies mentioned above, two-thirds of them have adjusted their investment portfolios due to COVID-19 and made changes in the sectors in which they usually invest.

Actions to Mitigate Risks for Current Portfolios

47% **of private sector actors**

think that the most important action that the public sector or international institutions can take to mitigate the risks for investors in the selected countries is to focus on liquidity supporting facilities

Most of the concerns identified within the public and private sector can be linked on the one hand to external, international factors, and on the other hand, to important measures for business continuity and development on a national level. These factors impact current and future levels of investments in the analyzed countries and they are of particular importance especially in instances of emerging markets and economies.

Therefore, understanding the key actors' expectations with regard to potential tools, which may mitigate the COVID-19 economic risks, should be crucial for policymakers.

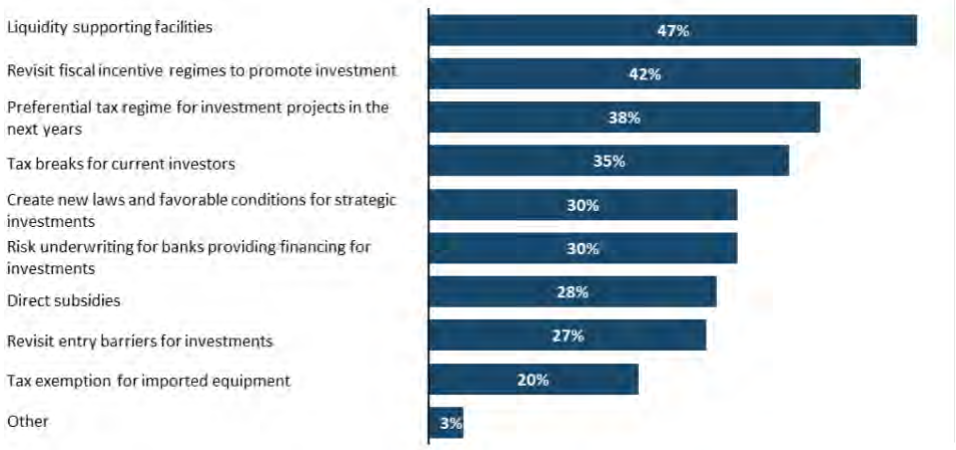
The actions prioritized advocate amending present legal regulations and developing institutional capacities to make existing structures more efficient, rather than creating new laws or prioritizing sectors.

Almost 50% of the private sector respondents highlighted creating liquidity supporting facilities as the most relevant measure. Liquidity support basically comes in the form of facilities to draw from a line of credit. In the face of the pandemic, maintaining liquidity is fundamental for any business, and is especially critical in light of supply chain disruptions and lockdown measures. Developing an effective financial plan to raise additional funds as quickly as possible is a key challenge that most companies are facing, especially considering that more than 80% of the businesses in Ghana, Rwanda, Kenya, Nigeria, and Uganda are micro- and small enterprises.

In second place, 42% of actors mentioned the **relevance of revisiting fiscal incentives regimes to promote investments.** This is followed by 38% of respondents, who considered it necessary to **establish preferential tax regimes for investment projects in the coming years.** Simultaneously, over one-third of private sector interviewees think that another important measure is to offer tax breaks for current investors (35%) and to create new laws and favorable conditions for strategic investments (30%).

Less than 30% considers it relevant to introduce direct subsidies (29%) and to revisit investment entry barriers (25%). Just 20% of those questioned expressed the need for tax exemptions for imported equipment.

Figure 14. Which actions can be taken by the public sector or international institutions to mitigate risks for investors active in the country?



N: 60 – Private Sector | Base – 300%

Actions and responses for Planned Investments

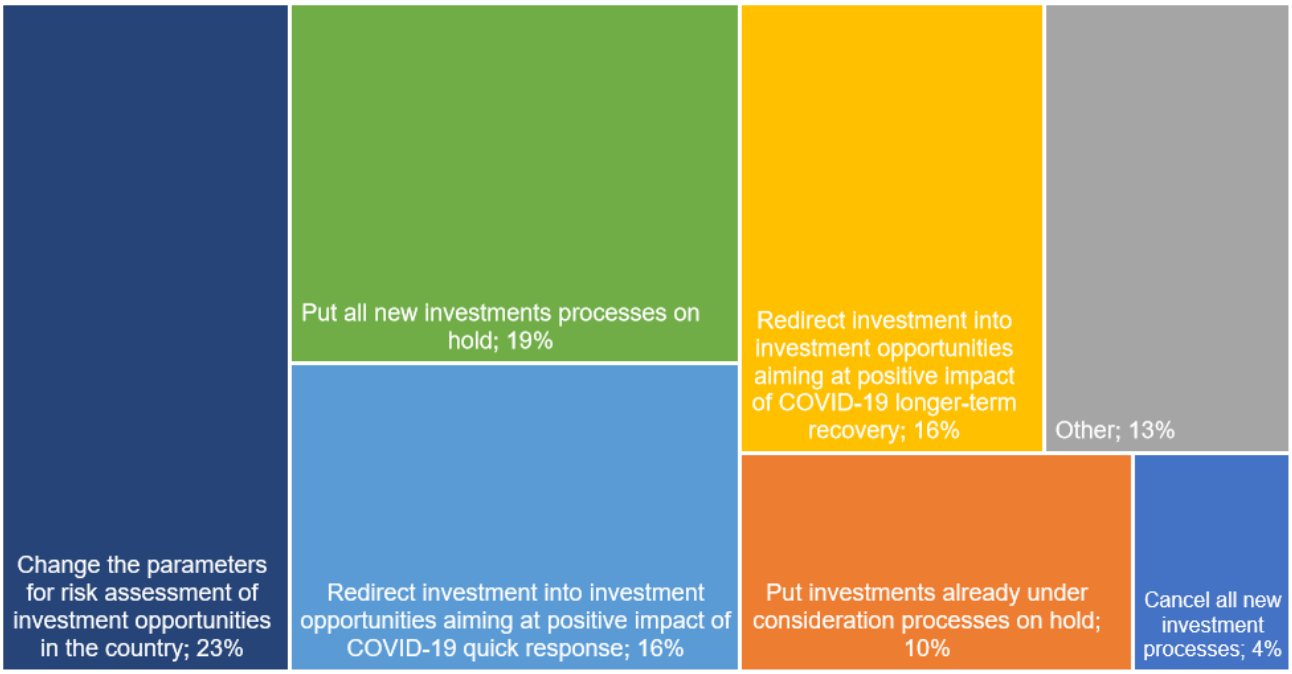
The actions that investors and companies have taken with regard to their investment portfolios reflect their main concerns including high levels of uncertainty, threats to business continuance and liquidity, as well as the necessity for cost cutting. **23% mentioned that they have changed the parameters for risk assessments of investment opportunities in the country.** These changes are mainly focused on ensuring even higher security and profitability of businesses and investment decisions, taking into account the COVID-19 related regulatory environment, and internal and external socio-economic factors inhibiting business growth.

44% of the private-sector respondents in Ghana and 31% in Kenya changed the parameters for investment opportunity risk assessment. In Nigeria and Uganda, 25% and 22% of survey participants, respectively, claimed to implement changes in their risk assessment parameters. This action was not taken by the survey stakeholders in Rwanda.

19% indicated putting all new investment processes on hold. However, there are wide variations in this regard depending on the country. For instance, 25% of surveyed actors in Nigeria, 22% in Ghana and 19% in Kenya and Rwanda mentioned this as one of the most important steps taken. Meanwhile, in Uganda, just 11% of the respondents have put all new investment processes on hold.

Considering COVID-19 response and recovery, 32% expressed that they redirected investments into opportunities that aimed to bring about quick response (16%) and long-term recovery (16%). This tendency is observed in four out of the five surveyed countries (Uganda; 17%, Kenya; 19%, Rwanda; 19% and Nigeria; 17%) where actors mentioned that they have redirected investments for quick response opportunities. However, in the case of Ghana, no investment changes have been made for quick response, but 11% have shifted to investment opportunities for long-term recovery.

Figure 15. Which of the following actions have been undertaken by your organization in response to the COVID-19 outbreak regarding your planned investments in the country?



N: 60 – Private Sector | Base – 100%

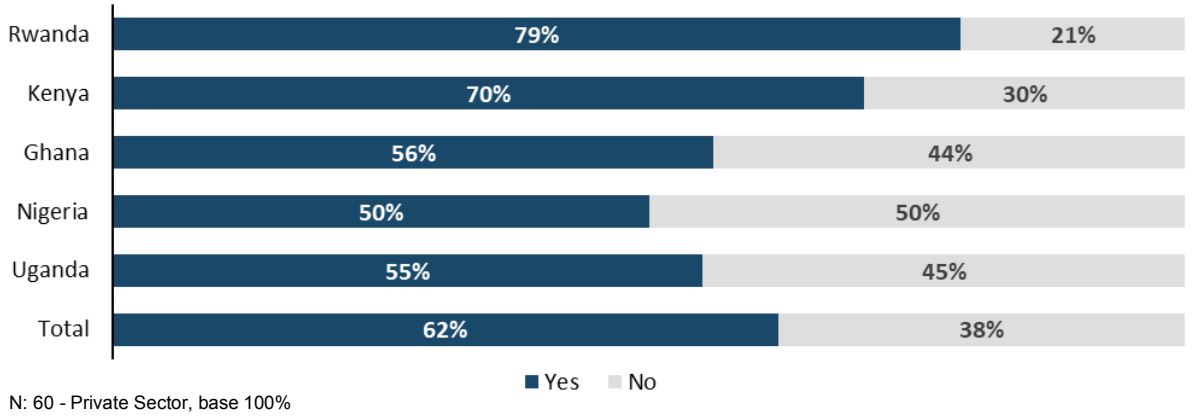
Actions and Responses for Planned Investments

In contrast to other more frequently adopted measures, only 9% of actors admitted that they have put investments already under consideration processes on hold. 19% of respondents in Rwanda, 13% in Kenya, 8% in Nigeria and 0% in Uganda and Ghana did so.

Stakeholders' main actions for planned investments are related to risk evaluation, seeking out COVID-19 related opportunities or halting processes to better understand the new circumstances. Despite uncertain global conditions, **only 11% of private sector representatives in Uganda and 6% in Rwanda declared that they have withdrawn from all new investment processes,** while none of the respondents cancelled investment processes already under consideration.

93% of the surveyed public stakeholders think that the private sector has adjusted investment priorities in the country and that they should adjust their investment priorities due to the COVID-19 outbreak

Figure 16. Have you adjusted your investment priorities due to COVID-19?



N: 60 - Private Sector, base 100%

In the opinion of over 90% of the public sector stakeholders, the private sector has already reoriented its investment priorities due to COVID-19 pandemic, whereas only 62% of companies and investors claim that they have actually done so.

Although at least half of the actors in all the analyzed countries confirmed they have introduced investment strategy for changes and adjustments, there is a significant discrepancy between the results for Nigeria and Rwanda. In the latter, 79% of the private stakeholders claimed they have modified their investment priorities accordingly. At the same time, only 50% of them reoriented their strategies in Nigeria.

While 79% of private sector investors and companies modified investment priorities in Rwanda, just 50% of them adjusted investment priorities in Nigeria.

5 out of 9 private sector investors and companies shifted investment priorities in Ghana

8 out of 16 private sector investors and companies shifted investment priorities in Nigeria

7 out of 10 private sector investors and companies shifted investment priorities in Kenya

6 out of 11 private sector investors and companies shifted investment priorities in Uganda

11 out of 14 private sector investors and companies shifted investment priorities in Rwanda

Prioritization of Sectors

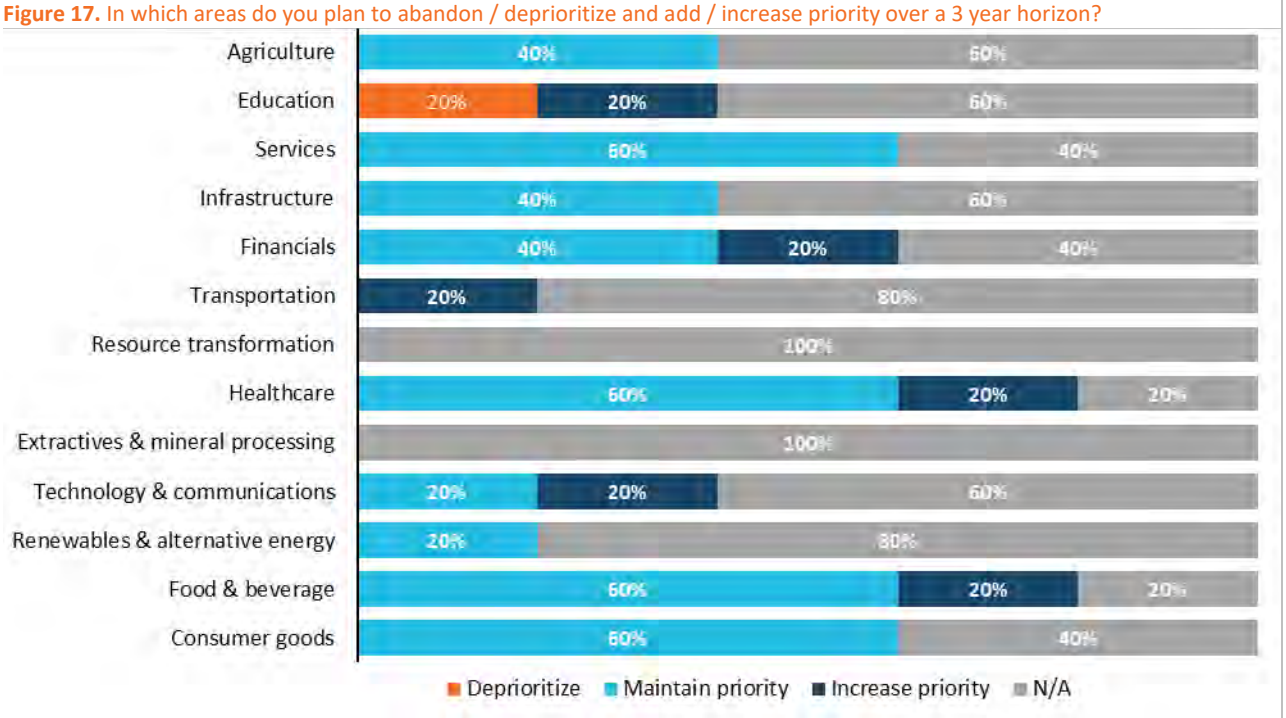
In order to better understand the shifts in priorities of investors and companies that confirmed modifications in their investments (figures 17, 18, 19, and 20) the following question was asked to understand which sectors will be in decline, maintain current levels of importance or take on new meaning over the course of three years:

In which areas do you plan to abandon / deprioritize and add / increase priority in over a 3 year horizon?

13 sectors were listed, and a "non-applicable" category was introduced in order to allow investors to indicate that they do not operate in that particular sector and to avoid misrepresentation of sectoral prioritization.

Ghana – Shifts in Priorities Over a 3 Year Horizon

Figure 17. In which areas do you plan to abandon / deprioritize and add / increase priority over a 3 year horizon?



N: 5 companies that changed investment priorities in Ghana

80% of the companies and investors that changed priorities in Ghana confirmed that they are not willing to deprioritize any of the sectors, while one company claimed to deprioritize education.

Part of the private sector representatives, who introduced shifts in investment priorities, expressed an interest in further prioritizing education, financials, transportation, healthcare, ICT and food & beverage.

60% of investors expressed a willingness to maintain the investment priority of the services, healthcare, food and beverage, and consumer goods sectors for the next 3 years. Meanwhile, 40% demonstrated interest in maintaining infrastructure and financials, and to lesser extent in technology & communications (20%) and renewables & alternative energy (20%).

The sectors experiencing the highest rate of either increased or maintained priorities are usually the areas most severely affected by the COVID-19 outbreak. In general, the virus's direct and indirect effects have elucidated the structural needs and potential business opportunities in the countries under consideration.

5 **out of 9 private sector investors and companies**

shifted investment priorities in Ghana

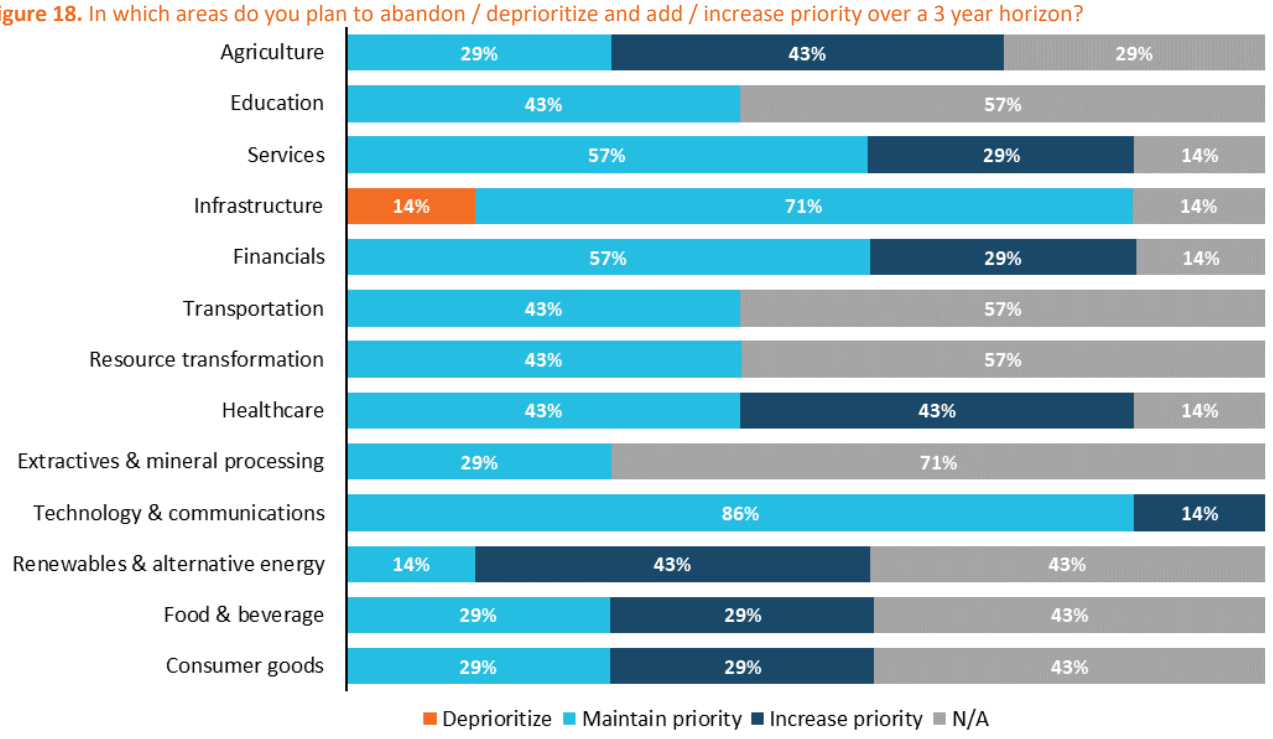
Of all stakeholders that rearranged their priorities, none did so in the resource transformation and extractives & minerals sectors. Similarly, in 4 out of the 5 companies analyzed, the same applies for the transportations and renewables & alternative energy sectors.

In the same line, 60% (3 out of 5) highlighted agriculture, education, infrastructure and technology & communications as not applicable.

Moreover, the ability to shift investments can be limited because of the nature of some sectors, current mandates, and the focus of portfolios and the characteristics of the capital.

Kenya– Shifts in Priorities Over a 3 Year Horizon

Figure 18. In which areas do you plan to abandon / deprioritize and add / increase priority over a 3 year horizon?



N: 7 companies that changed investment priorities in Kenya

86% of the companies and investors that changed priorities mentioned that they are not willing to deprioritize any of the sectors. However, one company expressed that they will deprioritize infrastructure.

Although 7 out of 10 private sector actors expressed expected shifts in their investment priorities, it is worth mentioning that they also expressed **intentions to maintain the priorities for all of the 13 sectors.** The highest levels are for ICT (86%), infrastructure (71%) and services and financials (57% each), followed by education, transportation, resource transformation and healthcare (43% each).

The agriculture, healthcare and renewables & alternative energy sectors have the highest increase in priority from companies and investors over the next 3 years (43% each). A slightly lower rate of prioritization is planned for services, financials, food & beverage and consumer goods (29% each), and 14% in ICT.

7 **out of 11 private sector investors and companies**

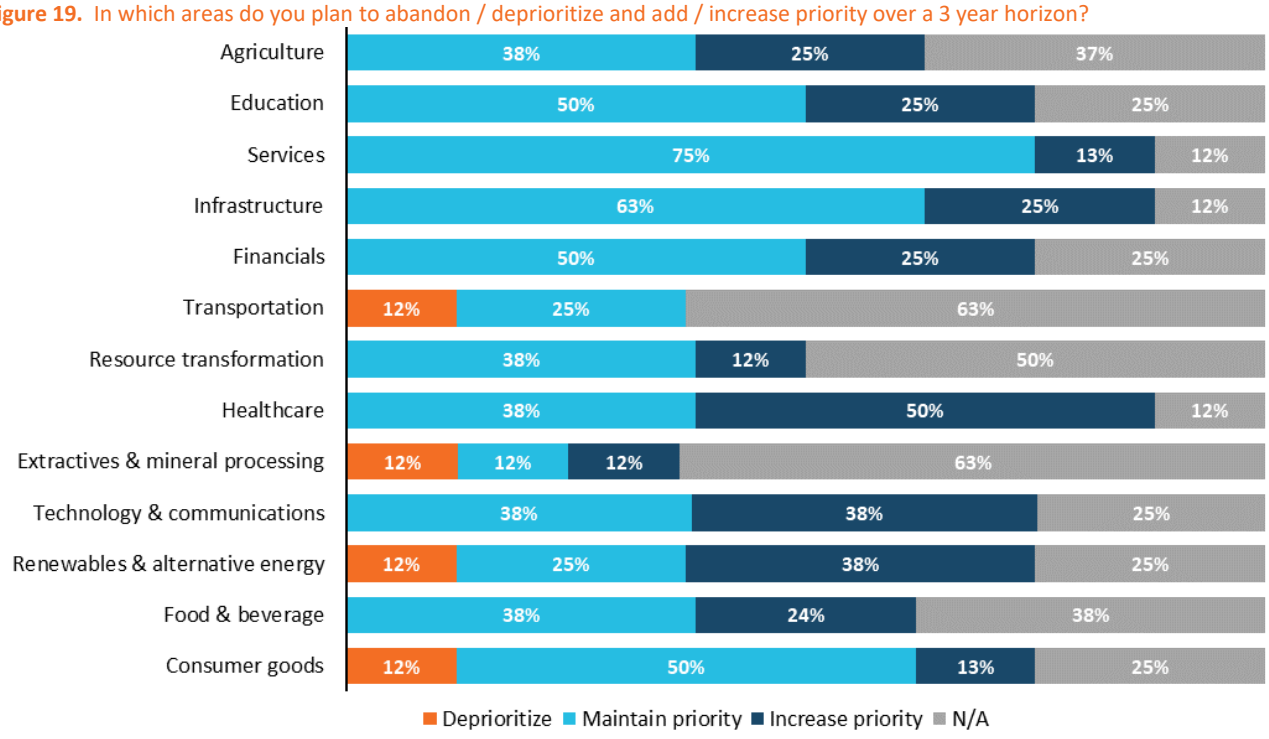
shifted investment priorities in Kenya

Additionally, 71% of private stakeholders that shifted priorities do not have investments in the extractives and mineral processing sector. Over 50% mentioned that the education, transportation and resource transformation sectors are not applicable to them (57% each).

However, current internal and external factors such as current ticket sizes, projects' inception and duration, focus of the investments, the participation of private actors in a particular sector, and the regulatory environment, can limit the flexibility, scalability, attractiveness and potential of investment areas. All elements need to be taken into consideration for understanding investors' decisions for the next 3 years.

Nigeria – Shifts in Priorities Over a 3 Year Horizon

Figure 19. In which areas do you plan to abandon / deprioritize and add / increase priority over a 3 year horizon?



N: 8 companies that changed investment priorities in Nigeria

Half of the private sector respondents expressed interest in increasing priority in 12 out of 13 sectors listed. This is especially true in the healthcare sector (50%), followed by renewable & alternative energy (38%) and technology & communications (38%).

Most of the actors that changed priorities in Nigeria do not plan to deprioritize sectors. Only a small decrease in priorities is expected in transportation, extractives & mineral processing, renewables & alternative energy, and consumer goods (12% each).

There is interest in maintaining the priority of all the sectors listed, though investors have chosen some more often, specifically services (75%) and infrastructure (63%). These sectors are followed by maintaining the priority in investments in education, financials and consumer goods (50% each). Additionally, the investors focused on key sectors highlighted by the outbreak such as agriculture, resource transformation, healthcare, technology & communications and food & beverage (38%).

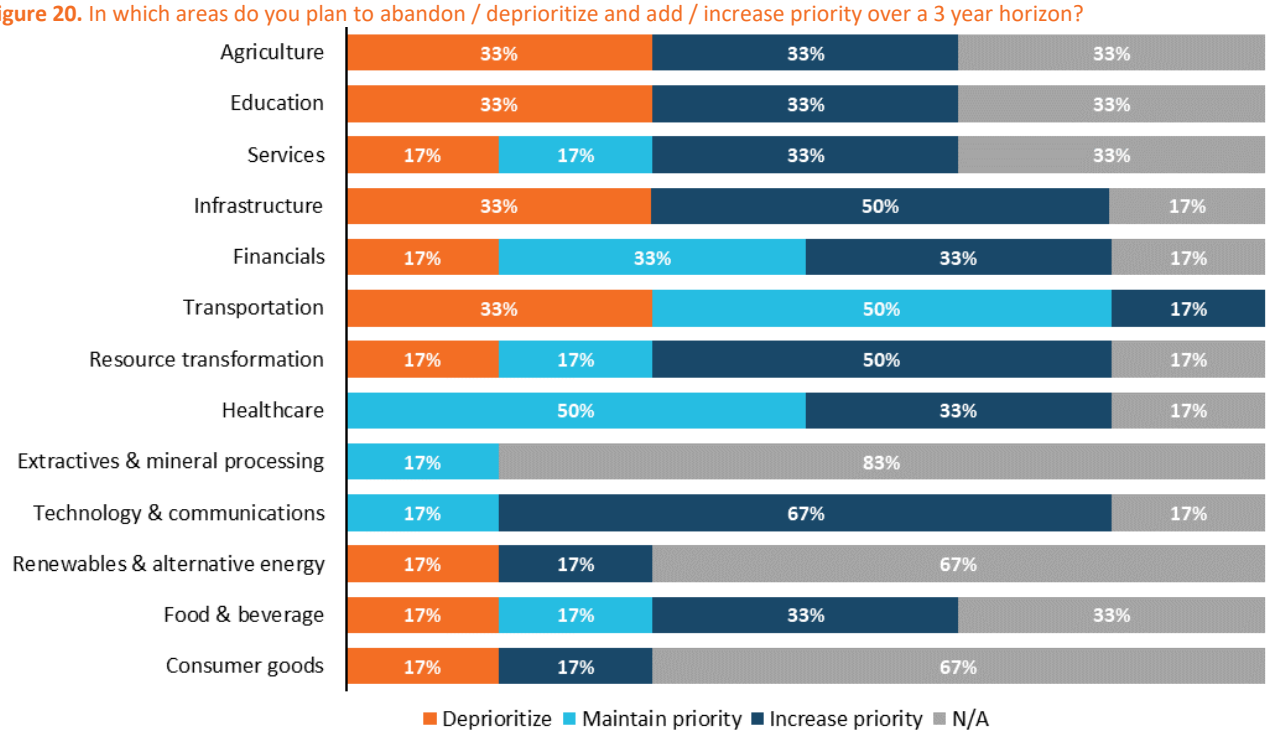
8 out of 16 private sector investors and companies

shifted investment priorities in Nigeria

The distribution of priority for sectors among stakeholders is quite diverse, and in each sector - at different levels - there are some of them that do not have investments. The transportation and extractives and mineral processing sectors have a non-applicability rate of 63% each, whereas education, financials and consumer goods are non-applicable to 50% of the companies.

Uganda – Shifts in Priorities Over a 3 Year Horizon

Figure 20. In which areas do you plan to abandon / deprioritize and add / increase priority over a 3 year horizon?



N: 6 companies that changed investment priorities in Uganda

Unlike Ghana, Kenya and Nigeria, a significant number of Ugandan investors plan to deprioritize 10 out of 13 sectors.

The highest loss of interest is in agriculture, education, infrastructure and transportation, where one-third of the companies that shifted priorities are deprioritizing these sectors.

However, Ugandan interest will grow for the following sectors - technology and communications (67%), infrastructure (50%) and resource transformation (50%). ICT has been particularly relevant due to the COVID-19 outbreak and following lockdown, especially considering the transformation of work and education habits.

The highest levels of maintaining priority were in the transportation and healthcare (50% each) sectors. An additional sector with moderate willingness to maintain priority is financials (33%).

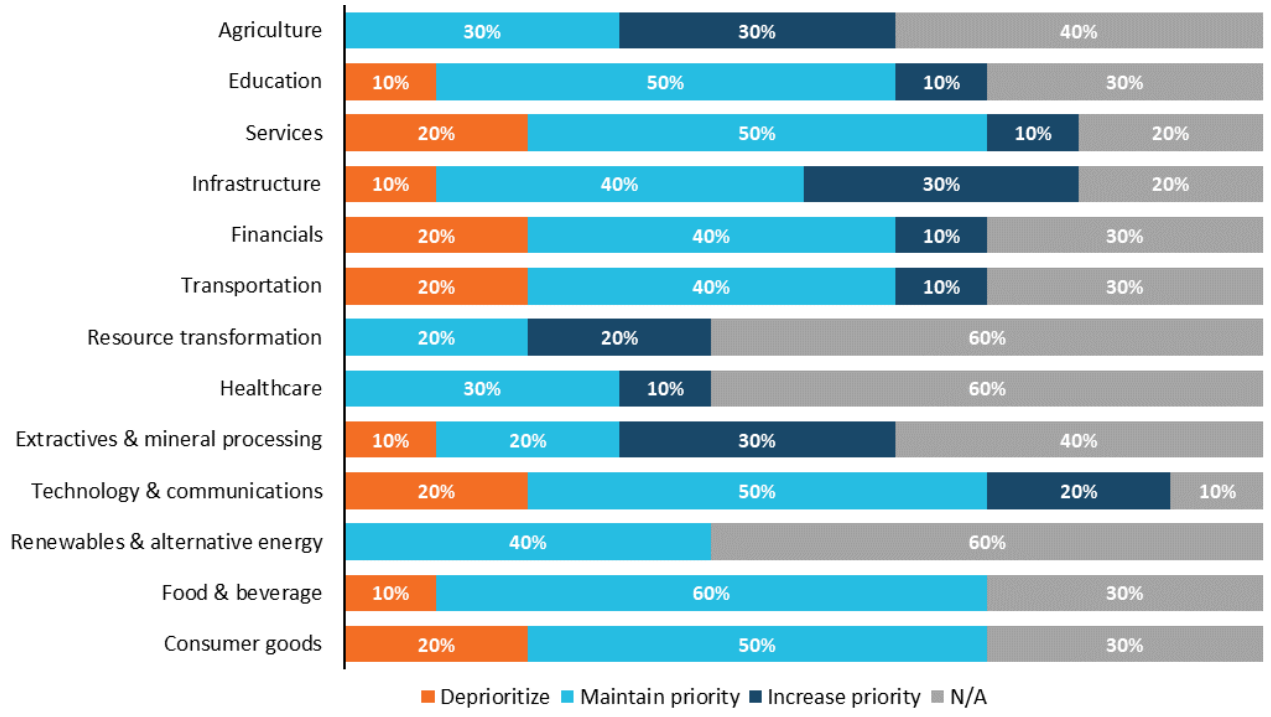
6 out of 11 private sector investors and companies

shifted investment priorities in Uganda

Additionally, 83% of private stakeholders that shifted priorities do not have investments in the extractives and mineral processing sector. And two-thirds mentioned that the renewables & alternative energy and consumer goods sectors are not applicable to them (67% each).

Rwanda – Shifts in Priorities Over a 3 Year Horizon

Figure 21. In which areas do you plan to abandon / deprioritize and add / increase priority over a 3 year horizon?



N: 11 companies that changed investment priorities in Rwanda

70% of the companies and investors that changed their investment priorities in Rwanda will deprioritize certain sectors, while the remaining part will only maintain or increase priority of the sectors.

In Rwanda, the agriculture, resource transformation, healthcare and renewables sectors will not be deprioritized.

Investors' interest in agriculture, infrastructure, resource transformation, healthcare and extractives & mineral processing will be growing.

The sectors that concentrated the highest shifts in priorities reflect the areas most affected by the COVID-19 outbreak. The direct and indirect consequences of the pandemic have highlighted the structural needs and potential opportunities for growth in the country.

11 out of 14private sector investors and companies

shifted investment priorities in Rwanda

The healthcare, resource transformation and renewables & alternative energy sectors are not applicable to 60% of the survey participants.

Meanwhile, the services, financial, transportation, technology and consumer goods areas recorded a 20% decrease in investors' attention.

On the other hand, 30% of the respondents decided to shift their priorities to sectors such as agriculture, infrastructure and extractives & mineral processing.

The ability to shift investments can be limited by the nature of some sectors, the thematic focus of portfolios and the characteristics of capital.

The Biggest Threats for Sustainable Investments

Over half of the public and private sector actors included in the study consider supply chain disruptions to be the most important threat to sustainable investments in their countries. Threats associated with disruptions are particularly important to Kenya, where two-thirds of the actors surveyed expressed this as their most critical concern (+12 pp). This is similar in Rwanda (+6 pp). In Nigeria, this is the second greatest threat (-5 pp), and third for Ghana (-7 pp) and Uganda (-12 pp).

43% perceived consumers' decreased purchasing power as one of the top three biggest threats in their countries. This concern is ranked first in Uganda (50% +7 pp), and second in Nigeria and Kenya (47% +4 pp).

The third threat identified by all the surveyed actors is foreign exchange risk (42%). Perception of this risk varies country to country. In fact, in Nigeria the foreign exchange risk is the top threat at 37 percentage points above the general result, and in the case of Ghana is +13 pp. In Kenya and Rwanda this reached 29% and 25% respectively (-13 pp, -17 pp), and 0% for Uganda.

Ghana's (55% +20) top perceived threat includes concerns about the country's financial position (35%). Meanwhile, this is considered the third biggest threat for Kenya (41% +6 pp) and Uganda (40% +5 pp).

52% **of the surveyed actors**

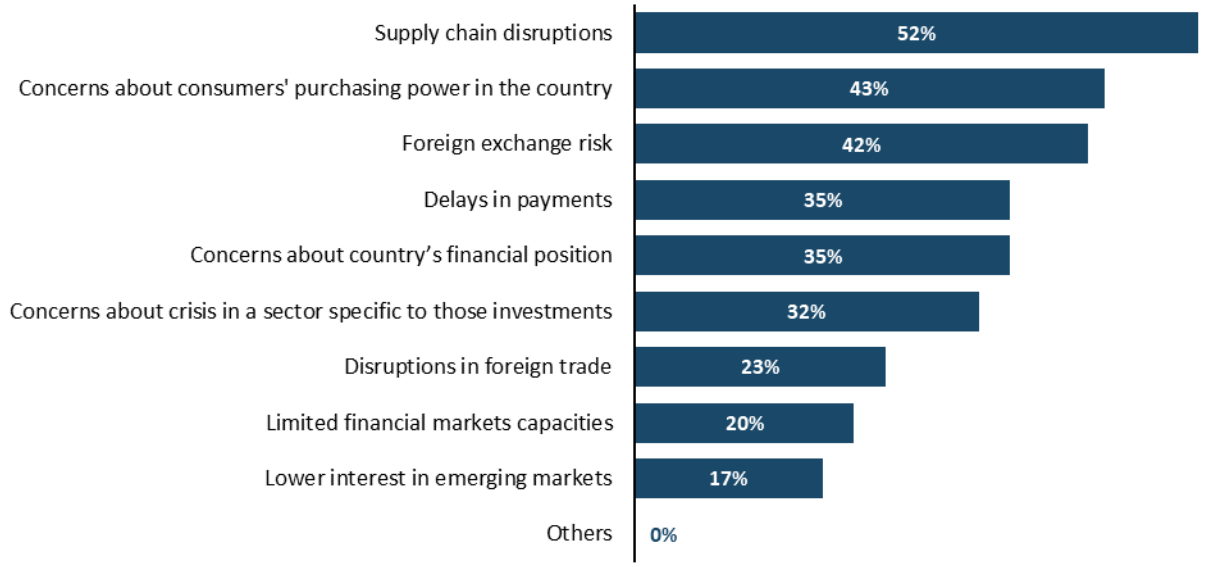
think that the biggest threat for sustainable investments in the country would be supply chain disruptions

However, for stakeholders surveyed in Nigeria (26% -13pp) and Rwanda (17% -18 pp), their country's financial position is one of the lowest concerns.

Further, just below one-fifth of those questioned consider limited financial market capacities (20%) and lower interest in emerging markets (17%) as the biggest threats. Yet, in Uganda, stakeholders (40% +22 pp) are highly concerned about a potential lower interest in emerging markets.

Additionally, there are other significant differences as in the cases of Uganda and Rwanda, where the second biggest threat is delays in payments (50% +15 pp for both countries).

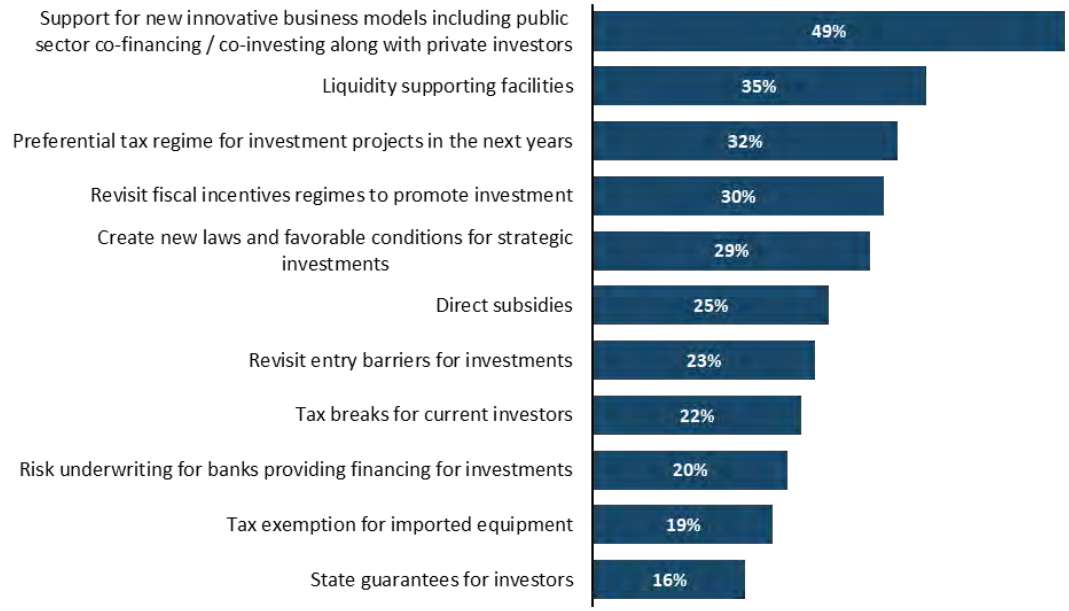
Figure 22. Which do you think would be the 3 biggest threats for sustainable investments?



N: All surveyed actors, base 300%

Actions to Mitigate Risks for Sustainable Investments

Figure 23. Which actions can be taken by the public sector or international institutions to mitigate those risks? (Please select top 3)



N: All surveyed actors, base 300%

Stakeholders (49%) identified support for new innovative business models including public sector co-financing / co-investing along with private investors as the most important action for mitigating risks for sustainable investment. This idea is prevalent in each of the five countries, and highlights the importance of public sector engagement to actively stimulate investments for sustainable recovery, while confirming the demand for public-private cooperation.

The second most important action that can be taken by the public sector or international institutions to mitigate the risks is related to liquidity support facilities (35%). This action was especially pervasive in the case of Uganda (50% +15 pp).

Those surveyed mentioned preferential tax regimes for investment projects in the coming years (32%) as the third most important key action. These measures have higher support in Nigeria (42% +10 pp) and Ghana (36% +4 pp). However, they are considered less relevant by 29% and 25% of respondents in Kenya and Rwanda (-3 pp, -7 pp) respectively, and by just 20% in Uganda (-12 pp).

Other differences between the countries are also visible, particularly **in regard to the creation of new laws and favorable conditions for strategic investments (29%).**

These measures are particularly important for Nigeria, where 47% (+18%) of those questioned consider this action most important for mitigating the risk for sustainable investments.

Likewise, **revisiting entry barriers for investments (23%) is particularly featured in the case of Ghana,** where 36% (+13 pp) consider this a relevant action to be taken by the public sector or international institutions. It was also mentioned by 25% in Rwanda (+2 pp), 24% in Kenya (+1 pp), 20% in Uganda (-3 pp) and 16% in Nigeria (-7 pp).

The least featured measure is state guarantees for investors (16%). Despite the overall result, however, it was prevalent for Kenyan stakeholders (41%), who considered it the second most important action to be taken to mitigate risks, showing a 25 percentage point advantage over the overall outcome. Dissimilarly, Ugandan and Ghanaian survey participants never mentioned this initiative.

In the same line, 25% mentioned that direct subsidies are relevant to risk mitigations. Even though the support for this measure is low across the key surveyed actors, this is prominent in **Rwanda and Ghana where 58% and 45% respectively consider this an important action (+34 pp and +20 pp).**

SDGs that should be Prioritized for Investors for COVID-19 Response and Recovery Phases

72% of those surveyed think that good-health and well-being (SDG 3) should be investors' top priority during the COVID-19 response and recovery phases.

Over two-thirds of the 75 key stakeholders included in the study position SDG 3 as the key focus for the next period. Results show how central and relevant healthcare and all the sub-sectors associated with it became to ensure a sustainable future and growth in the countries analyzed.

The second most important SDG is number 9: industry, innovation and infrastructure (35%). The COVID-19 outbreak made more visible the needs for innovation and industries development globally, and even more in emerging economies. The pandemic hit even harder those countries with higher infrastructural needs and important gaps in key sub-sectors in infrastructure such as energy, waste management, real state, water and elements ensuring connectivity.

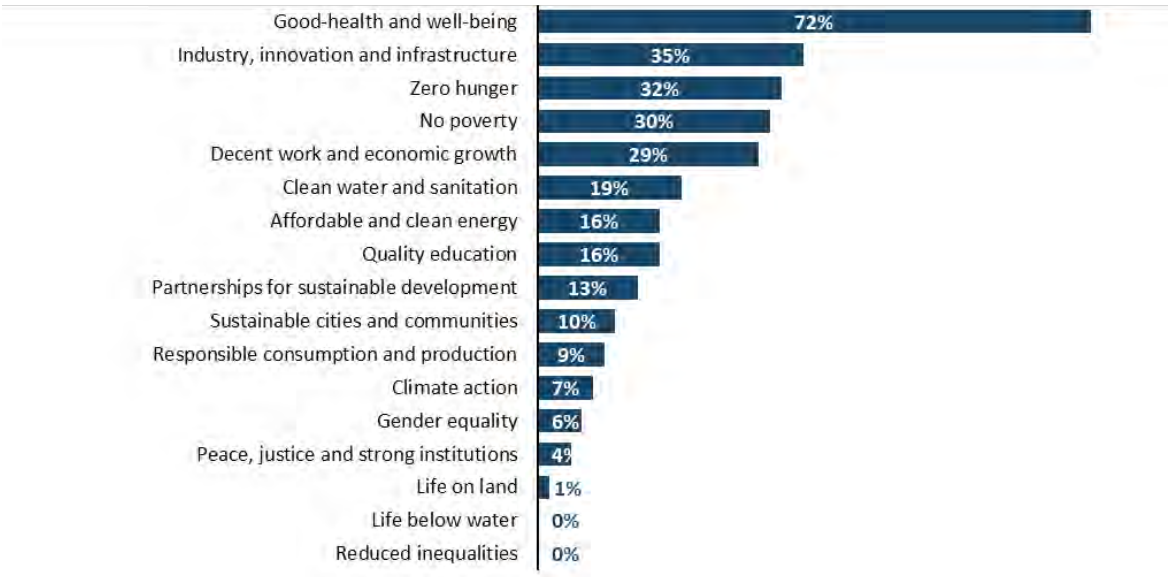
The third most relevant goal is SDG 2: zero hunger (32%). The direct and indirect impacts of the pandemic are more challenging in emerging economies with pre-existing problems with food accessibility. Therefore, creating opportunities and tackling the factors that support the development of the agricultural sector are critical for building the base of a sustainable future.

Other priorities are captured by the prevalence of SDG 1: no poverty and SDG 8: decent work and economic growth, 30% and 29% respectively. In markets dominated by informal employment and high vulnerability, expanding good working conditions while ensuring economic growth will be central to a sustainable recovery.

On the contrary, the SDGs least prioritized were life below water (0%), reduced inequalities (0%), life on land (1%), peace, justice and strong institutions (4%) and gender equality (6%). Additionally, SDG 13: climate action and SDG 12: responsible consumption and production are in the bottom of the list of priorities.

This SDG prioritization is aligned with the most affected sectors and direct effects of the pandemic on the livelihoods and well-being of citizens, businesses and countries. Therefore, identifying Investment Opportunity Areas that are attractive for the private sector, while generating a positive impact for the countries in the most needed areas for development will be key to sustainable recovery.

Figure 24. Which of the following SDGs do you think should be the top 3 priorities for investors for the COVID-19 response and recovery phases in the country?



N: All surveyed actors, base 300%

Appendix II

Country profiles and Investment Opportunity Areas

Ghana

Ghana's Economic Context

8.9
million people live in multidimensional poverty (2018Y)
30%
of total population

0.138
multidimensional poverty index (0-1) (2014Y)

4.0
million people live below income poverty line (PPP 1.90 USD/day)
13.3%
of total population

Ghana - a country located in the western part of Africa on the coast of the Atlantic Ocean - has a population slightly exceeding 30 million people. It is perceived as one of the most stable countries on the continent in terms of democracy and boasts wide freedoms of the press and speech. Although Ghana is categorized as a lower-middle-income country with GDP per capita above 2,200 USD, it is also among Africa's 10 fastest-growing economies with annual GDP growth at 6.5% in 2019[27]. The country is ranked in the medium human development group category according to the Human Development Report, with an HDI value of 0.596 which places it in the 142nd position out of 189 countries and territories[28].

In 2019 services accounted for almost 45% of Ghana's GDP[29], growing more than 7.6% annually in terms of value added. The sector also employs the largest number of people in the country. It is followed by industry, a sector that contributed 32% to the country's GDP, while agriculture's contribution was 17% in the same year[30].

With more than 3.5 billion USD, remittances are an important source of foreign money for Ghana and is the equivalent of more than 5.2% of its GDP. Since 2011, foreign direct investments fluctuated around 3.3 billion USD. This means that Ghana is West Africa's top FDI recipient with more than a third of the region's inflows in 2018. The amount of Official Development Assistance (ODA) and official aid received exceeded 1 billion USD in 2018. Moreover, there is a visible declining trend over the last 4 years, with the numbers falling 16% annually on average[31].

Ghana's Outlook during COVID-19[32]

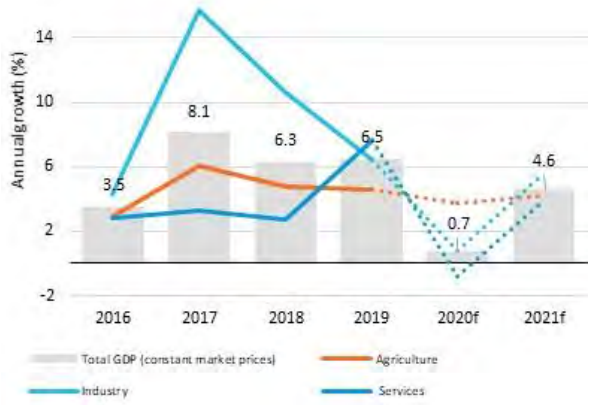
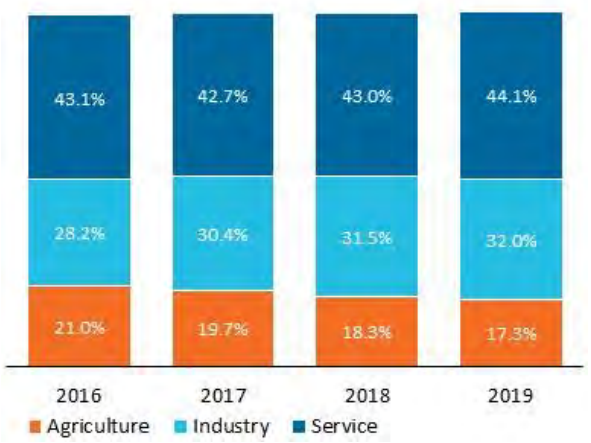


Figure 25. Ghana GDP Composition 2016-2019[33]



Development Needs and Vulnerable Populations

65.4 *Ghana's overall score in terms of achieving SDGs*

100th *The country's rank out of 193 in the world*

Although Ghana's economy is developing, there are still socio-economic issues to be solved. In many areas Africa is benefitting from rapid surge of new technologies what translates, among other things, into the financial landscape. Less than one third (27%) of Ghanaians has bank account, what is a significantly lower share than among developed countries. However, up to 56% of the country's population use mobile money services for transactions [57]. While 67% and 68% of the households in Ghana owned television and radio respectively, only 8% have working laptop and 6% have stable internet connection [58]. However, majority of internet users access the web through mobile phones rather than computers.

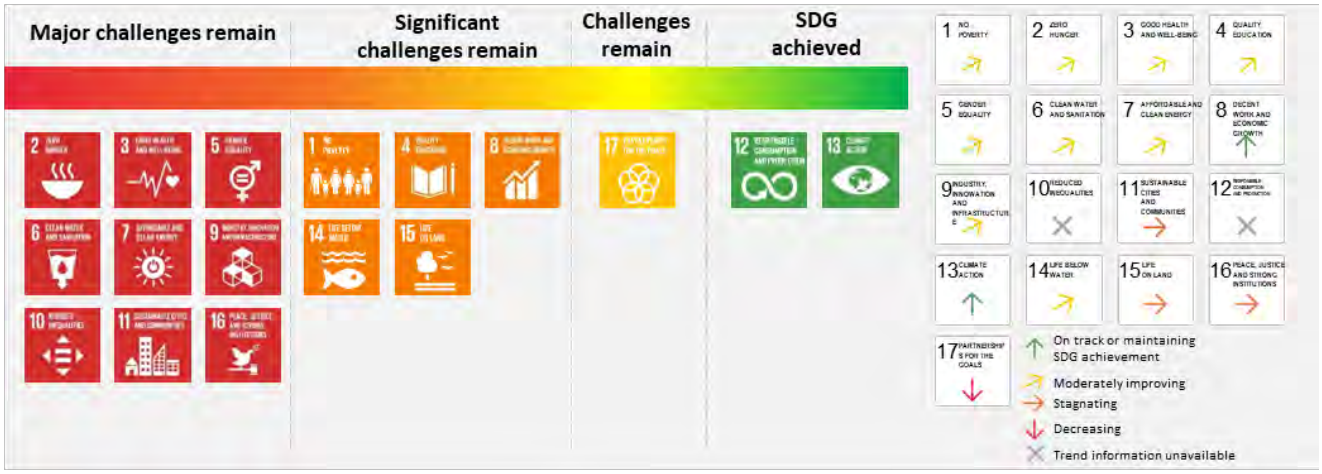
Regionally, poverty is significantly higher in the Upper West, Upper East and Northern parts of the country than in central and southern regions. People inhabiting those areas are more vulnerable to hunger and stunting, resulting in lower quality of human capital and overall well-being. The poor regions are also characterized by higher school drop-out rates, preventing them from finding good employment within the formal sector. Many groups in remote rural areas are excluded from access to basic goods and services with fewer healthcare and educational facilities as well as insufficient infrastructure.

Those inequalities are mostly due to the historic impact of maritime trade, which ensured capital inflow into the Southern part of the country through large sea ports and caused the marginalized regions to be left behind[62].

According to the latest available UNDP statistics from 2014, 13.3% of the Ghanaian population lived under the international poverty line of USD 1.90 per capita per day, while 23.4% of the population lived below the national poverty line. Additionally, another 22% of the people were vulnerable to multidimensional poverty. In 2018, the number of people living in multidimensional poverty amounted to almost 9 million, translating into 30% of the Ghana population [63].

COVID-19 has exacerbated multiple groups of people living in Ghana to poverty and worsened living standards of households. The pandemic has a much stronger adverse effect on the unemployed (the highest amongstthe youth - 27%) rather than on the employed and specifically among young women in urban areas. The level of poverty in households whose heads have become unemployed due to COVID-19 has increased by 55.7%, while their living standards have generally decreased by 65.7%. The problems encountered by households due to the COVID-19 pandemic included lack of access to medicines or medical treatments, clean water, sufficient food, fuel for cooking or income [69]. Other obstacles against achieving the SDGs are related to financing gaps (both on the institutional and private sector levels), insufficient research and development and excessive reliance on the extractives sector from the policymakers side rather than sustainable investments. The country is also lagging behind in value addition, which could be the main driver of inclusive growth [66].

SDG Achievement Status[34]



Potential for Growth – A Business Perspective

Ghana is perceived as one of the most stable countries on the continent in terms of democratic values and freedoms of press and speech. The country is among Africa's 10 fastest-growing economies with annual GDP growth at 6.5% in 2019[35].

Sectoral Opportunities for COVID-19

Sustainable Response and Recovery

Ghana is one of the fastest-growing emerging markets.

With a score of 60.0, the country was ranked as one of the best places for doing business in West Africa according to the Ease of Doing Business Report 2020 (118th globally)[36]. Ghana's location in West Africa gives investors facilitated access to more than 350 million potential customers across a number of markets in the region, under the Economic Community of West African States (ECOWAS) Union.

Taking into account the local context, economic forecasts and growth potential, the following sectors have been listed as the most promising ones amid COVID-19 turmoil:

Agriculture

Ghana's agricultural sector sales in 2019 amounted to 13.2 billion USD, with further estimated growth at 5.6% on average between 2020 and 2025. Consumption equaled 10.4 billion USD in 2019 and is estimated to grow at 4.9% on average in 2020-2025. The gross profit recorded in the sector reached 8.1 billion USD in 2019[39].

Healthcare

While more than half of the population lives in urban areas[40], the distribution of health facilities and the health workforce is uneven among regions. Modern solutions such as telemedicine can provide much needed support to communities and at the same time create a positive return for investors.

Infrastructure

The country's infrastructure sector recorded significant growth since the beginning of the 21st Century and is supporting Ghana's development. With a booming urban population (3.3% growth in 2019[41]), incremental levels of rural migration and growing middle class have been observed. Hence, there are a number of potential opportunities for the private sector to bridge the gap of inadequate water and energy supply.

Financials

Facilitated access to finance is the backbone of private sector development in the emerging countries. During COVID-19, around 30% of SMEs faced decreased access to finance, with agriculture and other services being the most affected sectors[37]. This provides a significant opportunity for investors as the market is not yet saturated and has a relatively large number of potential customers (92,250 formal SMEs)[38].

The list of 4 sectors and 8 Investment Opportunity Areas presented in the next section is the product of a mixed methods approach, that includes results of the survey taken among private and public stakeholders, open discussions with investors who contributed to sectoral prioritizations and desk research covering publicly available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies and National Policies/responses to the COVID-19 outbreak.

The analysis has demonstrated that advancing in SDGs and tackling main development needs are becoming even more urgent due to COVID-19 turmoil. At the same time, a number of areas were revealed in the selected sectors where business potential, policy priorities and development needs aligned.

Key Sectors and Investment Opportunity Areas – Ghana

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Agricultural Development & Innovation	*Supply high-quality seeds and fertilizers to farmers or to government supporting its agricultural programs*	15%-24%		2, 12, 15
	Processed Foods	*Investing in sustainable fish processing factories*	13%-27%		2, 12, 14
	Food Retailers & Distributors	*Creating mobile platforms to connect food producers with markets and provide agricultural information*	30% - 50%		2, 9, 12
	Storage & Packaging Infrastructure	*Building cold storage and transportation infrastructure for agriculture*	48%		2, 12
Healthcare	Healthcare Distribution	*Investment in telemedicine & mobile consultation and emergency response systems*	23%-27%		3, 5
Infrastructure	Gas Utilities & Distributors	*Building LPG bulk storage infrastructure and distribution systems*	20%-47%		7, 11, 15
	Water Utilities & Services	*Construction of water pipelines in low-income and informal settlements*	19%-23%		1, 3, 6
Financials	Consumer Finance	*Providing affordable loans for preserving farmers and MSME's liquidity through digital solutions*	18%		1, 8, 9

IOAs in Ghana

Sector	Agriculture
Sub-sector	Agricultural Development & Innovation

Direct SDG:

Indirect SDG:

Supplying Agricultural Inputs for Farmers

Business Model

Provide high-quality seeds and fertilizers to farmers or to the government supporting its agricultural programs (e.g., Planting for Food and Jobs) with a loan model to be paid at the end of the harvest season.

COVID-19 Related Need Case

Due to COVID-19 related supply chain disruptions, food insecurity among the poor (in Ghana more than 10% of the population lives for less than 1.9 USD daily) has risen, propelled by the increasing food prices, with a year over year inflation rate of 14.4%.[42,43] Moreover, the pandemic negatively affected seed accessibility for the 2020 cropping season, resulting in decreased agricultural production.[44]

Business Potential

- The size of the seed industry in Ghana was estimated at almost 4.5 million USD in 2017 and is expected to grow by a compound annual growth rate of 3.8% between 2020 and 2025.[45,46] However, the potential value based on targets of certified seed coverage is calculated to equal 60 million USD with a preponderance of hybrid maize due to a combination of covering the largest area for cultivation (600,000 hectares) with the highest certified seed prices (USD 2.79 / kg).[47]
- Seed production meets only around 30% of the demand within the country. Expansion of the domestic supply would significantly increase the low penetration of certified seeds among farmers, which in 2017 stood at less than 7%.[48,49]
- Ghana's domestic demand for fertilizers is satisfied entirely through import, which, in 2019, was worth more than 170 million USD. Therefore, opportunities exist to produce inputs such as fertilizers, which would contribute to closing this trade gap[50,51]
- As an example, Farmline, a company providing agricultural inputs and information via a mobile application, has reached above 180,000 farmers between 2013 and 2018.[52]

SDG Related Need Case

- Over 65% of Ghana's land is used for agriculture, which accounts for approximately 17% of its GDP.[53,54]
- The food crops subsector is dominated by smallholder farmers whose cropping practices are characterized by inadequate use of technology, low use of quality seeds and fertilizers, and weak market linkages resulting in poor yields. These have been indicated as significant challenges to attaining SDG 2 (Zero Hunger).[55]
- One of the reasons for sector challenges is the fact that Ghana covers only one fourth of demand for fertilizers domestically, while the rest is imported. Therefore, a potential disruption in international supply chains can negatively affect food production, translating into decreased food accessibility.[56]

IOAs in Ghana

Sector	Agriculture
Sub-sector	Processed Foods

Direct SDG:

Indirect SDG:

Fish Processing Facility

Business Model

Invest in sustainable fish processing factories with a focus on tuna (ocean fish) and tilapia (freshwater fish) to provide higher quality and value-addition through:

> Investments from the private sector to build and/or operate processing facilities

> Public private partnerships

COVID-19 Related Need Case

Fish constitutes up to 60% of animal protein intake for an average Ghanaian. The country imported 600 thousand tons of fish in 2016.[57] With COVID-19 related international supply chain disruptions and limited possibilities to buy fresh fish on the market due to possible lockdowns, all aspects of fish supply chain are strongly affected with jobs, incomes and food security at risk.[58]

Business Potential

- The average annual fish consumption in Ghana is approximately 26 kg per capita. Fish constitutes up to 60% of animal protein intake for an average Ghanaian. It is estimated that fish purchases account for 22.4% of household food expenditures.[59]
- Approximately three-fourths of the fish cultivated in Ghana are consumed locally, but the sector still struggles with an inefficient agro-processing infrastructure which leads to increased post-harvest loss and thus reduced competitiveness.[60]
- For the next 5 years, spending in the fish and fish products category is expected to rise by 12.6% annually and reach a value of 24.6 billion GHC (4.2 million USD) by 2024.[61]
- In 2017, the Ghanaian total fish capture equaled over 380 tons and aquaculture production generated slightly below 57 tons for a total of almost 440 tons.[62] The domestic supply comes from marine fisheries, inland waters and aquaculture. Additionally, the country imported more than 600 thousand tons valued at 200 million USD.[63]

SDG Related Need Case

- There are still major challenges for Ghana in achieving SDG 2: Zero Hunger. The prevalence of stunted growth among children under 5 was as high as 17.5% in 2017.[64]
- In the fishery sector, post-harvest losses can be as high as 20-25%, which is the highest among all agricultural sectors. Insufficient infrastructure, inappropriate and technologically-limited fishing craft, and inadequate processing and storage techniques are the major causes for such losses.[65]
- Women play an important role in the fishery sector, but their participation in leadership and managerial positions is limited in Ghana. However, since 2015, the government, international organizations and local entities have been promoting improvements in policies to ensure higher female participation in coastal management and fisheries.[66]

IOAs in Ghana

Sector	Agriculture
Sub-sector	Food Retailers & Distributors

Direct SDG:

Indirect SDG:

Creating a Mobile Platform to Connect Food Producers with Markets and Provide Agricultural Information

Business Model

Private investment to create a website together with a mobile platform/application that would connect smallholder farmers (mostly informal) with markets and provide them mutual mobile payment options, agricultural information and weather forecasts

COVID-19 Related Need Case

In order to cope with food price fluctuations caused by the COVID-19 crisis, farmers need reliable information about prices and access to markets where they can sell their produce at a fair price.[67]

Business Potential

- Agriculture is an important sector in Ghana. In 2019, it accounted for 17% of the national GDP and 29% of total employment.[68,69]
- In Ghana, policy is focused on raising the productivity and value addition in agriculture with government initiatives such as Planting for Food and Jobs or One Village, One Dam.[70]
- Ghana's agricultural sector sales in 2019 amounted to 13.2 billion USD and are estimated to grow on average at 5.6% between 2020 and 2025. Consumption equaled 10.4 billion USD in 2019 and is estimated to grow at 4.9% on average in 2020-2025.[71]
- The value of digital agriculture Business-To-Person payments in Ghana is rising. According to estimates, it rose from 2.2 billion USD in 2017 to 2.6 billion USD in 2020.[72]
- Additionally, by 2020 it is expected that 4 million farmers will have access to mobile phones, making them a potential client base for digital farming solutions.[73]

SDG Related Need Case

- According to the 2020 SDG Report, Ghana is facing challenges in achieving SDG 2 - Zero hunger, although it is moderately improving. Fortunately, 5 out of 7 indicators show that Ghana is on track to achieve the SDG goal.[74]
- Around 30% of the Ghanaian population is employed in agriculture and the sector adds 11.5 billion USD to the country's GDP.[75]
- About 90% of farm holdings are less than 2 hectares. The cropping practices of smallholder farmers are characterized by an inadequate use of technologies, low use of quality seeds and fertilizers, and weak market linkages.[76,77]
- Women represent an important part of the labor force in the agricultural sector, constituting over half the agricultural labor force and producing 70% of the country's food stock. Women constitute 95% of those involved in agro-processing and 85% of those in food distribution.[78]

IOAs in Ghana

Sector	Agriculture
Sub-sector	Storage & Packaging Infrastructure

Direct SDG:

Indirect SDG:

Building Cold Storage and Transportation Infrastructure for Agriculture

Business Model

Invest in cold storage facilities and refrigerated transportation systems through:

> Private investment, where the private sector invests in the establishment, operations and maintenance of cold storage facilities and provision of services

> Public private investments, where the private sector builds and/or operates the facilities based on a long-term contract with the public sector

COVID-19 Related Need Case

In Ghana, up to 45% of agricultural production is lost (depending on the crop). With COVID-19 contributing to supply chain disruptions and resulting in food shortages, investments in a series of actions and equipment applied to maintain a product within a specified low temperature range from harvest/production to consumption is needed.[79]

Business Potential

- The Middle Eastern and African cold storage market is estimated to grow by 7.4% CAGR between 2020 and 2025, increasing from 23.8 billion USD to 35 billion USD.[80]
- The gross profit of the agricultural sector in Ghana is equal to 8.1 billion USD and is expected to grow at a rate of 4.6% between 2020-2025.[81]
- Food spending in Ghana is rising, recording an annual growth rate of 17.6% in 2019 and is expected to increase at an average rate of 11.5% between 2020 and 2024.[82]
- In Ghana, estimates show that the average loss following harvests ranges from 5% to even 45% depending on the commodity.[83] Post-harvest losses of maize, rice, millet and sorghum accounted for a waste of around 160 million USD in 2018.[84]

SDG Related Need Case

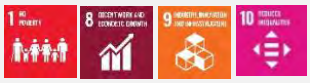
- According to the 2020 Sustainable Development Report, achieving SDG 2 - Zero hunger is a major challenge for Ghana, although there are signs of moderate improvement. About 5% of Ghana's population is food insecure and about 2 million people are vulnerable to become food insecure.[85,86]
- According to estimations, using cold storage solutions can reduce early post-harvest losses by up to 50%.[87]
- Additionally, agriculture supply chains create jobs in transportation with a particular emphasis on women traders, who provide food for local markets directly from farms.[88]
- Women are the key actors in the food sector in Ghana. Currently more than half of jobs in the sector are held by women who produce more than two-thirds of the country's food stock. Almost all employees in agro-processing and food distribution are female (95% and 85% respectively).[89]

IOAs in Ghana

Sector	Healthcare
Sub-sector	Healthcare Distribution

Direct SDG:

Indirect SDG:



Investment in Telemedicine & Mobile Consultation and Emergency Response Systems

Business Model

Private investment in the creation and operation of a mobile platform that would allow medical consultations and health monitoring via mobile phones/internet

COVID-19 Related Need Case

Due to the limited amount of medical personnel, e-medicine can help with identifying COVID-19 cases and reduce the burden on the overloaded healthcare system.[90]

Business Potential

- As of 2016, there were more than 8,300 health facilities in Ghana and more than 23 thousand hospital beds, 13% of which were provided by private companies.[91]
- While more than half of the population lives in urban areas, the distribution of health facilities and their workforce is uneven among regions. The Ashanti and Greater Accra regions, where two major cities in the country are located, have approximately 40% of the health workforce. This means that the rural population may face obstacles in accessing health services.[92,93]
- Ghana has been improving its ICT infrastructure (broadband internet, 4G LTE data) and has achieved 55% of unique user mobile penetration at the beginning of 2020. Therefore, a large market has been unlocked, as connectivity is not an obstacle to using mobile devices for medical advice.[94]
- One of the key areas, where telehealth is highly used is maternal health (second after family planning). The total market size is estimated to rise from 0.95 million to 1.2 million people between 2014 and 2020.[95]

SDG Related Need Case

- There are still major challenges in Ghana in achieving SDG 3: Good health and well-being.[96]
- To achieve universal healthcare access, Ghana has to tackle such problems as poor transportation networks, underequipped medical centers and an insufficient medical workforce. Many diseases that could be easily treated have a negative impact on morbidity rates.[97]
- With limited access to health services, the focus should be put on prevention facilitated by investments in telemedicine and mobile consultations. According to the Human Development Index, Ghana has only 9 hospital beds per 10,000 inhabitants compared to the average 19 beds per 10,000 inhabitants for medium-developed countries.[98]
- There were only 0.136 doctors (in 2017) and 4.2 nurses (in 2018) per 1,000 people. In comparison, the WHO recommends a minimum of 0.217 doctors and 2.28 nurses per 1,000 people respectively.[99,100]
- With solutions such as telemedicine and mobile consultations, the system will be better prepared and equipped to deal with post gender-based violence trauma. According to a report from 2016, more than 14% of young women in Ghana experienced sexual abuse and more than half of women were victims of gender-based violence.[101]

IOAs in Ghana

Sector	Infrastructure
Sub-sector	Gas Utilities & Distributors

Direct SDG:

Indirect SDG:

Building LPG Bulk Storage infrastructure and Distribution Systems

Business Model

Invest in LPG bulk storage and distribution systems infrastructure in partnership with local LPG producers

COVID-19 Related Need Case

Improving air quality through the eradication of highly polluting energy sources is fundamental for the improvement of well-being and the amelioration of immunity to illnesses such as COVID-19. In Ghana, biomass is the most popular cooking fuel used among 70% of households. According to estimations, the exposure to air pollution inside homes is responsible for more than 16,000 deaths.[102]

Business Potential

- The demand for LPG is growing in Ghana, with primary usage as cooking and transport fuel. Approximately 80% of LPG demand is covered through import, with domestic production at 340 thousand tons in 2019.[103]
- Although the government has already boosted LPG demand with incentivizing programs, the nationwide LPG penetration rate is currently only at 25%, below the 50% target set for 2020. Therefore, further government incentives to expand storage capacity and distributions centers are likely to be expected.[104]
- The largest demand for LPG was observed in urban areas, namely the Greater Accra, Ashanti and Western regions. Urban areas constitute a dynamic and ever-growing market for modern solutions for households.[105,106]
- To reach the goal of a 50% LPG penetration rate by 2030, there is need for an approximately 400 million USD investment, one-quarter of which is needed for bottling plants and storage facilities.[107]
- In 2017, it was estimated that there were 5.8 million LPG cylinders used in Ghana and that total consumption reached around 360,000 metric tons.[108]

SDG Related Need Case

- Ghana is underperforming in terms of SDG 7: Affordable and clean energy with a score of 51.7. Only 21.7% of the population has access to clean fuels & technology for cooking.[109]
- The benefits of switching to LPG include health improvements, the saved cost of biomass fuel or time needed to gather it, reduced cooking time, and reduced CO_2 emissions compared to fuelwood or charcoal.[110]
- Owners of LPG cooking stoves are forced to travel approximately 25 km (range: 20–28 km) on average to refill their cylinders.[111]

IOAs in Ghana

Sector	Infrastructure
Sub-sector	Water Utilities & Services

Direct SDG:

Indirect SDG:

Construction of Water Pipelines in Low-Income Settlements

Business Model

Invest in scaling water pipelines in low-income settlements surrounding major cities to provide their dwellers with affordable water through:

> Public- Private- Partnership models

> Private investments, where the private entity sells the water directly to consumers

COVID-19 Related Need Case

Access to clean water is necessary to improve hygiene levels in the most densely populated areas and therefore prevent the spread of COVID-19. In 2015, around 38% of the urban population lived in low-income, high density settlements in Ghana.[112]

Business Potential

- To reach the governmental goal of universal basic water coverage by 2025, an annual investment of 327 million USD is required. This value almost triples when the SDG requirements of quality and reliability are taken into account.[113]
- Ghana's urban population growth equaled 3.3% in 2019. More than 5.5 million people lived in low-income settlements in 2015 and this trend is growing because population growth exceeds economic growth.[114]
- The demand for water in urban areas amounted to 310 million gallons per day in 2018 exceeding the supply of 217.5 million gallons per day. Despite government action, insufficient water availability due to increasing demand will likely worsen without private sector investment.[115]
- There is a considerable inequality in access to piped water. In Accra, for example, connection rates can be as high as 90% in wealthy districts and as low as 16% in low-income ones.[116]

SDG Related Need Case

- Ghana still faces major challenges in achieving SDG 6: Clean water and sanitation. The proportion of the population with access to safe drinking water in urban areas reached 76% in 2016, while access in rural areas decreased from 64% in 2014 to 62% in 2016. The percentage of the population using at least basic sanitation services is as low as 14.3%.[117,118]
- Around 50% of all households do not have access to piped water (37% in urban centers, 74% in small towns).[119]
- Major challenges in the water subsector include: meeting increasing demand; intermittent supply; high levels of unaccounted-for water; inadequate maintenance of facilities; weak institutional coordination in water service delivery; and unreliable drinking water quality.[120]

IOAs in Ghana

Sector	Financials
Sub-sector	Consumer Finance

Direct SDG:

Indirect SDG:

Affordable Loans for Preserving Farmers and MSMEs' Liquidity

Business Model

Provide affordable loans for farmers and MSMEs to maintain liquidity in the short-term and boost growth and recovery in the mid-term through:
> Conventional loans from traditional banking sectors and/or lending institutions
> Fintech based solutions, using alternative data sources to assess creditworthiness of MSMEs and farmers

COVID-19 Related Need Case

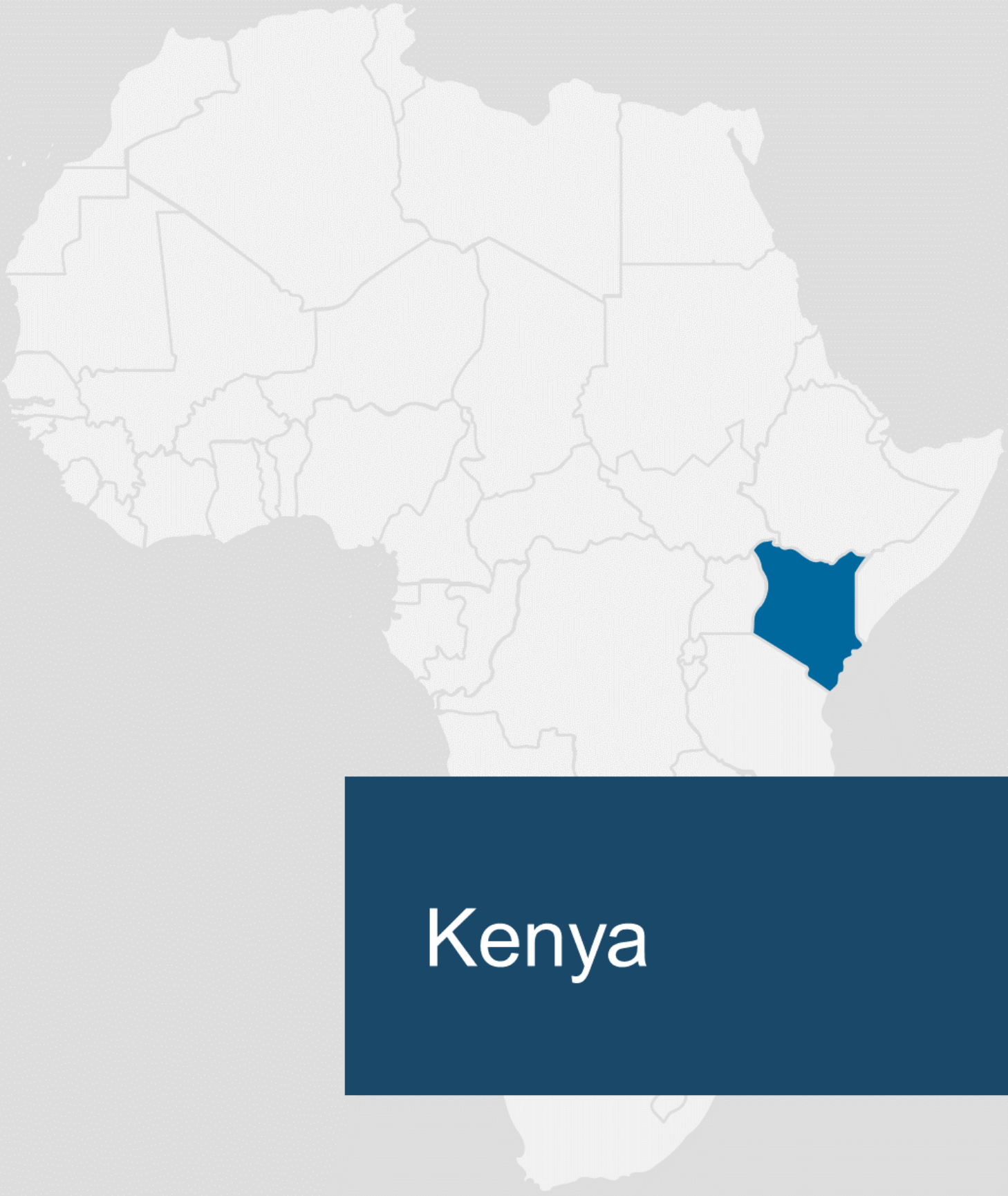
During the COVID-19 crisis, a majority of businesses suffered from shocks in supply and demand. More than 130 thousand companies reported challenges in accessing financial support and raised concerns with regard to higher levels of uncertainty in the business landscape.[121]

Business Potential

- The formal finance gap for SMEs in Ghana is as high as 65%.[122]
- The SMEs' finance gap in Ghana reaches 13.19% of the GDP.[123]
- There are 92,250 formal small and medium enterprises in Ghana.[124]
- According to the IMF's Financial Access Survey, 35% of formal SMEs in Ghana are financially constrained, 36% are partially financially constrained and less than 30% reported no financial constraints.[125]
- During COVID-19, around 30% of SMEs faced decreased access to finance, with agriculture and other services being the most affected sectors (agriculture 30%, other services 27%).[126]

SDG Related Need Case

- In Ghana access to finance is limited, especially among farmers, as the financial sector considers agribusiness too risky. This leads to insufficient financial products for farmers and private sector agribusiness companies. Together with prohibitive borrowing rates of up to 36%, farmers struggle to scale up their businesses.[127]
- Despite the fact that in 2018 there were over 550 licensed microfinance institutions in the country, nearly half of them are financially insecure, which puts at risk approximately 50% of MFI deposits.[128]
- Less than half of Ghanaians has access to formal financial services offered by banks, which forces those excluded to rely on informal borrowing or family loans.[129]
- Additionally, companies face similar challenges as over 90% of them belong to SME groups and can't afford formal banking services due to their size.[130]



Kenya

Kenya's Economic Context

19.9 million people live in multidimensional poverty (2018Y)

39% of total population

0.178 multidimensional poverty index (0-1) (2014Y)

19.3 million people live below income poverty line (PPP 1.90 USD/day)

37% of total population

Kenya – a country located in the eastern part of Africa - has a population exceeding 52.5 million people which grows at an annual pace of 2.3%[131]. It is the third largest economy in Sub-Saharan Africa after Nigeria and South Africa. Although Kenya is classified as a lower-middle-income economy by the World Bank, its HDI result of 0.579 puts the country in medium human development group in the 147th position out of 189 countries and territories[132].

The sector with the highest contribution to GDP is services (43.2%), whereas industry and agriculture contribute 16% and 34% respectively[133]. However, the share of agriculture in Kenya's economy has grown over the last decade, primarily due to the shrinking of services.

The value of remittances received in 2019 amounts to 2.8 billion USD, an equivalent of 3.0% of the GDP. Foreign Direct Investments (FDI) fluctuated significantly in the last decade, recording a considerable drop from almost 1.1 billion USD in 2013 to 0.4 billion USD in 2016, and is currently above 1.6 billion USD. At the same time, the amount of official development assistance and official aid received stood over the last years, with small variances, around 2.5 billion USD annually[134].

Another challenge for Kenya to overcome is its extensive informal sector, which according to national authorities accounts for more than 80% of total employment created annually[135] and is estimated to be equivalent to 30% to 40% of the Kenyan GDP[136]. However, there lack detailed statistics covering the structure of informal employment in the Kenyan economy.

Kenya's Outlook during COVID-19 [137]

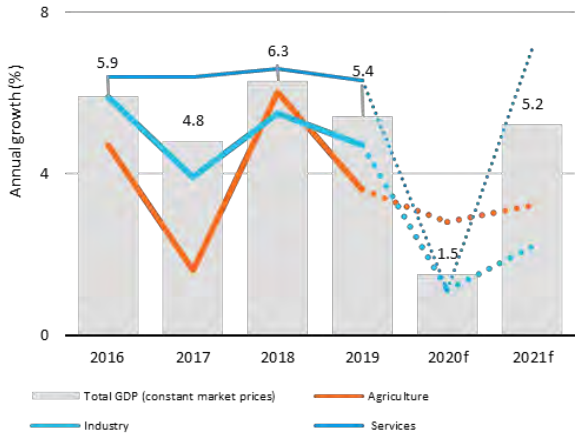
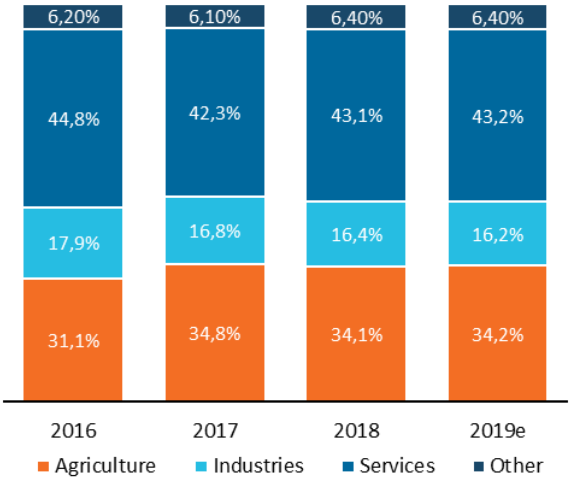


Figure 26. Kenya: GDP Composition 2016 - 2019[138]



Development Needs and Vulnerable Populations

60.2 *Kenya's overall score in terms of achieving SDGs*

123th *The country's rank out of 193 in the world*

Poverty and income inequality remain one of the key challenges for Kenya. The proportion of the population living below the national poverty line reached 36.1% in 2014, while by international standards, 36.8% of the population lived below the poverty line of 1.90 USD per capita per day[139]. The 2019 Kenya Population and Housing Census discovered that there are approximately 19.5 million of people living in poverty in Kenya. Of that number, 14 million live in rural areas, 1.3 million live in peri-urban areas and 4.2 million live in core-urban and informal settlements[140]. This disparity between rural and urban communities results in migration to large cities, which do not always have the capacity to absorb such inflow of people[141]. The COVID-19 pandemic will further deepen poverty levels, particularly within female headed households, which account for 30.2% of the poor population[142].

The COVID-19 pandemic is particularly dangerous for the poorest populations who are most vulnerable to its impacts. Not only are they more exposed to the virus because of limited social distancing possibilities and poor sanitary regimes, but they also may not be able to seek proper treatment, as on average, only 12% of the rural population has medical insurance, compared to 27% of urban dwellers[143].

There are high levels of youth unemployment, arising from insufficient human capital quality as well as high population growth, inconsistent with Kenya's economic development. Kenya's inhabitants are projected to grow, from the current 52 million[144] to as much as 77 million by 2030[145]. This will contribute to an oversaturated labor force in the market and will leave many Kenyans, especially those from poorer regions, unemployed and living in and poverty. As COVID-19 negatively impacts labor markets and causes lay-offs, even more people might become out of work.

Gender inequality remains a pressing issue in Kenya, as women are still victims of gender-based violence and objectification. Harmful cultural norms and pervasive discrimination negatively affect women's land ownership and employment, leading to limited financial independence.

Due to the pandemic and lockdown, many girls and women might become victims of domestic violence, as both the financial and relational situations of many households have been impacted negatively, giving rise to more tensions. Many women have been laid off from their jobs due to COVID-19, and therefore became dependent on their spouses or families. They are also under increased exposure to the contagion, as traditionally, women are the primary caregivers for the sick[146].

The agriculture sector employs nearly 60% of the total population and comprises 26% of Kenya's GDP[147]. However, it is marred by several significant obstacles to development: inadequate funding and access to finance, climate change having direct effects on agricultural productivity, inadequate market access for products, outbreaks of pests and diseases, high levels of post-harvest losses resulting to food insecurity and declining productivity in rural areas. High transportation costs and insufficient infrastructure lead to limited competitiveness of domestic agricultural produce and high food waste. This makes the population employed in the agricultural sector particularly vulnerable, as most of it belongs to the informal sector, and therefore has no form of social protection or insurance in case of a crisis[148].

The COVID-19 pandemic is likely to have an adverse effect on food security and nutrition, as the outbreak of the novel virus has coincided with the beginning of the planting season for maize, the basis for nutrition in Kenya.

Food stocks are projected to decline and prices to increase as the early season drought caused a large decrease in maize production in 2019, followed by this year's pandemic. This situation will mainly impact the poorest and the most vulnerable populations and will be deepened by travel and transport restrictions, night curfews, quarantines for cargo vessels' crews at ports, as well as strict controls at the country's borders resulting in logistics problems. Moreover, food security can be further exacerbated as some countries restrict food exports to hamper the spread of COVID-19[149].

As of April 2020, the housing situation in Kenya has undergone significant deterioration due to the COVID-19 pandemic, as only 41.7% of all tenants were able to pay their rent on time. According to a report on socioeconomic impacts of Covid-19 in Kenya, 30.5% of Kenyans' renting units were unable to meet the due dates for rent payments. The most quoted reasons for the inability to make the payments were reductions in or temporary loss of unemployment, and delays in income[150].

SDGs Achievement Status [151]

60.2

Kenya's overall score in terms of achieving SDGs

123rd

Country's rank out of 193 in the world

Trends

Potential for Growth – A Business Perspective

Kenya is the biggest economy in East Africa and the third largest in Sub-Saharan Africa with rapid annual GDP growth of over 5%[152]. This considerable development is fueled by the emerging middle class with rising demand for high-value products and services.

Sectoral Opportunities for COVID-19

Sustainable Response and Recovery

With a population of 51 million people[153] and a free-trade agreement within COMESA, Kenya offers considerable market potential[154]. According to the Ease of Doing Business index, Kenya is ranked third in Sub-Saharan Africa and 56th in the world (out of 190 countries)[155]. Investors have already noticed the country's potential as the FDI quadrupled between 2016 and 2018[156]. As of 2019, Kenya had also 61 Special Economic Zones which accounted for one-fourth of the total number in Africa[157].

During the COVID-19 pandemic the following sectors were indicated to possess the biggest market and impact potential:

Financials

Kenya is on track to becoming a regional financial hub, with Nairobi as its center. With increasing financial inclusion and surges in mobile payment services (10% between 2018--2019[158]) the appetite for capital is on the rise. The total finance gap for MSMEs equaled 19 billion USD in 2017[159] which can be provided by the private sector.

Technology & Communications

The ICT sector is the backbone of Kenyan GDP growth. The total value of telecommunication and digital services in Kenya is expected to reach 9.116 billion USD in 2022 (+3.66 billion since 2017)[160]. With a high penetration of mobile subscriptions of 115 per 100 people and 83 per 100 Internet subscriptions[161], Kenya offers high market potential for investing in ICT.

Healthcare

With a government priority of achieving Universal Health Care by 2022 and COVID-related demand, the sector offers profitable investment opportunities especially in implementing modern technologies like mHealth or 3D printing. The telehealth subsector alone is expected to grow by 50% between 2020-2022[162]. Government commitments to UHC and to increase public funding create opportunities for public-private cooperation.

Agriculture

Accounting for 34% of the Kenyan GDP[163] this sector also employs the most of Kenyan population. Total sales in agriculture reached 26.5 billion USD in 2019 and are expected to grow at an average rate of 1.52% from 2020 – 2025[164]. Together with a political priority on achieving Food and Nutrition Security stated in Big Four Agenda, agriculture offers numerous investment opportunities.

Education

COVID-19 forced the closure of schools which created high demand for remote education. mEducation is expected to reach a value of 240 million USD in 2022 up from 150 million USD in 2020[165]. Additionally, the Ministry of Education provided 7.25 million USD to expand remote learning solutions as a COVID-19 response plan[166].

Renewable Resources & Alternative Energy

The Kenyan government plans to achieve universal access to electricity by 2022. With an increase of electricity consumption (13% between 2015 and 2019[167]) and issues with transmission reliability, Kenya has a high demand for off-grid and mini-grid solutions. Kenya's National Electrification Strategy estimated that 2.8 billion USD of total investment in off- and mini-grid development is required to achieve universal access to electricity[168].

The list of 7 sectors and 10 Investment Opportunity Areas presented in the next section is the product of mixed methods approach, which benefited from results of the survey taken among private and public stakeholders, open discussions with investors who contributed to the sectoral prioritizations and desk research covering publicly available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies and National Policies/responses to the COVID-19 outbreak.

The analysis has demonstrated that advancing in the SDGs and tackling the main development needs are becoming even more urgent due to COVID-19 turmoil. At the same time, a number of areas was revealed in the selected sectors where business potential, policy priorities and development needs aligned.

Key Sectors and Investment Opportunity Areas – Kenya

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Food Retail & Distribution	*Creating platforms to connect food producers with markets*	20%-30%		
Healthcare	Healthcare Distribution	*Investment in telemedicine centers, hospitals, mobile consultation services, & emergency response systems*	18%-22%		
	Medical Equipment & Supplies	*3D printing farms for the production of PPE and medical spare parts*	18%-22%		
Infrastructure	Water Utilities & Services	*Water pipelines for low-income settlements*	16%-20%		
Financials	Consumer Finance	*Provide affordable credit and loans to support financial liquidity of MSMEs and agriculture*	18%		
	Insurance	*Providing affordable health and property microinsurance via mobile phone*	13%-18%		
Education	Digitalization of Education	*E-learning solutions via mobile platforms*	19%-23%		
ICT	Software & IT Services	*Digital remote work solutions for companies offering a wide range of services*	17%-21%		
	Internet Media & Services	*Extending existing broadband ranges across impoverished regions of the country/digital inclusion*	14%-18%		
Renewable Resources & Alternative Energy	Solar Technology & Project Developers	*Off-grid and mini-grid solar power generators to rural communities*	15%-20%		

IOAs in Kenya

Sector	Healthcare
Sub-sector	Healthcare Distribution

Direct SDG:

Indirect SDG:

Investment in Telemedicine Centres, Including Already Existing Hospitals & Mobile Consultation Services, as well as Emergency Response Systems

Business Model

Private investment in the provision of medical consultations and health monitoring via Internet platforms or mobile phones, together with emergency response systems in case of medical accidents. Further development can be also connected with supplying medicines.

COVID-19 Related Need Case

Due to a limited number of medical personnel, e-medicine can help with identifying COVID-19 cases and reducing the burden of an overloaded healthcare system. Contactless consultations will contribute to the improved safety of healthcare workers.[169]

Business Potential

- Telemedicine in Kenya has high customer access potential as the mobile penetration ratio stood at 114.7 per 100 inhabitants in 2019, along with an Internet penetration ratio of 83.4% in 2019 (both by number of subscriptions).[170]
- Kenyans are becoming more aware of the need for consultations as outpatient services increased by 90% from 4.8 million in 2003 to 9.1 million in 2018. However, the numbers of patients who reported a sickness but did not seek care reached 28% in 2018. In 2018, 3% of ill people mentioned distance to a health facility as a prohibitive factor. The average time to reach a medical facility was reported as 46 minutes in 2013.[171]
- The average annual number of medical visits per person equaled to 2.5 in 2018.[172]
- The "mHealth" industry value amounted to 275.7 million USD in 2019 and is expected to rise to 557.1 million USD in 2022.[173]

SDG Related Need Case

- Despite significant investments over the last two decades, health sector outcomes have not reflected sufficient progress to meet the demand of the rising population.[174]
- Kenya requires a solution for its understaffed medical centers. There were only 14 doctors per 100,000 inhabitants and 42 nurses per 100,000 in 2016, while the WHO recommends a minimum of 21.7 doctors and 228 nurses per 100,000 people respectively.[175]
- Moreover, there is significant geographical heterogeneity in the availability of health services in rural and urban areas. Around 70% of the population living in rural areas is mostly reliant on community health volunteers and health facilities staffed by nurses, who provide only basic services.[176]
- The current data shows that in 2015 on average only 65% of women visited a healthcare facility during the whole year. The lowest score was reported in northern counties (Turkana and Marsabit). Apart from the accessibility of clinics, women mentioned getting permission, distance, money and not wanting to go alone as obstacles to their visits.[177]

IOAs in Kenya

Sector	Healthcare
Sub-sector	Medical Equipment & Supplies

Direct SDG:

Indirect SDG:

3D Printing Farms for Production of PPE and Medical Spare Parts

Business Model

Private investment in 3D printer farms to produce personal protective equipment (e.g., masks) and spare parts for medical devices

COVID-19 Related Need Case

Currently, Kenya imports at least 70-80% of its medical devices. With possible disruptions in supply chains, there is a need to bridge this gap by increasing domestic production so that hospitals are better prepared and able to cease the spread of COVID-19.[178]

Business Potential

- Kenya is a leading East African country in 3D printing, which creates a friendly environment for technology adoption. However, this business is mostly focused in the capital city of Nairobi, leaving untapped potential in other parts of the country.[179]
- Kenya is a promising market for medical devices and has been ranked as the fastest growing market in sub-Saharan Africa according to Business Monitor International (BMI).[180] According to the 2020 Economic Survey, the overall expenditure on health services by the Kenyan government is expected to rise by 50.9% to 115.8 billion KSh (1 billion USD) in 2020.[181]
- Business potential is going to rise as the 3D market is expected to grow at over 20% in upcoming years with an expansion of printing for healthcare as a significant driver.[182]
- There is also a high demand for spare parts for medical devices since over 40% of medical equipment in areas with low resource availability is said to be nonoperational.[183]
- Kenya imports ca. 70-80%[184] of medical devices. This number is lower in comparison to a 95% average in low resource areas, however, the high costs of imports create an opportunity for local production.[185]
- According to available studies, Africa will require between 30,000 and 400,000 ventilators depending on various scenarios. Together with high costs for professional equipment ranging from 20,000 to 50,000 USD, this creates a significant market for 3D production.[186]

SDG Related Need Case

- Medical devices and equipment are vital for the proper healthcare operations. However, in Kenya medical facilities were reported to carry only 77% of necessary equipment according to WHO standards.[187]
- Together with frequent breakdowns of equipment, the situation poses a serious threat to healthcare quality that can be solved by 3D printing but requires private investment.[188]
- The situation become even more dire due to the expansion of Covid-19 which requires immediate action and manufacturing to produce personal protective equipment.[189] 3D printers can help to scale production and ensure high quality products.

IOAs in Kenya

Sector	Education
Sub-sector	Digitization of Education

Direct SDG:

Indirect SDG:

E-Learning Solutions & Mobile Platforms

Business Model

Investment in the creation of mobile platforms for schools (primary and secondary) that will support remote education with learning materials, lectures and exercises based on a customer-paid model with the support of grants and/or public funding

COVID-19 Related Need Case

There are nearly 18 million children in Kenya enrolled in education on any level, constituting around 35% of the total population. [190] E-learning is thus necessary to mitigate the impacts of COVID-19 related school closures.

Business Potential

- The African e-learning market was developing at a CAGR of 14% between 2011-2018 and achieved a value of 792 million USD in 2018. Constricted access to education in remote areas will drive the e-learning sector to reach an estimated value of 1.8 billion USD by 2024.[191]
- The growth of e-learning will be accelerated by the spread of COVID-19. The Kenyan Ministry of Education proposed a budget of 7.25 million USD for part of its rapid response plan which entails expanding existing remote learning opportunities for learning continuity for all students in basic education.[192]
- Students and teachers can benefit from e-learning development. As a direct effect of COVID-19, over 90,000 schools were closed in mid-March and will remain closed until the beginning of 2021. This situation interrupted the education of 18 million pre-primary, primary and secondary students. Additionally, over 300,000 teachers require support and tools to teach remotely.[193]

SDG Related Need Case

- Achieving SDG 4 – Quality Education remains a challenge for Kenya with indicators such as the literacy rate among those aged 15 to 24 showing only 88%.[194]
- The COVID-19 pandemic may lengthen the time it takes to achieve the SDG goal. Currently, 48.2% of households in Kenya applied home schooling to continue learning. Notably, 24.6% of households with members who usually attend a learning institution were not using any method to continue education.[195]
- As indicated during the 2014-2016 Ebola-related lockdown and school closures, there was an increase in dropouts, child labor, violence, teen pregnancies and persisting socioeconomic and gender disparities. This had long-term effects on the continuity of education as well as economic and health outcomes.[196]

IOAs in Kenya

Sector	Financials
Sub-sector	Consumer Finance

Direct SDG:

Indirect SDG:

Provide Affordable Loans to Support Financial Liquidity of MSMEs and Agriculture

Business Model

Customized loan products to provide MSMEs and farmers with financial instruments focused on guaranteeing liquidity and medium-term adaptation and recovery through:

> Conventional loans from traditional banking and/or lending institutions

> Fintech solution, such as B2C Fintech or P2P lending services. [197] Investment in already existing companies can be also made through Venture Capital vehicles, mitigating the risk of early-stage businesses.

COVID-19 Related Need Case

Only 39% of SMEs have financial reserves to manage emergencies arising from losses or reductions in income. [198] Therefore, there is need for affordable financing for maintaining liquidity after the shock caused by COVID-19.

Business Potential

- The market for affordable finance is growing in Africa, as shown by 56% and 46% growth in the amount of MFI and borrowers respectively between 2012 and 2018. The number of borrowers stood at 6.3 million people in 2018.[199]
- In Kenya, capital is mostly needed for over 1.5 million SMEs and agricultural development. In 2017 the total finance gap of SMEs equaled over 19 billion USD which accounted for 30% of the Kenyan GDP.[200] Moreover, affordable loans and credits have a favorable environment in Kenya as it is a regional finance hub.
- 71.6% of SMEs were using mobile phones for business in 2017 and 68.1% sent or received mobile money in the same year.[201]
- According to estimations in the Economist, the Fintech sector in Africa recorded an annual growth of 24% between 2009 and 2019. The countries propelling this growth were, among others, Nigeria, Kenya and South Africa.[818]

SDG Related Need Case

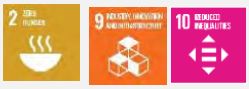
- While access to finance is a key factor for SMEs' growth, over 70% of them don't have access to medium- and long-term loans. This forces them to look for loans among family or friends, and 40% of SMEs have done so. This figure could be even higher considering that many companies mix their sources of funding.[202,203] Currently, the problem is also that the ticket size mismatch between demand from SMEs and investors covers only investments of considerable size. 64% of companies are in their early stages, and thus they desire loans below 100,000 USD, whereas angel investors offered on average 140,000 USD in one ticket. The same problem persists even for middle-sized demand for capital.[204]
- Another issue is the high cost of capital. Since 2005, lending interest rates have not fallen below 13%, and even peaked at around 20% in 2012.[205]
- Though 75% of women work in agriculture, they own only 6% of land (1% alone and 5% in joint ownership), contributing to lower access to credit and yield gaps of 20-30% in favor of men.[206]

IOAs in Kenya

Sector	Financials
Sub-sector	Insurance

Direct SDG:

Indirect SDG:



Providing Affordable Health and Property Microinsurance via Mobile Phone

Business Model

Private investment in providing affordable and customer-adjusted health and property insurance with a focus on agro-insurance, natural disaster coverage and production losses through mobile platforms

COVID-19 Related Need Case

To reduce the risk caused by COVID-19 and to mitigate extreme health spending, Kenyans need access to fair and affordable insurance. Only about 20% of the population has some form of health insurance coverage.[207]

Business Potential

- The Kenyan insurance sector records stable growth. In 2018, the gross premium of the industry was equal to 2 billion USD (216.26 billion KSh) indicating nominal growth of 3.5% from the previous year.[208] An annual population increase of over 2% will likely contribute to maintaining or even accelerating this growth.'[209]
- Despite that around 60% of non-life and close to 90% of life insurance markets are controlled by top 10 players (V) there is still high market potential as the insurance penetration rate stood at only 2.4% in 2018. Nonetheless, demand is on the rise as indicated by the surge of insurance density which grew by 1.5% (y/y) and stood at 42 USD (4,525 KSh) in 2018.[210,211]
- Also, digital insurance has favorable perspectives as the market size is expected to grow from 5.2 million USD to 24.5 million USD between 2017-2022.[212]
- In 2018, 4.9% of the population incurred catastrophic health expenditures and only 20% was enrolled for some form of health insurance.[213]
- The biggest market share belongs to medical and motor insurance, which cover 31.5% and 36.1% of the market respectively (2018).[214]

SDG Related Need Case

- Poor citizens are highly vulnerable to health shocks as they rarely have any form of health insurance. To cover their medical expenses, they are often forced to sell their personal assets or take a loan from an informal source with above average interest rates, pushing them further into poverty.[215]
- To avoid this issue, the insurance sector should provide financial security to people. Kenya's insurance sector remains underdeveloped, although it can be considered mature in comparison to the regional average. A large number of companies fragments the market and deteriorates the service quality.[216]
- In the 35-64 age bracket, females were reported to have lower access to crop and livestock insurance than men (0.8% for men and 0.5% for women). For the 16-34 age group, there is little to no agricultural insurance for men and 0.2% for women.[217]
- Currently Kenyans often have a negative perception of local insurers, don't have access to appropriate insurance products and face poor service quality. Together with high prices, these factors prevent the sector from developing.[218]

IOAs in Kenya

Sector	Technology & Communication
Sub-sector	Software & IT Services

Direct SDG:

Indirect SDG:

Digital Remote Work Solutions for Companies Offering a Wide Range of Services, i.e. Remote Meetings, Work in Cloud, Payment, Delivery and Supply Handling

Business Model

Private investment in digital solutions to scale-up the remote work capabilities of companies such as virtual meetings, onboarding and training as well as mobile payments with customers and suppliers

COVID-19 Related Need Case

The pandemic forced people into social distancing, which decreased productivity due to the inability to transition to a remote work system. Digital solutions can not only contain the spread of the virus and provide help in day-to-day operations, but they also enable the companies to implement more resilient and competitive business models.[219]

Business Potential

- The ICT is one of the fastest growing sectors in Kenya. In 2019 alone, it grew by 8.8% thanks to the development of mobile services and Internet connectivity. Moreover, the ICT is expected to play a significant role during COVID-19 and in post COVID-19 recovery.[220]
- According to a survey of 258 employers, over 65% of them allowed telework. Moreover, of this group, 71% would like to incorporate remote work into their organization.[221]
- Additionally, the possibility of implementing telework is growing as already 88% of companies utilize computers in everyday work and 81% have Internet access on their premises.[222]
- Moreover, Kenyans have experienced a growing digitalization rate as mobile penetration reached 114.7% and Internet penetration 83.4% in 2019 (both by number of subscriptions). Additionally, 21.6% of the urban population has access to a computer/laptop/tablet and these numbers are growing.[223,224]

SDG Related Need Case

- The competitiveness of Kenyan SMEs is held back by the limited availability of tools and processes supporting connectivity. According to SMEs Competitiveness Outlook 2018, “connect” indicators (e-mail and firm website) for small enterprises are around 30 points lower (on a scale from 0 to 100) than for medium enterprises and reduce the joint score of all size enterprises to 32 and 40 for e-mail and websites respectively.[225]
- Currently remote work is even more important, as due to lockdown 59% of companies reported working less hours than average, 21% closed and only 15% operated from home.[226]
- Furthermore, development of remote work may contribute to the achievement of SDG 8 and 9, which - although improving - are still considered a significant and major challenge respectively.[227]

IOAs in Kenya

Sector	Technology & Communication
Sub-sector	Internet Media & Services

Direct SDG:

Indirect SDG:

Extending Existing Broadband Range Across Impoverished Regions of the Country/Digital Inclusion

Business Model

Invest in the extension of Internet broadband networks/solutions to provide Internet for rural communities through:

> Public Private Partnership

> Blended finance with private sector investment

COVID-19 Related Need Case

Lack of universal and fast data transmission is a considerable challenge for everyday business during the COVID-19 pandemic. Despite a high number of subscriptions, broadband has a significant geographical access divergence and in terms of broadband speed Kenya is ranked 138th out of 174 countries.[228]

Business Potential

- 100 billion USD is necessary to achieve universal access to good-quality broadband in Africa by 2030 which entails connecting 1.1 billion new unique users.[229]
- In Kenya the telecommunication market is expected to reach 3.49 billion USD in revenue by 2022 with demand for mobile data being the key growth factor.[230]
- The rising demand for data transmission can already be observed as total utilized bandwidth reached over 2.7 million Mbps in 2019 (an almost 2.5 time increase compared to 2018) and total broadband subscriptions reached 22.1 million.[231]
- However, only 2% of total broadband subscriptions were wired compared to the 98% wireless ones. A similar disparity is shown by Internet subscriptions where only 1% are wired and 99% are wireless. Considering the rising demand for higher Internet speeds and better reliability, this presents an opportunity for investment in wired broadband.[232]

SDG Related Need Case

- Broadband is critical to economic development in Africa. According to the International Telecommunication Union, if broadband penetration in Africa rises by 10%, the GDP per capita will increase by 2.5%.[233]
- As for 2016, the broadband coverage was not universal. In a study done by the Communication Authority, 8% of sub-locations had less than 50% coverage of the basic 2G network and 2% had no coverage at all. In terms of 3G, access below 50% was reported by 31% of sub-locations and 17% had no access. Even though the situation is improving, and some operators started deploying 4G LTE, there is still a gap to cover.[234]
- Another problem is the data cost which restricts access to the Internet for poorer citizens. In Kenya the average cost of 1GB of data in 2018 was equal to 4% of the Gross National Income per capita, twice as high as the Development Target of the UN Broadband Commission.[235]

IOAs in Kenya

Sector	Renewable Resources & Alternative Energy
Sub-sector	Solar Technology & Project Developers

Direct SDG:

Indirect SDG:

Off-Grid and Mini-Grid Solar Power Generators for Rural Communities

Business Model

Providing an off-grid or mini-grid solar energy generator for rural communities through:

> Lease-to-own models

> Private investment

> PPP models

COVID-19 Related Need Case

25% of Kenya's population has to live without access to electricity with rural areas having the lowest rates of electrification. Together with often unreliable transmission from the main grid, this stymies possible development and constitutes a challenge for day-to-day life and business during social distancing.[236]

Business Potential

- Kenya wants to achieve universal access to electricity by 2022. The Kenya National Electrification Strategy aims at creating around 2 million new connections using Solar House Systems and mini-grid solutions provided mainly by the private sector. Total investment requirements were estimated to equal 2.8 billion USD.[237]
- Additionally, electricity consumption rose by 13% between 2015 and 2019, demonstrating the need to develop affordable energy sources like off-grid and mini-grid solutions.[238]
- The environment for off-grid development in Kenya is favorable and the total sales of Solar House Systems reached 5 million USD between 2014 and 2018 putting Kenya in a leading position in Africa. The main drivers of this include rising demand at a rate of 6.7% (2018) and unreliable transmission from current sources.[239]
- As of 2019, Kenya had installed 700,000 off-grid connections.[240]

SDG Related Need Case

- Kenya still faces major challenges in achieving SDG 7: Affordable and clean energy. In 2019, only 25.1% of the population relied primarily on clean fuels, and the share of renewable energy in total energy consumption equaled 54.9%, down from 57.7% in 2017.[241]
- Furthermore, despite developing capacity Kenya still faces challenges in transmission. Companies reported that on average they faced 3.8 electricity outages per month with an average duration of 5.8 hours from the main grid. This led to 5.4% in sales losses and forced 65.6% of companies to buy a generator.[242]
- Moreover, households mentioned electricity cost and connection fees as a constraint. This results in a situation where some communities that are, in theory, linked to the grid have only 5.5% of last mile connectivity with fees of 140–320 USD (15-35 thousand KSh) compared to the daily cost of off-grid generators of only 0.5 USD (50 KSh).[243]

IOAs in Kenya

Sector	Agriculture
Sub-sector	Food Retail & Distribution

Direct SDG:

Indirect SDG:

Creating Platforms to Connect Food Producers with Markets

Business Model

Investing in mobile platforms to establish links between smallholder farmers (often informal) and markets requiring sustainable amounts of produce while providing delivery services between them

COVID-19 Related Need Case

The agricultural sector contributes over 30% of the GDP[244] and employs 40% of the total population in Kenya[245] (where women account for a substantial part of employment in the sector) [246]. The impact of COVID-19 will heavily affect the agricultural sector and increase food insecurity.

Business Potential

- In 2019, 73.2% of farms claimed to be smallholdings, and their total output reached 4.31 billion USD (466 billion KSh).[247]
- However, without buyers ready to purchase from farmers, post-harvest losses can reach 39-52% as illustrated by the mango industry in Kenya. Limited off-take leads, loss by pests and poor storage practices could have been avoided with better market access.[248]
- An example of a successful start-up creating connections between producers and consumers is Twiga Foods. By 2019, it had connected more than 17,000 producers and 8,000 retailers since its launch in 2014 and raised 67.2 million USD in total.[249,250]
- The market is not yet saturated considering a 53% smartphone penetration rate amongst farmers and a 47% feature phone penetration rate with basic access to the Internet.[251]

SDG Related Need Case

- The 2020 Sustainable Development Report indicates that Kenya is stagnating in achieving SDG 2: Zero hunger by 2030, with its major challenges being crop yield and the prevalence of undernourishment.[252]
- To drive agricultural transformation in Kenya, there is significant need for improving competitiveness by supporting farmer aggregation models that promote smallholder links to off-takers, which then in turn can improve access to good farming practices and new technology.[253] However, the COVID-19 crisis will slow down this transformation. Due to price fluctuations, uncertainty and supply chain disruptions, food security may be endangered which is indicated by a recent 10.6% inflation rate of food prices compared to a 2.8% rate in the previous year.[254]
- Despite the fact that women play a key role in the agricultural sector, being in some cases the only ones from their households working in rural production and selling crops, they usually work in informal settings and get lower revenues from their sales. Therefore, developing additional tools to connect them with potential buyers and the market will facilitate making more informed decisions, increasing their incomes and positively impacting their livelihoods.[255]

IOAs in Kenya

Sector	Infrastructure
Sub-sector	Water Utilities & Services

Direct SDG:

Indirect SDG:

Water Pipelines for Low-Income Settlements

Business Model

Invest in providing water by pipelines in suburban, informal settlements and low-income areas of big cities through:

> Public Private Partnership models

> Blended finance with private sector investment, government subsidies and grants

> Private investment to build, operate, maintain and provide the services directly to consumers

COVID-19 Related Need Case

Access to water is crucial to maintain a high level of sanitation, which helps mitigate the spread of COVID-19. However, in 2017, only 32% of the urban and 22% of the rural population had access to basic handwashing facilities such as soap and water.[256]

Business Potential

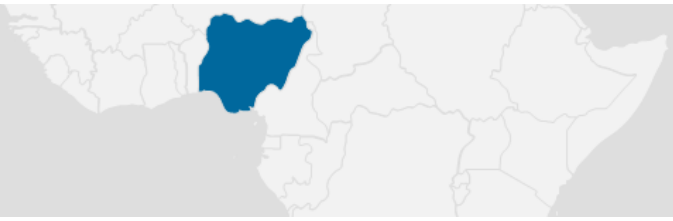
- In 2019, the Kenyan urban population reached 14.4 million people, accounting for 27.5% of the total population. This rate is growing at 4% annually. However, the most recent data shows that 56% of urban inhabitants lived in low-income communities in 2014, and this trend is growing due to high population expansion.[257]
- At the same time, the domestic water demand is expected to rise from 1.2 to 2.6 billion cubic meters between 2010 and 2030.[258]
- Nonetheless, only 60% of Kenyans have access to safe drinking water with the goal of 80% by 2022, and 29% have access to at least basic sanitation services. This leaves a considerable gap than can be filled by the private sector.[259]
- As for access to pipes, only one-third of the total population uses them as a source of drinking water.[260]
- The total investment that is required to achieve SDG 6 (Clean Water and Sanitation) was estimated at over 17 billion USD.[261]

SDG Related Need Case

- According to the 2020 Sustainable Development Report achieving SDG 6 (Water & Sanitation) in Kenya is still a major challenge. Indicators suggest that it is not improving in this sector with the biggest challenges being basic access to water and sanitation.[262]
- The cost of water is a significant problem. The average price of piped water in Nairobi equals around 4.46 USD a month whereas the cost of having to cope with unreliable water sources amounts to 38 USD monthly in rural areas.[263]
- Similar issues are present in informal settlements, where only a minority of households has access to the utility water supply, which is cheaper and more reliable because common water supplies are being mostly privatized by “cartels”.[264]

Nigeria

Nigeria's Economic Context



90.9
million people live in multidimensional poverty (2018Y)
46%
of total population

0.254
multidimensional poverty index (0-1) (2014Y)

107.5
million people live below income poverty line (PPP 1.90 USD/day)
54%
of total population

Nigeria – a country located in the western part of Africa, is the most populated country on the continent with more than 200 million inhabitants and an annual population growth exceeding 2.5%[265]. It is notable for the size of its population under 18 years old, ranked third after India and China. According to the World Bank, it is the largest economy on the continent and ranks 26th globally[266]. However, Nigeria's HDI value for 2018 is 0.534, putting the country in the low human development category and ranks 158th out of 189 countries and territories[267].

Services account for approximately half of the Nigerian GDP with agriculture generating slightly more than one-fifth. The non-oil industry's share in the total GDP has increasing in recent years and according to World Bank estimates almost reached 20% in 2019[268].

However, as a member of OPEC, the Nigerian economy is stillstrongly tied to the oil industry. It is the country's major export product, as well as the main source of government revenues even though its share in total GDP does not exceed 10%[269].

The leading sectors of the economy include agriculture, trade and extractives, though they bring relatively low value addition and result in relatively small contributions to inclusive economic growth[270].

With up to 17 million Nigerians dispersed across Africa, Europe, and North America, remittances are a significant money supply representing almost 24 billion USD and are equivalent to more than 5% of the Nigerian GDP. This number is considerably higher than both foreign direct investments and official development assistance received[271].

Nigeria's Outlook during COVID-19[272]

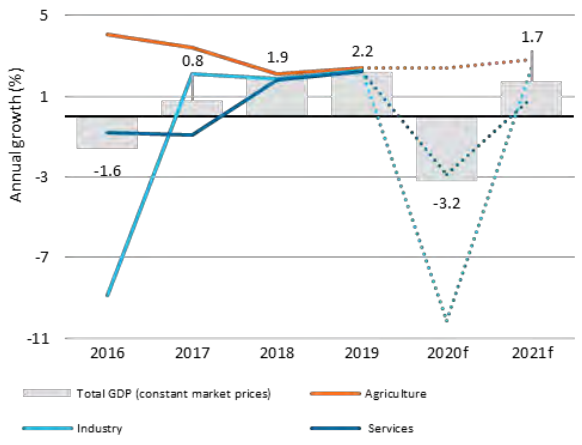
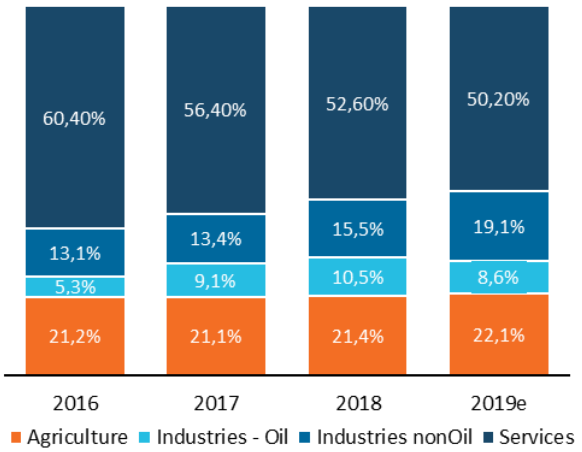


Figure 27. Nigeria GDP Composition 2016-2019[273]



Development Needs and Vulnerable Populations

49.3 *Nigeria's overall score in terms of achieving SDGs*

160th *The country's rank out of 193 in the world*

Nigeria, a country with high political instability and substantial poverty levels, faces many challenges in terms of the COVID-19 outbreak. As it is a region with underdeveloped healthcare infrastructure and coverage, limited access to sanitation and overcrowded urban areas, the virus might be particularly difficult to contain. The Nigerian economy is expected to suffer significantly, in part, due to the humanitarian crisis caused by COVID-19, the lockdown in general and because of falling prices of crude oil. Together, these factors may bring on a very deep and seemingly insurmountable recession, that will likely hit the most vulnerable populations, including refugees, people residing in IDP camps, women and the urban poor.

There is burning need to tackle the issue of inequality and decent work opportunities among the disabled, who number approximately 10 million Nigerian citizens. The epidemic not only put them at higher risk of health problems, but also decreased their chances of finding work, as most businesses are currently laying off employees, rather than contracting new ones. They are, therefore, often pushed below the poverty line and are not able to satisfy both their basic and additional needs. As the healthcare system is under increasing stress due to the pandemic, the living conditions of disabled people, their health and well-being are severely endangered[274].

Regional discrepancies in development is still high, with the southern and central regions experiencing significantly faster growth and higher incomes than the northern part of the country. The difference is not only monetary, but also humanitarian - people residing in the more urbanized, central and southern regions constitute more attractive human capital in terms of physical well-being and skills. This creates pressure to migrate in order to escape poverty and obtain better life chances, both for oneself and one's family. However, the labor demand does not grow as quickly as supply, contributing to unemployment especially among the youth[275].

One of the biggest challenges to Nigeria's growth and progress toward implementing SDGs is the country's low productivity. There are several reasons for this obstacle, including insufficient investment in infrastructure, rapid population growth, high costs of financing, climate and environmental complications destroying crops and insufficient regulations supporting investors. The COVID-19 outbreak and its subsequent crisis will most likely deepen these problems, and investors likely will be even more reluctant to support Nigeria's economy through FDI[276].

Another development priority for Nigeria is gender equality, especially in terms of women's rights and social position. Currently, women are significantly undereducated in comparison to men, which could be solved by implementing a series of government programs such as social transfers correlated with girls staying in school. The disadvantage of not being properly educated results in women's weaker position in Nigerian society, increased exposure to gender-based violence, the inability to find formal employment and political underrepresentation. The government should modify school curricula to promote women's equal place in society and present girls as one of the future drivers of inclusive growth[277].

SDG Achievement Status[278]

Potential for Growth – A Business Perspective

Nigeria is perceived as one of the countries with the highest potential for growth - listed among 11 others that, together with the BRICs states, can shape the future global economic landscape[279].

Sectoral Opportunities for COVID-19

Sustainable Response and Recovery

With a population exceeding 200 million people and a continuously growing middle class, the number of potential business opportunities is immense. Furthermore, the country is characterized by the substantial size of the population under 18 years of age meaning that millions of people enter the domestic job market each year[280].

During the COVID-19 pandemic, the following sectors were indicated to possess the biggest market and impact potential:

Services

While the higher middle class and the wealthy account for 10% of the population, they also constitute up to 40% of the total consumption in Nigeria[370]. It translates into a number of potential business opportunities providing diversified services, which can also benefit from willingness of the young population to use technological solutions similar to those being offered in the western countries which can act as enablers for services provisioning.

Healthcare

COVID-19 put a heavy burden on the already challenged and fragmented healthcare system in Nigeria. The growing population will result in more patients in need of diversified health services, particularly when 77% of health expenditures are out of pocket payments[285].

Infrastructure

Nigeria will have to face a number of challenges in the next decades, with the infrastructure sector being the basis for the country's sustainable development, particularly due to its crosscutting characteristics. There is a number of potential areas for investments, focused on, but not only, serving rapidly growing urban population and providing i.a. electricity generation or waste management.

Financials

Market saturation is low. In 2017 approximately 65 million Nigerians did not have access to finance[281]. Many of them are self-employed and need financing for both personal and business-related expenses. Furthermore, the number of MSMEs in Nigeria reaches 37 million[282], unlocking potential for business financial services. Additionally, the outbreak and lockdown had a negative impact on liquidity and business operations, making even more necessary the need for access to finance.

Agriculture

Nigeria is characterized by ample arable land, thus which agriculture is an important pillar of GDP creation and constitutes a significant share of the total employment (over 35%)[283]. While the sector is still underdeveloped, it is rapidly taking advantage of modern solutions and technologies, thereby propelling the growth of agricultural yields. Nigeria's agricultural sector sales in 2019 amounted to 132.5 billion USD, with further estimated growth at 5.6% on average between 2020 and 2025. Consumption equaled 129.8 billion USD in 2019 and is estimated to grow at 8.7% on average in 2020-2025. The gross profit recorded in the sector reached 95.7 billion USD in 2019[284].

Renewable Resources & Alternative Energy

It is estimated that approximately 27.9 million households and 10.6 million SMEs are in need of access to electricity in Nigeria, and this demand is projected to double within the next 10 years[286]. Furthermore, consumers are willing to pay for off-grid energy services, since there is significant demand for superior service[287].

The list of 7 sectors and 12 Investment Opportunity Areas presented in the next section is the product of mixed methods approach, which benefited from results of the survey taken among private and public stakeholders, open discussions with investors who contributed to the sectoral prioritizations and desk research covering –publicly-available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies and National Policies/responses to the COVID-19 outbreak.

The analysis has demonstrated that advancing in the SDGs and tackling the main development needs are becoming even more urgent due to COVID-19 turmoil. At the same time, a number of areas was revealed in the selected sectors where business potential, policy priorities and development needs aligned.

Key sectors and Investment Opportunity Areas – Nigeria

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Agricultural Production	*Agroprocessors for adding value to raw farm production*	16%-20%		
	Storage & Packaging Infrastructure	*Storage infrastructure for grains and crop value chains*	57%		
	Transportation & Logistics	*Logistics services for transporting raw agricultural produce*	19%-23%		
	Fishery	*Fishery terminals*	20%-25%		
Healthcare	Healthcare Delivery	*Production of COVID-19 tests*	21%-25%		
Infrastructure	Electric Utilities & Power Generators	*Electricity generation from refuse derived fuel from main cities*	18%-22%		
	Waste Management	*Clinical waste management facilities*	12%-18%		
	Waste Management	*Investments in recycling facilities*	12%-18%		
Financials	Consumer Finance	*Provide short- and medium-term loans for financial liquidity to MSMEs and agriculture*	16%-20%		
Renewable Resources & Alternative energy	Solar Technology & Developers	*Standalone solar systems for MSMEs, public education & healthcare facilities and households, delivered to remote areas*	15%		
Resource Transformation	Chemicals / Biomass	*Construction of LPG and Ethanol / Methanol Plants*	10%-15%		
Services	Professional & Commercial Services	*Platforms offering delivery services & payments processing*			

IOAs in Nigeria

Sector	Renewable Resources & Alternative Energy
Sub-sector	Solar Technology & Developers

Direct SDG:

Indirect SDG:

Standalone Solar Systems for MSMEs, Public Education & Healthcare Facilities and Households Delivered to Remote Areas

Business Model

Investment in standalone solar systems for MSMEs, public education & healthcare facilities and households delivered to remote areas through:

> Lease-to-own models

> Private investment

> PPP models

COVID-19 Related Need Case

Countrywide, as much as 22% of the Nigerian population does not have access to electricity,[288] while only 30% of the rural and 82% of the urban population has access to reliable sources of electricity in Nigeria.[289] This makes sustaining business, providing key services and remote working and education even more challenging, especially in rural and peri-urban areas, where there is little physical transmission infrastructure.[290]

Business Potential

- This is an investment opportunity of almost 20 billion USD with a revenue potential of more than 3 billion USD per year.[291]
- Some communities and households have already been served by the Nigerian Rural Electrification Agency (REA), which installed solar mini-grids and standalone solar home systems, though there also exists an important unserved market. The REA estimates an IRR for stand-alone small or medium off-grid communities of 15%.[292,293]
- The energy market in Nigeria has signaled high willingness to pay for development within off-grid and poor-grid communities where there exists large demand for superior services. According to the Renewable Energy Master Plan in 2020, the total demand for electricity is supposed to reach 50,820 megawatts and the demand is projected to double within next 10 years.[294,295,296]
- In line with the Off-Grid Electrification Strategy developed by the REA, there is a plan to deploy 5 million solar standalone systems for individual households and small and medium enterprises (SMEs) by 2023.[297]

SDG Related Need Case

- Affordable and reliable electricity is key for economic development, as well as advancement in multiple SDGs.
- The lack of access to a reliable power supply leaves approximately 27.9 million households and 10.6 million SMEs in need of electricity in Nigeria.[298]
- In light of an unreliable and expensive power supply, many households employ solutions such as self-generation using diesel, which results in increased pollution and constitutes a health hazard.[299]
- The renewable energy sector – still at early stages of development – faces some challenges such as: high initial capital investment; inadequate human resources in renewable energy; an absence of local manufacturing capacity for renewable energy components and systems; insufficient public awareness and participation.[300]

IOAs in Nigeria

Sector	Agriculture
Sub-sector	Agricultural Production

Direct SDG:

Indirect SDG:

Agroprocessors for Adding Value to Raw Farm Production

Business Model

Investing in processing facilities for agricultural products, including the collection of raw materials from individual farmers, and adding value before delivering to the national market and for exports. These investments can be done through:

> Private investments to establish and/or operate processing facilities across value chains

> Public private investments, where the private sector establishes and/or operates the facilities and facilitates the collection of raw material.

COVID-19 Related Need Case

50% of food produced in Nigeria is lost annually,[301] and COVID-19 has only contributed to increased food insecurity.[302] More investment in the preservation of processed foods will result in extended expiry dates, thus preventing food losses and providing more food in the market.[303]

Business Potential

- Over the last 20 years, Nigeria's agricultural value added per capita has risen by less than 1% each year.[304]
- In 2019, the gross agricultural output in Nigeria was 121.13 billion USD and the annual food import was close to 2.5 billion USD. Additionally, 50% of food is lost every year due to inefficient post-harvest treatment and a lack of processing.[305,306,307]
- Despite this, the agricultural sector in Nigeria is mostly focused on crop production – 90% of all activity within the sector refers to harvests. Thus, there is potential for internal and regional markets for processed food.[308]
- The food processing and packaging market in Nigeria is considered one of the largest in Africa, and its size is estimated at approximately 545 million USD.[309]

SDG Related Need Case

- There is food insecurity in Nigeria due to the insufficient production of processed foods, as well as low productivity and value-addition before delivering the products to the market.[310]
- The primary factors behind food losses are poor transportation, storage and handling facilities. Developing food processing facilities will solve some of those issues, and therefore reduce food loss.[311]
- 92% of jobs in agriculture are informal – investments in this sector will likely help it transform into the formal sector.[312]

IOAs in Nigeria

Sector	Agriculture
Sub-sector	Storage & Packaging Infrastructure

Direct SDG:

Indirect SDG:

Storage Infrastructure for Grains and Crop Value Chains

Business Model

Investment in sustainable facilities such as silos, grain conveyors, grain dryers, vacuum hermetic fumigation and gas hermetic storage that can be leased or operated directly through:

> Private sector investment in the establishment, operation and maintenance of the facilities.

> Public private partnership where the public sector awards a contract to build and/or operate the facilities.

COVID-19 Related Need Case

50% of food produced in Nigeria is lost annually.[313] COVID-19 has contributed to increased food insecurity,[314] which could be mitigated by proper food storage, translating into longer expiry dates. Appropriate storage prevents food losses and therefore causes more food to remain in the market.[315]

Business Potential

- In 2019, the gross agricultural output in Nigeria was 121.13 billion USD,[316] and the current active grain market size stands at 25 million metric tons per year.[317]
- According to the Federal Institute of Industrial Research, Oshodi (FIIRO), Nigeria's annual post-harvest loss is as high as 9 billion USD. This food could be saved by preventing deterioration with more efficient storage facilities, thereby contributing to the reduction of hunger in Nigeria.[318]
- Nigeria's population is growing at a steady rate of 2.6% annually,[319] and is projected to reach 262 million people by 2030. [320] This will call for the preparation of food reserves, requiring appropriate agricultural storage facilities. The grain market is forecasted to grow adequately by 2.5-3% annually in terms of supply and demand.[321]

SDG Related Need Case

- In Nigeria, 13.4% of the population experiences malnutrition. Additionally, 43.5% of children under the age of 5 are malnourished.[322]
- Inefficient agricultural storage facilities cause significant post-harvest losses in terms of produce perishability.[323]
- Inadequate food storage facilities result in substantial food loses and waste, directly translating to insufficient food supply and hunger.

IOAs in Nigeria

Sector	Agriculture
Sub-sector	Transportation & Logistics

Direct SDG:

Indirect SDG:

Logistics Services for Transporting Raw Agricultural Produce

Business Model

Private investment in upscaling logistics services to connect smallholder farmers with the nearest processing/storage facilities, offering an option of online payments with the possibility to schedule pick-up services for products.

COVID-19 Related Need Case

COVID-19 has deepened food insecurity for Nigerians.[324] In the country, 53.5% of the people live below the absolute poverty line of 1.90 USD per day,[325] and are therefore particularly vulnerable to food insecurity. Thus, there is need for maximizing productivity and minimizing food losses.

Business Potential

- Approximately 73 million of Nigeria's 201 million citizens are engaged in agriculture. 96% of them have access to transportation services, leaving nearly 3 million farmers under- or unserved.[326,327]
- Smallholder farmers constitute 88.4% of all farmers in Nigeria.[328]
- According to an ICT users' survey of 2019, only 80% of Nigerian farmers have access to customized platforms for data collection from agricultural producers.[329]
- Agriculture is the largest sector in Nigeria's economy and provides employment to over 1/3 of its working age population.[330]
- 14% of smallholder farmers declare distance from roads as one of the key constraints in trade.[331]
- According to an FAO survey, all smallholder farmers use informal channels to sell at least part of their produce. At the same time, 94% of those smallholders also sell at least part of their crops at local markets.[332]

SDG Related Need Case

- 43.5% of children under the age of 5 in Nigeria are malnourished. Improving access to food could contribute to solving this issue.[333]
- A majority of rural communities lacks the infrastructure and logistics necessary for delivering their produce to aggregation points. As logistic services are costly and aggregation and storage centers are scattered around the country, often dozens or hundreds of kilometers away from certain communities, much of the agricultural yield is lost, consumed locally or does not undergo value addition.
- Approximately 70% of fresh agricultural products become unsuitable to ingest during road transportation.[334]

IOAs in Nigeria

Sector	Agriculture
Sub-sector	Fishery

Direct SDG:

Indirect SDG:

Fishery Terminals

Business Model

Investing in sustainable fishery terminals for large-scale fish cultivation, processing, storage and packaging through:

> Private investments

> Public private partnerships, where the government awards/leases existing or new fishery terminals to the private sector for operation, upscaling and maintenance.

COVID-19 Related Need Case

There is a 2.2 million metric ton demand gap for fish in Nigeria, currently covered by imports.[335] COVID-19 related international chain disruptions require investments in the sector.

Business Potential

- The fish market in Nigeria is very prominent, as fishery contributes to 3-4% of Nigeria's GDP. Fish consumption constitutes approximately 50% of animal protein intake for the population.[336]
- In 2017, fish consumption per capita reached 13.3 kg annually.[337]
- Despite large potential for both marine and freshwater fish cultivation, Nigeria still covers around 60% of the demand through imports. This gap could be filled by domestic production.[338]
- Increased food production (especially protein-rich foods) will bring about better well-being and reduce food insecurity. There is high demand (3.3 million metric tons) for fish products e.g., tilapia, catfish, mackerel and salmon.[339]

SDG Related Need Case

- Malnutrition is a key constraint against human capital development, translating not only into bad health, but also lower overall productivity.
- Nigeria's population is growing at a steady rate of 2.6% annually and is projected to reach 262 million people by 2030. This will call for increased food production to satisfy increased protein demand.[340,341]
- Aquaculture is also an attractive sector for policymakers as it employs 8.6 million people directly and a further 19.6 million indirectly. Furthermore, Nigerian women play a predominant role as hired workers in semi-intensive operations, accounting for 70% of workers involved in aquaculture processing in the country. Sustainable investments in the sector will support job creation among youth, women, increased household income, improved nutrition and reduced child mortality.[342]

IOAs in Nigeria

Sector	Healthcare
Sub-sector	Healthcare Delivery

Direct SDG:

Indirect SDG:

Production of Tests for COVID-19

Business Model

Private investment in manufacturing and assembling tests for COVID-19 with potential for expansion into production of tests for HIV, EBOLA, etc.

COVID-19 Related Need Case

Nigeria has a daily testing capacity of 2,500. Insufficient testing for COVID-19 results in increasing numbers of infections and further spread of the pandemic.[343]

Business Potential

- As of September 23rd, Nigeria has recorded 57,613 cases of COVID-19. However, only 484,051 tests have been performed to date, meaning that less than 0.25% of the Nigerian population has been tested for COVID-19.[344]
- The share of positive tests is at 11.9%, more than double the WHO-recommended threshold of 5%. This means that the population is likely to be undertested and restrictions need to be tightened to prevent further spread of the virus.[345]
- So far, there are 64 government testing centers and 14 private testing centers in Nigeria,[346] and the vast majority are located in large cities.[347]
- There exists high demand for COVID-19 tests. Currently, the supply is insufficient, as all of the tests are imported.[348]

SDG Related Need Case

- Nigeria is underperforming in SDG 3 – Good health and well-being, with a result of 30.5.[349] Low availability of healthcare services, high incidences of pollution-induced lung diseases arising from insufficient infrastructure and poor diagnostic services make the Nigerian population very vulnerable to COVID-19 and its implications. Improving the testing rate for COVID-19 would help limit further spreads of the disease.
- It is important to overcome the challenges brought about by the COVID-19 pandemic by limiting its spread and reducing the number of cases. Otherwise, the Nigerian economy, which underperforms on SDG 8 – Decent work and economic growth, will face greater difficulty reaching sustainable development targets.[350]

IOAs in Nigeria

Sector	Infrastructure
Sub-sector	Electric Utilities & Power Generators

Direct SDG:

Indirect SDG:

Electricity Generation from Refuse-Derived Fuel for Main Cities

Business Model

Investments in waste management and electricity generation from refuse-derived fuel and biomass to supply electricity to main cities through:

> Public private partnership

> Private investment

COVID-19 Related Need Case

40% of the Nigerian population does not have access to electricity in Lagos State, making it even more difficult to sustain business continuity, provide key services and facilitate remote working and schooling. More efficient waste management will also prevent the spread of diseases.[351]

Business Potential

- Lagos is the largest city in Nigeria and the 8th largest city in Africa, achieving the status of a megacity in 2010 after reaching a population of 11 million inhabitants. By 2030, the city is estimated to reach over 24 million people. This growth will demand an increased power supply, especially in developing areas, which attract many new migrants.[352]
- Currently, Lagos is estimated to generate approximately 20,000 tons of solid waste every day,[353] only 10% of which undergoes collection. Moreover, Lagos ranks last out of 42 sub-Saharan cities in terms of rates of waste collection,[354] resulting in urgent need of waste management. The city's landfills are significantly overused and create a prominent environmental threat.[355]
- The main challenges of generating electricity in Nigeria include 40% of the population not having access to electricity grids, inadequate transmission capacity, 80% of the population having to rely on diesel generators, as well as governance challenges arising from an inadequate management of assets.[356]
- The power deficit in Lagos equals 9,000-10,000MW, combined with a low utilization of generating capacity.[357]
- The average annual energy consumption is 150kWh/yr. per capita,[358] which is in line with the average for sub-Saharan Africa. However, this figure is significantly below the average for developing countries such as India, Brazil and South Africa.[359]

SDG Related Need Case

- 65 million metric tons of waste is generated annually in Nigeria.[360] Lagos, the biggest city in the country generates about 20 thousand tons of urban waste every day.[361]
- Sustainable investments in the area of waste management, in addition to electricity generation are both advantageous in terms of reducing greenhouse gas emissions. Furthermore, such alternative sources of electricity may improve access to stable energy for households that lack it.
- Currently, 40% of the population of Lagos has no access to the power grid and adequate transmission capacity.[362] Moreover, the power supply in Lagos is unreliable,[363] causing problems to businesses and hampering economic and business development.

IOAs in Nigeria

Sector	Infrastructure
Sub-sector	Waste Management

Direct SDG:

Indirect SDG:

Clinical Waste Management Facilities

Business Model

Construction of medical waste processing facilities equipped with autoclaves for melting disposables, as well as a landfill for the liquid ooze created through:

> Public private partnership

> Private investment

COVID-19 related need case

89 million masks, 76 million examination gloves, and 1.6 million goggles are required for the COVID-19 response each month. This results in increased medical waste production, which needs to be disposed of in a secure and sanitary manner.[364]

Business Potential

- There are approximately 3,500 healthcare facilities in Nigeria, however, most of them lack appropriate waste treatment systems. This creates a large potential market in terms of clinical waste management.[365]
- A 2014 study found that only 16.9% of healthcare facilities in Lagos segregated waste, leaving 83.1% of facilities unserved. These establishments could potentially become clients to a clinical waste management facility.[366]

SDG Related Need Case

- The disposal of waste originating from healthcare establishments (public and private) can have an adverse effect on human health and well-being, and a devastating impact on the environment. Nevertheless, experience has proven that waste originating from healthcare establishments, when properly managed, generally pose no greater risk than that of properly treated municipal or industrial sources.
- In Lagos State, on average, 30% of waste generated in hospitals is categorized as infectious. Waste generation stands at the average level of 0.63 kg per bed daily.[367]

IOAs in Nigeria

Sector	Infrastructure
Sub-sector	Waste Management

Direct SDG:

Indirect SDG:

Investments in Recycling Facilities

Business Model

Investments in recycling facilities for plastic disposables, among others through:

> Public private partnership

> Private investment

COVID-19 Related Need Case

89 million masks are required for the COVID-19 response each month. This increases the rate of waste generation, which could otherwise be recycled and reused instead of polluting the natural environment.[368]

Business Potential

- The amount of plastic bottles used in Nigeria has doubled between 2016 and 2019, to approximately 150 million metric tons annually. According to a study, half of those bottles are consumed in Lagos alone and 80% of them do not undergo recycling.
  This creates a great opportunity for a recycling facility that can satisfy both the demand for waste management and for the production of domestic plastics.[369]
- In Nigeria, the average per capita consumption of plastics has increased by approximately 5% every year since 2007, from 4.0 kg to 6.5 kg in 2017. As of 2020, it is estimated to be 7.5 kg.[370]
- Every year, Nigeria produces 2.5 million tons of plastic waste.[371]
- In 2018, Nigeria imported plastics and articles thereof with a total worth of over 1.6 billion USD. This requires further action to avoid releasing them into the national environment.[372]

SDG Related Need Case

- Plastics are a problem mostly due to their non-biodegradable nature and their improper disposal can lead to pollution. Global plastic production has exceeded 311 million metric tons. Of the 2.5 billion metric tons of solid waste generated globally, about 275 million tons were plastic waste. The longevity of plastics is estimated to be hundreds to thousands of years. Plastic waste is a major cause of litter in the environment, water pollution, flood and general environmental degradation. In 2010, Nigeria was suspected of being the fifth largest pollutant of the marine environment in the world after reportedly having released 0.34 million tonnes of plastic waste into the ocean.[373,374]
- 65 million metric tons of waste is generated annually in Nigeria.[375] Lagos, the biggest city in Nigeria, generates about 10 thousand tons of urban waste every day.[376]
- According to indicators for SDG 14 – Life below water, in which Nigeria is currently underperforming, approximately 81% of plastic waste is handled improperly.[377]

IOAs in Nigeria

Sector	Renewables & Alternative Energy / Resource Transformation
Sub-sector	Chemicals / Biomass

Direct SDG:

Indirect SDG:

Construction of LPG and Ethanol/Methanol Plants

Business Model

Investment in the construction and production of ethanol/methanol and LPG (fuel) for cooking stoves, transportation, production of alcohol-based sanitizers, pharmaceuticals, industrial disinfectants, industrial production, surface coating, alcoholic beverages, preservatives from cassava and sugar cane through:

> Private investment

> Public Private Partnership

COVID-19 Related Need Case

Only 30% of the rural population of Nigeria has access to electricity.[378] Ethanol can be used for providing energy to households in remote areas, and both for germicidal and medical purposes.

Business Potential

- Despite access to raw materials for the production of ethanol and the government's import substitution policies, Nigeria's domestic production covers only about 6% of the demand. The country imports between 300 million and 350 million liters of the product yearly. This creates an opportunity to substitute some of the imports with domestic production.[379]
- The short-term demand for bioethanol, under an assumption of a 10% blend, is estimated at 1.3 billion liters annually.[380]
- Depending on the amount of funding as well as both the public and the private support, the LPG consumption in Nigeria will reach from 12.65% (pessimistic scenario) to 25.08% (optimistic scenario) by 2030. Both scenarios assume a significant growth of the LPG market in Nigeria.[381]

SDG Related Need Case

- With 22% of households still lacking access to energy in Nigeria, investments in LPG and Ethanol/Methanol plants may help reduce this problem.[382]
- 94% of the Nigerian population lacks access to clean cooking equipment.[383]
- Approximately 75% of Nigerians remain reliant on traditional fuels such as wood and are therefore exposed to smoke and pollution from open fires or inefficient combustible. This contributes to more than 64,600 premature deaths every year in Nigeria. The country records the highest number of household air pollution deaths on the whole continent.[384]

IOAs in Nigeria

Sector	Services
Sub-sector	Professional & Commercial Services

Direct SDG:

Indirect SDG:

Platforms Offering Delivery Services & Payments Processing

Business Model

Private sector investments in the development and operation of platforms for ordering online services and goods: food delivery, grocery delivery, mobile dry-cleaning together with delivery services mainly to urban populations.

COVID-19 related need case

Delivery services facilitate social distancing and therefore prevent the spread of COVID-19, while potentially creating jobs in a highly unstable job market.

Business Potential

- In April alone, due to social distancing measures and lockdown in general, online food delivery services recorded a 50% increase in volume of food sold through platforms such as Jumia.[385] However, in a megacity of 14.4 million inhabitants like Lagos, there remains a need for additional delivery service providers.[386]
- In Nigeria, urban areas are inhabited by almost 52% of the country's population and they are continuously growing. These areas are characterized by significantly higher internet connectivity than rural areas[387]. In 2017, for example, urban areas had a 50% higher rate of internet accessibility than rural areas.[388] This creates numerous opportunities for the expansion of mobile apps offering different types of services.
- The mobile payments sector is also growing rapidly - by 391% from May 2019 to July 2020. This indicates a growing market for cashless transactions.[389]

SDG Related Need Case

- Nigeria is currently underperforming on SDG 8 – Decent work and economic growth, with a score of 50.3. Steady and sustainable economic growth is a driver for many sectors of the economy, as it allows investment into infrastructure, human capital, innovation etc.[390]
- The service sector is necessary for economic growth and transforming from a resource-based economy toward one derived from social and economic development. Delivery services not only create jobs, but can also boost trade by adding a new revenue generating mechanism. They also increase the potential customer group, allowing businesses to keep operating in case of lockdown/physical distance measures.[391]

IOAs in Nigeria

Sector	Financials
Sub-sector	Consumer Finance

Direct SDG:

Indirect SDG:

Provide Short- and Medium-Term Loans for Financial Liquidity to MSMEs and Agriculture

Business Model

Customized loan products to provide MSMEs and farmers with financial instruments focused on guaranteeing liquidity and medium-term adaptation and recovery through:

> Conventional loans from traditional banking and/or lending institutions

> Fintech solutions, such as the B2C Fintech formula or P2P lending services.[392] Investment in already existing companies can be also made through Venture Capital vehicles, mitigating the risk of early-stage businesses.

COVID-19 Related Need Case

30% of MSMEs in Nigeria indicated that their businesses will not survive the pandemic. 72.1% reported a need for support with cashflow.[393]

Business Potential

- In 2017, only 39.7% of Nigerians had an account at a financial institution or were served by mobile money services providers. Approximately 65 million Nigerians remained unserved due to insufficient funds, distance from financial institutions and affordability. Many citizens are self-employed and need financing for both personal and business-related expenses. There is also a discrepancy in access to financing options between males and females. In 2017, only 27.3% of Nigerian women above 15 years old were financially included compared to 51.4% of men above 15 years old.[394]
- The rate of financial exclusion in Nigeria has reached 73.7% within smallholder households.[395] The number of MSMEs in Nigeria reaches approximately 37 million, and 99.8% consist of micro enterprises.[396] The finance gap of MSMEs in Nigeria has reached 158 billion USD, constituting almost 33% of the country's GDP.[397] In spite of the pandemic-related slowdown, up to 50% of entrepreneurs in Nigeria see opportunities to launch new products and services in the future, while more than 40% see opportunities to expand or diversify their businesses.[398]

SDG Related Need Case

- Nigeria has not yet achieved SDG 8 – Decent work and economic growth with a score of 50.3[399] – which is lower than the majority of neighboring countries. In order to enhance Nigeria's SDG 8 score, it is critical to promote and facilitate access to affordable loans and credits, a catalyst for economic growth in the Nigerian economy.[400]
- Providing financial liquidity is a critical factor in the development of agriculture, rural areas and small businesses. According to a report on COVID-19's impact on Nigerian MSMEs, these types of enterprises account for approximately 75% of the total workforce and almost 50% of the country's GDP. Women-owned businesses account for 41.5%.[401]
- According to the Nigerian National Financial Inclusion Strategy, approximately 40 million of adult Nigerians (41.6% of the adult population) were found to be financially excluded in 2016. According to the Economist, Fintech solutions may tackle this imbalance and support bridging this gap.[402]

Uganda

Ugandan Economic Context

23.5 million people live in multidimensional poverty (2018Y)

53% of total population

0.269 multidimensional poverty index (0-1) (2014Y)

18.5 million people live below income poverty line (PPP 1.90 USD/day)

42% of total population

Uganda - a landlocked country located in eastern part of Africa - has a rapidly growing population of almost 45 million people, characterized by one of the world's highest fertility rates at 5.59 children per woman in 2018. It is categorized as a low-income country with a GDP per capita at 776,8 USD[403], behind its neighboring countries such as Kenya and Tanzania. Uganda's HDI value for 2018 was 0.528, putting the country in the low human development category. It ranks 159th out of 189 countries and territories[404].

Services (with the highest contribution coming from trade and real estate activities) constituted the largest share and accounted for almost half of Uganda's GDP in 2019. Industry accounts for almost 30% (with manufacturing as a main component) and agriculture as one-fifth of the economy[405].

Remittances are an important source of foreign money for Uganda, reaching almost 1.5 billion USD in 2019, an equivalent to more than 4.1% of the GDP, and growing at 6.2% CAGR over the last ten years. The amount of foreign direct investments fluctuated significantly in the last decade, with the biggest drops in 2010 and 2016 when the country recorded net inflows at around 0.6 billion USD. However, over the last 3 years the amount of investments doubled and currently exceeds 1.2 billion USD. The amount of official development assistance and aid received from recent years has remained at a steady level, almost reaching 2 billion USD[406].

Uganda outlook during COVID-19[407]

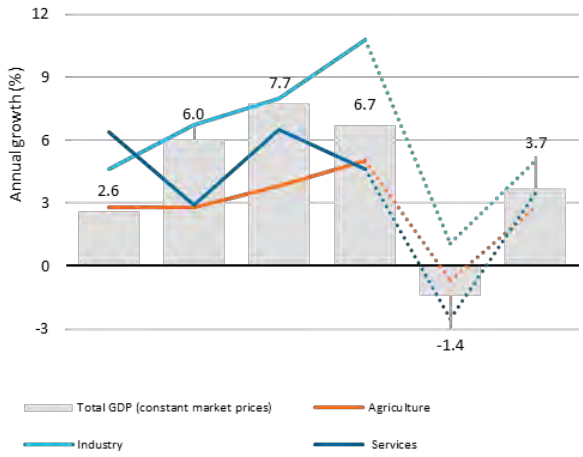
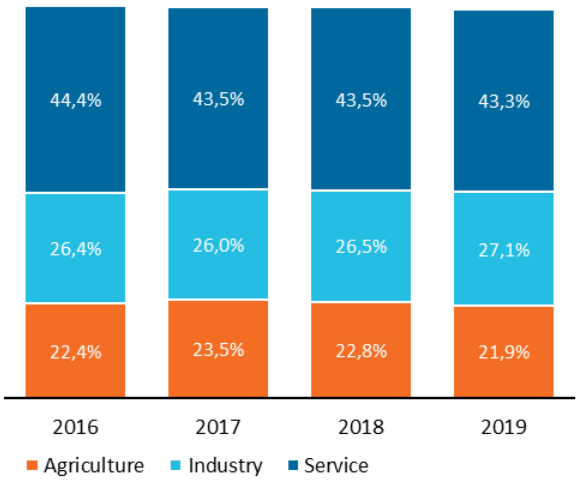


Figure 28. Uganda GDP Composition 2016-2019[408]



Development Needs and Vulnerable Populations

53.5 *Uganda's overall score in terms of achieving SDGs*

142nd *The country's rank out of 193 in the world*

Over a million Ugandan citizens are at risk of poverty, though there is a pronounced geographical distribution of vulnerable groups in the country. The southern and central regions are generally wealthier than the north and east, which are predominantly rural. Though the percentage of people living in poverty is slowly declining, because of steady population growth, the absolute values of those living below the poverty line continues to rise[409]. As of 2016, more than 23 million people (24.9% of Uganda's population) were vulnerable to poverty, 41.7% of the population lived below the international poverty threshold of 1.90 USD per capita per day, and 21.4% of all Ugandan citizens lived below the national poverty line[410]. The COVID-19 epidemic is projected to further worsen the situation of the most vulnerable groups and push even more people into poverty[411].

The rapid pace of population growth is putting immense pressure on urban areas that are not prepared for the massive inflow of people from rural areas. With an urban growth rate at 6% and more than 10 million people already living in cities, it is estimated that the urban population will reach 22 million by 2040[412]. Currently, only half of urban residents has access to electricity and only one-third has access to basic handwashing facilities including soap and water[413]. Other issues cities face include the low quality of available education and an insufficient supply of financial services, which negatively affect rural and low-income entrepreneurship further hindering development of these areas[414].

Women in Uganda are a particularly vulnerable group, as laws still exist that prevent them from obtaining economic independence. For example, there are discriminatory legal provisions requiring land transactions to be performed only with the written consent of the male spouse and Area Land Committee. Furthermore, inadequate daycare and educational facilities for children prevent many women from seeking employment, thereby hampering the possibility of financial independence from their spouses[415]. According to official reports, gender-based violence and sexual abuse, is experienced by 56% and 22% of all women respectively. However, due to high social tolerance and low reporting rates, the real scale of the problem is most likely much larger than official statistics suggest. Lockdown measures due to COVID-19 have worsened both the financial and familial situation of many households, exacerbating instances of domestic violence and overall tensions at home. Moreover, many women have become dependent on their spouses after losing their jobs due to the pandemic[416].

Stunting, wasting and undernutrition remain a significant problem in Uganda. It is estimated that up one-third or 2.4 million children are affected. Half of Ugandans under the age of 5 are anemic, and reports suggest that between 2012 and 2015 over 250,000 children died of malnutrition. Stunting has very serious effects on health and future productivity - the children suffering from it tend to perform worse in school, repeat grades, have malnutrition-associated diseases and are generally weaker[417].

SDG Achievement Status[418]

Potential for Growth – A Business Perspective

Uganda is a country strategically located in the heart of Sub-Saharan Africa bordering Sudan, Kenya, Tanzania, Rwanda and the Democratic Republic of the Congo, positioning the country as a potential hub for regional investments and beneficial trade linkages.

Sectoral Opportunities for COVID-19

Sustainable Response and Recovery

With the country's stable political and economic environment, GDP growth that exceeds 6.5% annually[419], and a rapidly growing population, Uganda is perceived as one of the most promising investment locations. The country's authorities boast a high recruitment potential for its citizens and workforce trainability. Women and youth are highly engaged in the labor force, and approximately 700,000 young people enter the job market in Uganda every year[420]. Moreover, the legislative environment is very favorable for foreign direct investment in that 100% of overseas investment ownership is permissible unlike in many other countries[421].

During the COVID-19 pandemic the following sectors were indicated to possess the biggest market and impact potential:

Agriculture

Agriculture is the second-fastest growing sector in Uganda's economy, having increased by 5.0% in 2019[424]. It is essential not only in terms of food security, but also for providing employment opportunities, as 73% of Uganda's population works in agriculture[425]. The government is incentivizing greater commercialization in the sector by encouraging the use of irrigation systems and up-scaling modern farming. Uganda is one of the top producers of coffee, bananas and oil seed crops which are mostly intended for export[426].

Healthcare

Food & Beverage

Only half of Uganda's population is using basic drinking water services translating into more than 20 million people[422] potentially willing to access water from reliable sources.

Infrastructure

It is recognized that infrastructure development contributes to greatly to increased productivity by improving efficient connectivity and facilitating the logistics of goods as well as the provision of services. With a rapidly growing population putting pressure on urban infrastructure and the country's desire to position itself as a regional trade hub, the development of infrastructure will be key[423].

Services

Services constitute the largest part of the Ugandan economy and contribute 43.3% of the domestic GDP[427]. A shift towards a service-driven economy is necessary in the case of Uganda, as the population growing at a rate of 3.6% annually[428] requires the creation of workplaces outside the agricultural sector.

Financials

Significant numbers of Ugandans do not yet have access to health service, especially in rural areas due to the scarcity of health facilities in more remote locations. Thus, this is an unsaturated market for investors, that at the same time can provide badly needed support to local communities.

Access to financing is key for business development and Uganda's economic growth. Although the financial sector has been growing steadily over the last decade, and the level of financialization in Uganda is constantly increasing, there still remains a financial gap among MSMEs at a level of over 90% creating potential for investments[429].

The list of 6 sectors and 11 Investment Opportunity Areas presented in the next section is the product of a mixed methods approach, that includes results of the survey taken among private and public stakeholders, open discussions with investors who contributed to the sectoral prioritizations and desk research covering -publicly-available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies and National Policies/responses to the COVID-19 outbreak.

The analysis has demonstrated that advancing in SDGs and tackling main development needs are becoming even more urgent due to COVID-19 turmoil. At the same time, a number of areas were revealed in the selected sectors where business potential, policy priorities and development needs aligned.

Key Sectors and Investment Opportunity Areas - Uganda

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Agricultural Production	*Production of bio-fertilizers*	15%		2, 8, 12, 15
	Agricultural Production	*Investment in dairy processing facilities*	15%-19%		2, 9, 12
	Storage & Packaging Infrastructure	*Collection of milk from smallholder farmers and storage of dairy products*	17%-21%		2, 12
	Storage & Packaging Infrastructure	*Storage for agricultural production*	57%		2, 8, 12
Healthcare	Medical Equipment & Supply	*Financing for healthcare facilities*	14%-18%		3
	Medical Equipment & Supply	*Manufacturing first aid supplies & medical disposables*	19%-23%		3, 9
Infrastructure	Waste Management	*Facilitating cooperation between waste collectors and landfills*	12-18%		6, 11, 12, 15
	Waste Management	*Investments in recycling facilities*	12%-18%		12, 14, 15
Financials	Consumer Finance	*Provide affordable loans to support financial liquidity of MSMEs and agriculture*	18%		1, 8, 9
Services	Professional & Commercial Services	*Platforms offering delivery services & payments processing*			8, 12
Food & Beverage	Non-Alcoholic Beverages	*Investments in facilities and distribution of distilled water*	12%-16%		3, 6

IOAs in Uganda

Sector	Agriculture
Sub-sector	Agricultural Production

Direct SDG:

Indirect SDG:

Production of Bio-Fertilizers

Business Model

Private investment in the production of bio-fertilizers from animal organic waste (with the possibility of utilizing various methods, including vermiculture)

COVID-19 Related Need Case

Uganda's agricultural productivity is highly dependent on the imports of fertilizers, which stood at 39 million USD in 2018.[430] Supply chain disruptions caused by the COVID-19 pandemic have led to decreased availability of fertilizers and an increased risk of food insecurity, further worsened by a recent locust infestation.[431] COVID-19 will likely heighten wasting levels among African children by 20-25% through 2021.[432]

Business Potential

- The total acreage of cultivated land in Uganda is approximately 4.6 million hectares.[433] In 2016, the overall consumption of fertilizer stood at 8,700 tons.[434]
- Sub-Saharan Africa accounts for approximately 13% of the world population and comprises about 20% of global agricultural land. However, the area experiences severe food insecurity because of inadequate food production. Farming is mainly for subsistence, and farmers practice insufficient fertilizer utilization due to their poor material situation. This increases the demand for alternative cost-effective solutions.[435]
- Uganda's imports of fertilizers stood at 39 million USD in 2018[815], indicating a large demand that can be satisfied through domestic production.
- Despite the fact that fertilizer consumption in Uganda is currently very low and stands at around 2 kilograms per hectare of arable land, with upcoming climate-related challenges and a growing population, it will likely increase. In comparison, the average fertilizer consumption in Sub-Saharan Africa and globally is 16 kg and 140 kg per hectare of arable land respectively[436]

SDG Related Need Case

- National agricultural output between 2012 and 2017 grew at only 2% annually in comparison to an average annual population growth of 3.3% in the same period. This discrepancy may lead to increased food insecurity as productivity is not keeping up with population growth.[437]
- With 2.05 tons per hectare of harvested land in 2017, Uganda falls behind in achieving the SDG 3 (Zero hunger) target for cereal yields of 7 tons.[438]
- It is estimated that Uganda is losing 4-12% of GDP annually due to soil erosion, compaction and nutrient loss.[439]
- In Africa, supply chains often fail to keep markets well-stocked and farmers supplied with the necessary agricultural and livestock inputs such as quality seeds, fertilizer, and feeds.

IOAs in Uganda

Sector	Agriculture
Sub-sector	Agricultural Production

Direct SDG:

Indirect SDG:

Investments in Dairy Processing Facilities

Business Model

Establishing and operating processing facilities for converting milk into milk powder or UHT milk through:

> Blended finance with direct private sector investment, as well as grants from foundations and donors

> Private investments - the private sector builds, operates, maintains and sells the products

COVID-19 Related Need Case

COVID-19 contributed to increased food insecurity due to disruptions in both international and domestic supply chains adding additional challenges to preserving perishable goods.[440] Food processing prevents decomposition allowing for longer storage and reductions in food losses.[441] Milk is a valuable source of nutrients. Its lower availability may affect wasting levels (20%-25% increase until 2021).[442] Its preservation is therefore of key importance.

Business Potential

- Annually, only 33% of the total amount of milk produced in Uganda is processed, while 67% is sold raw by smallholder farmers, suggesting that more than 1.5 billion liters of milk is left unprocessed.[443] Considering Uganda's goal of processing 50% of milk produced,[444] this is an opportunity for future investment that could tackle socio-economic problems in the country.[445]
- While average daily milk production stands at 6.9 million liters, the domestic processing capacity is only 2.7 million liters.[446]
- Per capita milk consumption in the country has shown a substantial increase, rising from 25 liters in 1986 to 62 liters in 2017, which translates into an annual production volume exceeding 2.5 billion liters.[447]
- There are 1.6 million dairy farmers in Uganda who can provide the input for dairy processing plants.[448]

SDG Related Need Case

- In Uganda, 29% of children under 5 experience stunting[449] and 41% of Ugandans suffer from low calorie consumption.[450] The inclusion or increase of milk consumption can decrease these numbers. Milk can provide up to 25-33% of protein needed every day and positively contributes to the weight gain and growth of malnourished children.[451]
- However, milk is a highly perishable good and, in order to extend its shelf life (translating into increased food security and reduced food losses) the development of facilities for dairy processing is required.

IOAs in Uganda

Sector	Agriculture
Sub-sector	Storage & Packaging Infrastructure / Transportation & Logistics

Direct SDG:

Indirect SDG:

Collection of Milk from Smallholder Farmers and Storage of Dairy Products

Business Model

Private investment in distribution services based on networks and a truck fleet collecting milk from smallholder farmers gathered at local markets with investments in large refrigerated storage facilities, and the wholesale of milk to processing facilities

COVID-19 Related Need Case

COVID-19 contributed to increased food insecurity due to the border restrictions in Uganda and an insufficient amount of cooling and storage capacities, leading to high losses in milk. [452,453]

Business Potential

- Agriculture is the second-fastest growing sector in Uganda's economy, having increased by 5.0% in 2019[454]. It is essential not only in terms of food security, but also for providing employment opportunities, as 73% of Uganda's population works in agriculture.[455]
- Without storing fresh milk in a cooling tank overnight, smallholder farmers face difficulties in preserving it for the early morning supply at the market. The milk harvested in the evening spoils before it can be collected. Investments in improving logistics and storage facilities will reduce food losses.
- While average daily milk production stands at 6.9 million liters in the country, there is only a 1.7 million liter capacity in rural collection centers.[456]
- The value of marketed milk has increased by 5% from 716 million USD in 2015 to 752 million USD in 2017/18.[457]

SDG Related Need Case

- In Uganda, 29% of children under 5 experience stunting[458] and 41% of Ugandans suffer from insufficient calorie intake.[459]
- The inclusion or increase of milk consumption among children can positively reduce malnutrition. Milk can provide up to 25-33% of protein needed every day and positively contributes to the weight gain and growth of malnourished children.[460]
- Inadequate storage and cargo space are among key challenges in maintaining milk quality and prolonging its shelf life. The development of facilities for dairy processing is therefore required to promote increased food security and reduce losses.

IOAs in Uganda

Sector	Agriculture
Sub-sector	Storage & Packaging Infrastructure / Transportation & Logistics

Direct SDG:

Indirect SDG:

Storage for Agricultural Production

Business Model

Up-scaling storage facilities and packaging infrastructure through the construction of silos, grain conveyors, grain dryers, vacuum hermetic fumigation, and gas hermetic storage systems that can be leased or operated directly through:

> Private investments

> Public private partnerships for building, operations and maintenance of the facilities

COVID-19 Related Need Case

COVID-19 contributed to increased food losses and insecurity due to border restrictions and disruptions in transportation and supply chains. Products couldn't be distributed to customers quickly enough before they spoiled.[461] Investments in storage facilities will positively contribute to curbing food losses and help reduce the risk of food insecurity enabling the creation of food reserves.[462]

Business Potential

- With an annual population growth of 3.6% in 2019, there will be 100 million people in Uganda by 2050.[463]
- The overall increase in population and the rapid growth of the number of urban inhabitants (around 6% annually) will increase demand for food and require appropriate storage facilities to provide adequate food reserves and reduce losses within the supply chain.[464]
- As of now, the annual post-harvest losses stand at 17.6% out of 2.8 million metric tons of maize, 12.4% out of 214 thousand metric tons of millet and 13.5% of 230 thousand metric tons of rice produced in the country.[465]

SDG Related Need Case

- High food losses result from inefficient post-harvest handling practices (especially poor drying and high moisture content during storage), inadequate and inappropriate storage facilities, limited value-addition, filth and contamination, poor marketing systems, damage by insects, rodents and other pests, and infestation by micro-organisms which can lead to serious health problems.
- 41% of Ugandans suffer from insufficient calorie consumption, which can be reduced if better post-harvest handling practices and storage facilities are in place.[466]

IOAs in Uganda

Sector	Healthcare
Sub-sector	Medical Equipment & Supply

Direct SDG:

Indirect SDG:

Financing for Healthcare Facilities

Business Model

Private investments in providing financing for healthcare institutions to purchase medical equipment

COVID-19 Related Need Case

Even before COVID-19, 62% of Ugandans declared difficulties accessing medical care, well above the 45% average regional response.[467] With additional challenges resulting from the pandemic, these numbers are likely to go up. Providing access to financing for healthcare facilities will engender much needed investment in medical equipment and supplies to improve the healthcare system's preparedness for mitigating COVID-19, and lead to the increased protection of a larger percentage of the population.

Business Potential

- In Uganda there are approximately 7,000 health clinics (around 200 of which are hospitals or bigger health facilities) and 40% of them are private for-profit institutions.[468]
- 70% of the private health facilities are located in the most densely populated area of the country (the central region of Uganda).[469]
- More than 80% of health clinics in Uganda plan to take a medium-term loan to purchase new equipment and one-third plan to take a long-term loan to finance land purchases or the construction of a new facility. However, access to financing is still a challenge.[470]

SDG Related Need Case

- At 5.1% of the total government expenditure, public spending on health is far below the 15% target.[471]
- There are 16.8 doctors, and 123 nurses and midwives per 100,000 people in Uganda, while the WHO recommends a minimum of 21.7 doctors and 228 nurses per 100,000 inhabitants respectively. [472,473]
- Significant numbers of Ugandans do not have access to or cannot afford health services; lack of health services is particularly acute in rural areas due to the scarcity of health facilities and healthcare professionals in more remote locations.
- There were just 2,000 ventilators across 41 African countries and 5,000 intensive care beds across 43 countries in mid-April.[474]
- With a better financed healthcare system, medical professionals will be better prepared and equipped to deal with violence against women. According to the latest WHO report on violence against women in Uganda, progress on improving the health system's response to gender-related violence has been made. However, there are still challenges ahead.[475]

IOAs in Uganda

Sector	Healthcare
Sub-sector	Medical Equipment & Supply

Direct SDG:

Indirect SDG:

Manufacturing First Aid Supplies & Medical Disposables

Business Model

Establishing facilities, assembling first aid kits and manufacturing medical disposables (e.g., syringes, tests, etc.) through Public Private Partnership or private investment for establishment and operation.

COVID-19 Related Need Case

89 million masks, 76 million gloves and about 1.6 million goggles are required globally for the COVID-19 response each month. Uganda was among the first recipients of PPE from the WHO but these supplies are rapidly depleting.[476] Medical disposables are vital for ensuring large-scale healthcare delivery and preventive actions. With disruptions in international transport, an increase of domestic production capacity is important.

Business Potential

- Uganda's 2018 imports of medical needles, catheters, cannulae and syringes were estimated at 8 million USD and the market for blood tests is estimated to be almost 3 million USD.[477]
- Uganda imports approximately 90% of its essential medicines and health supplies, mainly from Asian countries. This creates an opportunity for domestic manufacturers to meet part of that demand.[478]
- Companies in Uganda (e.g., Takataka Plastics) have already respond to the increased demand for PPE by transforming plastics into face masks.[479]

SDG Related Need Case

- According to estimations, up to 17 billion USD is needed to bridge the financing gap and cover the needs of the private health sector (excluding pharmaceuticals and medical products) in Sub-Saharan Africa.[480]
- Medical equipment represents a substantial asset in the health care delivery system and needs to be managed efficiently. Moreover, the manner in which it is purchased, managed and used can influence the quality of healthcare delivered to patients.
- According to WHO representatives, "Health services have a crucial role in responding to violence against women" which is a country-wide and persistent problem in Uganda. Therefore, investments in the sector are likely to support fighting this problem.[816]

IOAs in Uganda

Sector	Infrastructure
Sub-sector	Waste Management

Direct SDG:

Indirect SDG:

Facilitating Cooperation Between Waste Collectors and Landfills

Business Model

Develop platforms to facilitate cooperation between waste collectors and landfills (through apps and text messages) allowing to locate nearest drop-off points, facilitating payments, scheduling pick-ups; image recognition to distinguish waste type through private investment

COVID-19 Related Need Case

The COVID-19 pandemic has led to additional difficulties in waste management. Safe management of medical but also domestic waste is crucial in containing and mitigating the virus. Waste management disruptions increase the risk of spreading the virus further and polluting the environment.[481,482]

Business Potential

- Waste generated in the capital city of Uganda exceeds 800 thousand tons annually (2.3 thousand tons daily). With a projected increase of per capita waste generation this number will double by 2030. Currently, the collection rate stands at approximately 50%.[483] This calls for urgent intervention in improving the capacity of waste management.
- According to estimations, about 600 tons of plastic are disposed of in Uganda each day. In Kampala, half of the plastic waste is left uncollected.[484]
- Currently around 3,000 people are employed in the informal provision of solid waste management services in the capital, with more than 100 formally registered companies, mainly SMEs.[485]

SDG Related Need Case

- Even though Uganda is on track to achieve SDG 12 – Responsible Consumption, the waste management problem will increase with the rapid growth of inhabitants .[486]
- With fast population and urban growth there is a risk of extensive developments of low-income and informal settlements, which are characterized by poor waste management.
- Currently up to 85% of waste remains uncollected in some municipalities in Uganda.[487]
- Women account for a significant fraction of waste collecting employees. Some of them work for recycling plants in a formal setting[488] (80% of the collectors in the Nakawa plant for Coca-Cola Beverages Africa Uganda are females), whereas the remaining women work informally for legal and illegal landfill sites.[489]

IOAs in Uganda

Sector	Infrastructure
Sub-sector	Waste Management

Direct SDG:

Indirect SDG:

Investments in Recycling Facilities

Business Model

Up-scaling and investing in recycling facilities handling plastic waste through:

> Public private partnership with national or local governments or a multiparty ownership structure in development of recycling facilities

> Private investment

COVID-19 Related Need Case

Each month, 89 million masks, 76 million gloves and about 1.6 million goggles worldwide are necessary to fight COVID-19.[490] While the demand is high, the pandemic contributes greatly to an increase in plastic waste generated each day. Increased demand for PPE can be met through recycling and transforming plastic waste into face masks again, simultaneously lowering the environmental impact.[491]

Business Potential

- It is currently estimated that 600 tons of plastic are disposed of in Uganda every day.[492]
- Waste generated in the capital city of Uganda exceeds 2.3 thousand tons daily with a collection rate at 50%. Of this, approximately 15% is classified as recyclable including plastics, paper, metal and glass. However, collected waste is usually left without treatment at the city's official dump site, Kiteezi, where it decomposes.[493] This waste could be successfully used in the recycling process instead of polluting the natural environment, thereby satisfying domestic demand in a more sustainable manner.
- One-third of collected waste is managed by private contractors with further government initiatives to extend these partnerships.[494]

SDG Related Need Case

- Even though Uganda is on track to achieve SDG 12 – Responsible Consumption and Production, the waste management problem is likely to increase with rapid population growth.[495]
- The waste sector is the city's second biggest contributor of greenhouse gas emissions - 28% is generated from landfilling, waste incineration and solid waste management collectively.[496] With sustainable investments in recycling, this negative externality can be reduced.
- The average annual municipal expenditure on solid waste management in Kampala is 2.25 million USD.[497]
- Much of the uncollected waste ends up in one of Kampala's 59 illegal dump sites, 133 unofficial temporary storage areas, 35 official temporary waste storage locations, or is simply burnt or carried away in waterways, possibly leading to contamination.[498]
- Women account for a significant fraction of waste collecting employees. Some of them work for recycling plants in a formal setting (80% of the collectors in the Nakawa plant from Coca-Cola Beverages Africa Uganda are females), whereas the remaining women work informally for legal and illegal landfill sites.[499]

IOAs in Uganda

Sector	Food and Beverage
Sub-sector	Non-Alcoholic Beverages

Direct SDG:

Indirect SDG:

Investments in Facilities and Distribution of Distilled Water

Business Model

Investments in water distillation facilities and later distribution of safe drinking water in large 5, 10, 15, 20-liter bottles to households and low-income communities without connection to piped water through:

> Public- Private- Partnership models

> Private investments, where the private entity sells the water directly to consumers

COVID-19 Related Need Case

Slightly more than 20% of Uganda's population has access to basic handwashing facilities including soap and water[500]. This is especially important during the pandemic as washing hands is an effective solution to prevent the spread of coronavirus. According to the USDA, bottled water can be a substitute to tap water when the latter is not available.[501]

Business Potential

- Only half of Uganda's population uses basic drinking water services.[502] That means more than 20 million people in the country are in demand of water from reliable sources.
- Less than 20% of the rural and less than 40% of the urban population has access to basic handwashing facilities including soap and water.[503] With current population growth at 3.6% annually and pandemic-related healthcare habits, the number of people looking for reliable water resources will likely increase.

SDG Related Need Case

- Access to clean and safe drinking water is important in terms of both ensuring proper hydration, thereby promoting overall well-being, but it can also be used to improve hygiene and reduce bacterial spread. WHO guidelines specify a 50-liter daily quantity of water per capita needed to maintain health and hygiene, and for domestic use.[504]
- Due to disparities in water access in Uganda, urban people living in poverty pay as much as 22% of their income to access water from water vendors, in comparison to 3-5% recommended by the WHO. [505,506]
- Households without a connection to piped water spent several times more money on water provided by informal vendors. This reduces overall the household income further limiting opportunities to build savings and break the poverty cycle. [507]

IOAs in Uganda

Sector	Services
Sub-sector	Professional & Commercial Services

Direct SDG:

Indirect SDG:

Platforms Offering Delivery Services & Payments Processing

Business Model

Private investments in the development of platforms for ordering online services and goods: food delivery, grocery delivery, mobile dry-cleaning together with delivery services mainly to urban population and online payments.

COVID-19 Related Need Case

Delivery services allow for keeping trade flow, especially with social distancing restrictions in place that hinder the spread of COVID-19..[508] These may also create new employment opportunities.[509]

Business Potential

- Uganda is characterized by one of the most rapid population growth rates in the world, with 3.6% and 6% growth for total and urban population respectively (2019). It is estimated that the number of inhabitants will reach 100 million people by 2050.[510]
- Almost 4 million adults living in urban areas are already financially included, with 10 million more residing in rural areas.[511]
- More than half of adults (10 million) in the country already use mobile financial services.[512]

SDG Related Need Case

- The service sector is necessary for economic growth and moving away from a resource-based economy assuring a broader scope of social and economic development.
- Delivery services not only create basic jobs for people lacking training/higher education, but also effectively support businesses such as restaurants by adding a new revenue stream and increasing the potential group of customers.[513]

IOAs in Uganda

Sector	Financials
Sub-sector	Consumer Finance

Direct SDG:

Indirect SDG:

Affordable Loans for Farmers and MSMEs

Business Model

Provide affordable financing for farmers and MSMEs to maintain liquidity through:

> Conventional loans from traditional banking sectors and/or lending institutions

> Fintech based solutions, using alternative data sources to assess creditworthiness of MSMEs and farmers

COVID-19 Related Need Case

In the COVID-19 crisis, both micro-enterprises in the informal economy and small businesses form an essential basis for social and economic recovery.[514] Providing finance in this context is therefore important to support borrowers, whose cashflows were heavily affected by the lockdown, social distancing and changes in consumption habits.[515]

Business Potential

- In Uganda, there are 19,270 formal micro-enterprises and 5,863 formal SMEs. Of them, 28.7% reported being fully financially constrained and 27.6% claimed to be partially financially constrained,[516] indicating a large demand for capital.
- The Formal MSME Finance Gap is estimated to be 10% covered, with almost 5 billion USD still needed.[517]
- More than 2.5 million people work in MSMEs in Uganda, accounting for 90% of private sector employment.[518]
- Most MSMEs reported that they closed their businesses due to the pandemic with a further 69% of MSMEs reporting a decline in access to credit.[519]
- High potential for providing loans and enhancing credit to MSMEs in high-density markets is observed.[520]

SDG Related Need Case

- SMEs are usually more vulnerable to unforeseen risks such as COVID-19 than large companies. Therefore, they are in need of financial support to keep their businesses running.
- 59% of Ugandans already have an account at a bank or other financial institution or use a mobile-money-service provider, but there are still challenges in achieving the SDG 8: Decent work and economic growth goal.[521, 522]
- Generally, when aggregating the formal and informal financial providers, around one in four adults in rural areas (where the primary type of employment is agriculture) is financially excluded in comparison to only 14% in urban areas. In terms of gender disaggregation, slightly more women than men are excluded (23% and 22% respectively.) However, if formal financial services are counted exclusively, the disparities are more visible. While 23% of urban residents are excluded, almost half (48%) of rural inhabitants are not formally served. Additionally, significantly more females than males are financially excluded in terms of formal financial services (37% and 46% respectively).[523]
- With significant restrictions on business activities and transportation, access to credit for businesses and the continued operation of financial institutions is essential.

Rwanda

Rwandan Economic Context

6.2 million people live in multidimensional poverty (2015Y)

54% of total population

0.259 multidimensional poverty index (0-1) (2015Y)

6.4 million people live below income poverty line (PPP 1.90 USD/day)

55% of total population

Rwanda - a hilly, land-locked country located in the eastern part of Africa, has a fast-growing population of 12.6 million people[524]. The country ranks 29th in the world in terms of the ease of doing business and is the only low-income economy within the top 30 locations[525]. Despite a relatively low GDP per capita at the level of 801.7 USD in 2019[526], Rwanda is still among the most rapidly developing countries in Africa. Its economy expanded at a rate of 9.4% in 2019 in terms of GDP growth, the highest score among all Sub-Saharan African countries[527]. However, in 2018 Rwanda's HDI value was only 0.536, putting it in the low human development category and ranking it 157th out of 189 countries and territories worldwide[528].

In 2019, services constituted nearly half of the country's GDP, while agriculture and industry accounted for 24.1% and 18% of the GDP respectively[529]. Construction and tourism are the main engines propelling the services sector and they contribute to the country's overall growth significantly - a distinctive feature of a transforming economy. However, the employment structure is partially inverted. Despite the fact that agriculture contributes only one-fourth to the country's GDP, the sector provides around 60% of total employment. Services, on the other hand, provide around one-third and industry less than 10% of workplaces[530].

Since 2015, personal remittances rose by 100 million USD and constituted 2.6% of the GDP in 2019, making it an increasingly important source of foreign capital in Rwanda[531]. In 2019, it amounted to approximately 260.5 million USD. However, due to the COVID-19 pandemic, the inflow of remittances has plummeted by 16% in March 2020. This is because the largest remittance sending countries (the US and Germany) have gone into lockdown leaving many migrants unable to work and support their families abroad[532].

Rwanda's Outlook during COVID-19 [814]

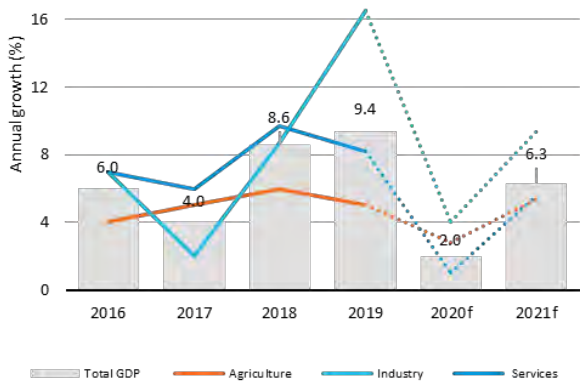
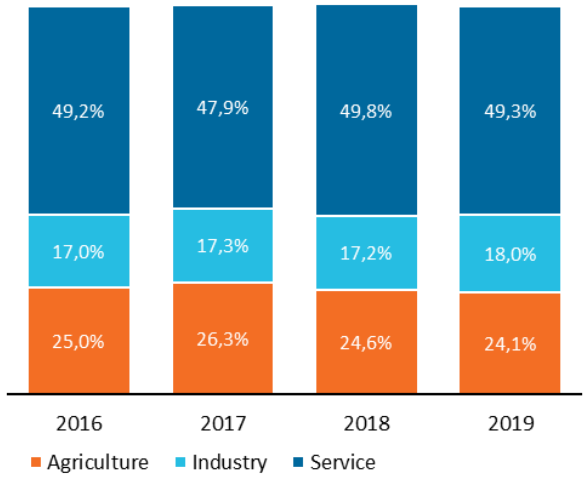


Figure 29. Rwanda: Share of Economic Sectors in GDP from 2009 to 2019 [658]



Development Needs and Vulnerable Populations

56.6 *Rwanda's overall score in terms of achieving SDGs*

132nd *The country's ranks out of 193 in the world*

Poverty is a significant challenge in Rwanda. In 2015, 55.5% of the country's population lived below the international poverty line of 1.90 UD per capita per day, while 38.2% found themselves under the national poverty line. Thus over 6 million Rwandans live in poverty in accordance with international standards and over 4 million people in line with national standards.

Moreover, 25.7% of the population or 3 million people was vulnerable to multidimensional poverty[533]. In 2014/15, 38% of children under 5 were affected by chronic malnutrition and an additional 2.2% of them were affected by wasting, resulting in a high death rate. In 2018, 18.7% of all households in Rwanda declared food insecurity[534].

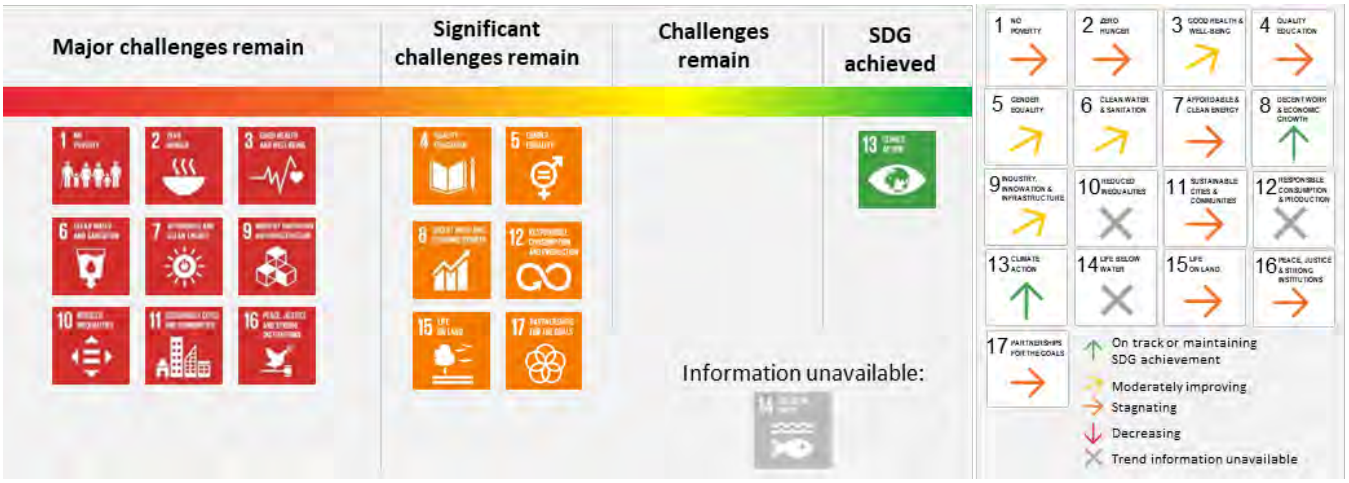
Economic growth rates are the highest in urban areas, specifically in Kigali, where many poor people have already found employment. However, the demand for the labor force does not increase proportionally t population growth. That leads to greater underemployment and lower real wages. Poverty in rural areas has been further aggravated by an insufficient regional integration of markets and increasing food price inflation. At the time of supply chain disruptions and border closures caused by the COVID-19 pandemic, farmers, agricultural producers and merchants were further exposed to poverty due to the limited trade volume, both international and domestic[535].

There are gendered discrepancies in the level of education. Approximately 68% of Rwandan girls aged 15 or higher struggle to read or write[536]. They therefore face great challenges while competing in the labor market. Given the COVID-19 crisis, a country lockdown and remote schooling, combined with low technological advancement and Internet penetration, girls are exceptionally vulnerable to falling behind in school or even dropping out, worsening of their situation on the job market.

The outbreak of COVID-19 and the restrictions imposed afterwards weakened Rwandans' capacity to afford a formal insurance scheme especially among people depending only on small- and medium-sized businesses for their livelihoods. They are often engaged in the informal sector, resulting in limitations to timely payment of insurance premiums, which may lead to many people falling out of the formal insurance schemes. As most households are forecasted to experience reduced incomes, it is likely that the number of health insurance subscriptions will decrease[537].

Child labor remains an important problem in Rwanda, as 29% of children are engaged in some type of work[538]. Despite existing laws setting the minimum working age at 16, the issue remains present, especially in the agricultural sector. Additionally, some of the children in Rwanda are engaged in what are considered the worst forms of labor, including dangerous activities in agriculture and forced domestic labor – and are frequent targets for human trafficking. Even though Rwanda itself is not a child trafficking destination, it serves as a source and transit country, particularly for those destined for Uganda and the Democratic Republic of the Congo. They then become victims to commercial sexual exploitation and forced labor in the agricultural and industrial sectors and domestic activities[539].

SDG Achievement Status[540]



Potential for Growth – A Business Perspective

Rwanda is strategically located in the center of East Africa. It has a population of over 12 million people and an emerging middle class. The country recorded on average a more than 7% GDP annual growth rate in the last five years[541].

Sectoral Opportunities for COVID-19

Sustainable Response and Recovery

With the country's stable GDP growth exceeding 7% annually[542], a clear strategic vision for its development and rapidly growing population, Rwanda is perceived as one of the most promising investment locations. Rwandan authorities emphasize that a substantial part of a population is under 30 years of age, bilingual and well-educated[543]. This makes them attractive for the labor market. Moreover, Investment authorities developed an investor friendly climate. According to the 2020 World Bank Doing Business Report, Rwanda is 2nd in Africa and 38th globally in terms of an investment-friendly environment[544].

During the COVID-19 pandemic, the following sectors were identified as having the biggest market and impact potential:

Infrastructure

Given that the population is projected to reach over 16 million people by 2032, it is necessary to invest in means for increased productivity (to secure employment and livelihoods of future generations), to protect the natural environment and to invest in sustainable solutions[546] related to waste collection, environmental protection and healthcare[547].

Agriculture

The agriculture sector in Rwanda accounts for 24% of the GDP[549] and employs 60% of the total population[550]. It is therefore a crucial sector for investments to improve the livelihoods of Rwandan citizens. In its Vision 2050, the government recognizes "sustained food security and nutrition for all households and age groups" as a development priority and has put effort into agriculture sector investments' attraction and promotion[551].

Renewable Resources & Alternative Energy

The National Strategy for Transformation (NST 1) aims at upscaling electricity generation and provision with special consideration for its quality, affordability and reliability. This was identified as one of the key economic drivers for Rwanda. The industry and socio-economic facilities (such as schools or hospitals) have been identified as major recipients in need of sufficient, stable energy supplies[545].

Healthcare

Although the situation gradually improves, Rwanda still faces many challenges in the healthcare sector. The government plans to ensure quality healthcare for all with a focus on improving services, medical infrastructure, enhancing financing and strengthening the capability of healthcare sector professionals[548].

Financials

The financial sector is crucial for growth and development in Rwanda and contributed to the country being a net importer of services[552]. In order to achieve the goals established in the national development policy (National Strategy for Transformation) approximately 42 million USD must be invested in Rwanda between 2017 and 2024. 41% of that sum is supposed to be provided by the private sector[553]. Due to the pandemic, there is urgent need for investments in healthcare, social protection and SMEs' liquidity.[554]

Consumer Goods

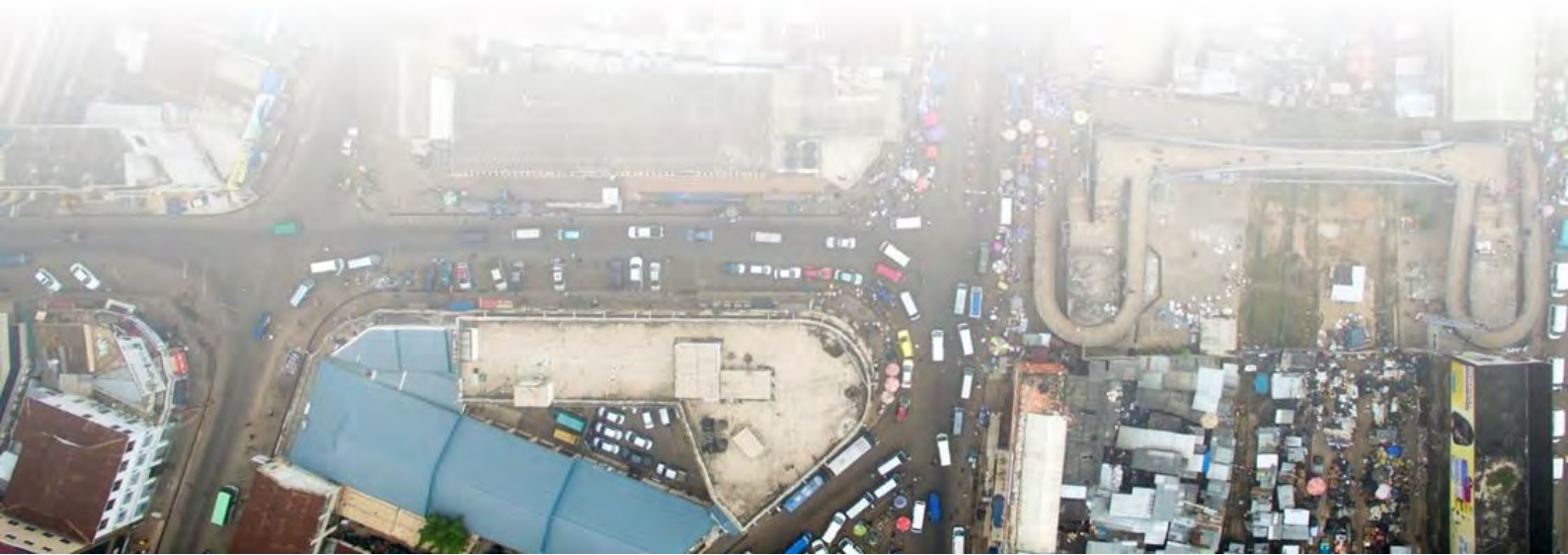
In 2019, this industry (including construction) accounted for 18% of total GDP translating to over 1.8 billion USD. The annual growth in the same year equaled 16.5%. However, with supply chain disruptions, border shutdowns and an increasing need for sanitation and disinfection products, COVID-19 put additional pressure to further invest in this sector. As demand for household products grows, they become either more expensive or difficult to obtain[555].

The list of 6 sectors and 8 Investment Opportunity Areas presented in the next section is the product of mixed methods approach, that includes results of the survey taken among private and public stakeholders, open discussions with investors who contributed to the sectoral prioritizations and desk research covering -publicly-available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies and National Policies/responses to the COVID-19 outbreak.

The analysis has demonstrated that advancing in SDGs and tackling main development needs are becoming even more urgent due to COVID-19 turmoil. At the same time, a number of areas were revealed in the selected sectors where business potential, policy priorities and development needs aligned.

Key Sectors and Investment Opportunity Areas - Rwanda

Sector	Subsector	Investment Opportunity Area	IRR	Timeframe Short-Medium-Long	SDGs
Agriculture	Processed Foods	*Agricultural processing for staple crops adding value of production*	14%-18%		
	Meat, Poultry & Dairy	*Investment in dairy processing facilities*	25%-35%		
	Storage & Packaging Infrastructure	*Storage infrastructure for agricultural products and crops*	50%		
Healthcare	Medical Equipment & Supply	*Manufacturing of first aid health prod-ucts and medical equipment*	19%-23%		
Infrastructure	Waste Management	*Investment in facilities and upscaling the recycling and reprocessing rate of plastic disposables*	12%-18%		
Financials	Consumer Finance	*Affordable loans for agriculture and MSMEs*	18%		
Renewable Resources & Alternative Energy	Solar Technology & Project Developers	*Off-grid and mini-grid solar power generators for rural communities*	15%-20%		
Consumer Goods	Household & Personal Products	*Production of soap and detergent*	20%-40%		



IOAs in Rwanda

Sector	Infrastructure
Sub-sector	Waste Management

Direct SDG:

Indirect SDG:

Investment in Facilities and Upscaling the Recycling and Reprocessing Rate of Plastic Disposables

Business Model

Investment in the establishment and operations of recycling facility plants for repurposing plastics.

The investment can be done through:

> Public private partnership

> Private investment

> Willing buyer-willing seller model

COVID-19 Related Need Case

Disruptions in international supply chains, plastic packaging and new ways of doing business due to the COVID-19 outbreak contribute to an increase in the amount of generated waste. This adds increased pressure to waste management systems, the carrying capacity of which are already strained.

Business Potential

- The population of Kigali is forecasted to more than double within the period of 2012-2032, from 1.1 million inhabitants to approximately 2.5 million.[556]
- It is estimated that only around half of the households in Kigali have access to waste collection services.[557]
- The government has aimed for a non-organic solid waste recycling rate of 40% by 2029/30.[558]
- According to the Utilities and Amenities Thematic Report, in Kigali, only 48.9% of waste is disposed of through public waste collection services, while 33.5% is thrown into fields, 13.6% is composted and 0.7% is abandoned in water basins.[559]
- Because of the single-use plastics ban imposed by the Rwandan Government, the demand for recycled plastic has risen[560,561]. While the Rwandan recycling market was non-existent in 2008, by 2019 there were already 14 companies present in the country.[562]

SDG Related Need Case

- Rapid population growth has put increasing pressure on the existing infrastructure and urban planning strategies. New challenges have thus arisen in relation to waste collection and management, which need to be tackled to prevent environmental pollution and healthcare threats.[563]
- Between 2011 and 2019, the amount of solid waste generated in Kigali doubled from 400 tons to 800 tons per day.[564]
- Currently, it is estimated that only around half of the households in Kigali have access to waste collection services.[565]
- Rwanda has recognized the mismanagement of solid waste as a major obstacle on its way toward sustainable development, particularly considering its health and safety implications for citizens.[566]

IOAs in Rwanda

Sector	Agriculture
Sub-sector	Processed Foods

Direct SDG:

Indirect SDG:

Agricultural Processing for Staple Crops and Adding Production Value

Business Model

Investment for upscaling, establishment and operations of modern processing plants for beans, rice, maize and potatoes. Depending on the product, processing can cover cleaning, dehydration, thermal processing, flour production, adding other food components, hermetic canning, etc. The investments can be done through:

> Private investments

> Public private investments

COVID-19 Related Need Case

40% of food produced in Rwanda is lost, amounting to 3 million tons annually.[567] The COVID-19 pandemic has resulted in higher rates of food insecurity mainly due to supply chain disruptions contributing to food wastage.[568] Food processing can reduce these losses by either slowing down or stopping the natural processes of decay.[569]

Business Potential

- The agricultural sector in Rwanda is valued at over 3 billion USD or 33% of the national GDP.[570] With a 5.3% average annual growth, the value of the sector has more than doubled between 2000 and 2016.[571]
- In 2017, the agro-processing subsector generated 309.5 million USD.[572] In 2019, almost 960,000 metric tons of cassava, wheat, rice, sorghum and maize were produced in Rwanda.[573] Despite recent improvements, there is still important need for upscaling agro-processing with new technology in order to increase capacity, and at the same time upgrading the whole value chain in line with the Rwandan Industrial Master Plan.[574]
- By 2024, domestic maize consumption is anticipated to reach 245,235 metric tons from the current 227,212 metric tons due to population growth.[575]

SDG Related Need Case

- In Rwanda, approximately 40% of the country's total food production is lost or spoiled annually. This translates into 21% waste of total land use, 16% of greenhouse gas emissions and a 12% loss to the country's GDP.[576]
- Almost 20% of Rwandans are food insecure and 35.6% of the population is undernourished.[577,578] Around 467,000 households are considered food insecure. Of those, almost 42,500 were in severe food insecurity, meaning their access to sufficient nutritious food is limited or non-existent.[579]
- Processing facilities may help solve this problem as processed food has a longer shelf life and can be used as an ingredient in the production of other, more complicated food products.

IOAs in Rwanda

Sector	Agriculture
Sub-sector	Meat, Poultry & Dairy

Direct SDG:

Indirect SDG:

Investment in Dairy Processing Facilities

Business Model

Investment in the establishment and operations of dairy processing plants to make products such as UHT milk / milk powder through:

> Blended finance with private sector investment

> Private investment

COVID-19 Related Need Case

The pandemic has increased the level of food insecurity due to supply chain disruptions. In the case of perishable goods, disruptions lead to larger food losses.[580] Investment in dairy processing decreases its perishability and therefore reduces the waste rate of protein-rich dairy products.[581]

Business Potential

- The government recognizes "sustained food security and nutrition for all households and age groups" as a development priority in its Vision 2050 plan and is therefore aiming to promote investment in the development of the agricultural sector.[582]
- Rwanda's fresh milk production amounts to approximately 160 million liters annually. It is estimated that 35% of the raw milk produced in Rwanda spoils before reaching the market e.g., by turning rancid.[583]
- As of 2016, only 20% of all milk produced reached formal processing facilities,[584] as compared to the international standard of 50%.[585] In 2018-2019, almost 69 million liters of milk were supplied to dairy processing plants.[586]
- Production in the dairy subsector has increased by almost 400% over the last decade, but it still doesn't satisfy demand.[587]
- In 2019, Rwanda imported dairy of a total value of 11 million USD,[588] as compared to the total demand for dairy products, the value of which amounts to 15.4 million USD.[589] This indicates a large market demand which could be satisfied by domestic production.

SDG Related Need Case

- Almost 20% of Rwanda's population is food insecure[590] while 35.6% of inhabitants are undernourished.[591] This arises, in part, from insufficient protein intake in diets.[592] Increased milk consumption can decrease these numbers. Milk can provide up to 25-33% of the protein needed every day, and positively contributes to weight gain and growth in malnourished children.[593]
- It is estimated that undernutrition among children caused a loss of approximately half a million USD in 2012 or about 11.5% of the country's GDP.[594]

IOAs in Rwanda

Sector	Agriculture
Sub-sector	Storage & Packaging Infrastructure

Direct SDG:

Indirect SDG:

Storage Infrastructure for Crops and Agricultural Products

Business Model

Investment in construction of new and upscaling operations of existing silos & storage facilities for crops that can be leased or operated directly through:

> Private investment, where the private sector invests in the establishment, operations and maintenance of facilities

> Public private investments, where the private sector builds and/or operates the facilities based on a long-term contract with the public sector

COVID-19 Related Need Case

In Rwanda, post-harvest food losses reach up to 40%, and are caused by inefficient storage and packaging.[595] COVID-19 has further intensified these losses in perishable, agricultural products, due to border closures, lack of storage facilities and limited access to agricultural equipment.[596] Storage facilities can either reduce or prevent decomposition and increase the amount of food available in the market.[597]

Business Potential

- In 2018, Rwanda's food loss amounted to 20.5 million USD in maize, and 14 million USD in rice.[598]
- In 2019, almost 960,000 metric tons of cassava, wheat, rice, sorghum and maize were produced in Rwanda.[599]
- As of 2019, agricultural storage capacity in Rwanda was estimated at 316,050 metric tons.[600] This means that only 1/3 of the agricultural output could be stored in a sector highly dependent on seasonal production.
- Due to poor quality arising from consequences of inefficient storage, the Africa Improved Foods factory claimed that it rejected 90% of maize produced during the 2017 agricultural season.[601]
- The 2018 National Agricultural Policy aimed to ensure food and nutrition security, modernize agribusiness technologies through the professionalization and productivity of farmers, commercialize rural output and improve the competitiveness of the agricultural sector.[602]

SDG Related Need Case

- Rwanda is significantly underperforming in SDG 2 – Zero hunger.[603] Therefore, it is necessary to address the hunger gap immediately by improving the supply and quality of food and directing investments towards agricultural infrastructure.
- In Rwanda, post-harvest food losses reach up to 40%. They are caused, in part, by such factors as inappropriate storage and packaging. [604]
- There is need to improve agricultural effectiveness because the average daily caloric intake for Rwandans is only 1,950 kcal per person, which is lower than the defined poverty line of 2,500 kcal per person daily.[605]

IOAs in Rwanda

Sector	Consumer Goods
Sub-sector	Household & Personal Products

Direct SDG:

Indirect SDG:

Production of Soap and Detergent

Business Model

Investment in the establishment and upscaling of operations in the area of soap and detergent production.

> The investments can be done through private investments or in partnership with the government to utilize/lease infrastructure and land for the establishment of operations.

COVID-19 Related Need Case

To reduce the spread of the virus, proper sanitation measures, including handwashing, need to be applied. However, the negative economic impacts of the lockdown have reduced the availability of soaps. This, in turn, has limited citizens' access to basic levels of sanitation.[606]

Business Potential

- With the disruption of supply chains, the closure of markets and an increased need for sanitation and disinfection products, COVID-19 created additional pressure to further invest in this sector, particularly due to increasing demand for household products, which have become either difficult to obtain or more expensive.[607]
- In 2019, Rwanda had 12.6 million citizens and this number is growing at a stable rate of 2.6% annually.[608] Population growth is likely to increase the demand for basic household products such as soap and detergents.
- The current low availability of hand-washing facilities requires a significant investment to achieve the goals of assuring access to water and soap for 70% of households by 2020 and 100% of households by 2030. Just between 2016-2020, the public funding required for individual sanitation and sector coordination reached 83 million USD.[609]

SDG Related Need Case

- Meeting SDG 6 (Clean Water and Sanitation) and SDG 9 (Industry, Innovation and Infrastructure) is still considered to be a major challenge in Rwanda. According to the indicator, only 64% of the Rwandan population has access to basic sanitation services.[610]
- There is need for the installation and operation of handwashing and sanitation facilities to provide social assistance to the poorest households. The latest data (2014/15) recorded only 4.3% of households with access to handwashing facilities with soap and water.[611]
- Local soap production covers only 40% of total demand forcing Rwanda to import more costly goods from abroad.[612] In 2019, the total import of soap and detergents equaled 33 million USD.[613]

IOAs in Rwanda

Sector	Renewable Resources & Alternative Energy
Sub-sector	Solar Technology & Project Development

Direct SDG:

Indirect SDG:

Off-Grid and Mini-Grid Solar Power Generators for Rural Communities

Business Model

Investment in the establishment of off-grid or mini-grid solar energy generators for rural communities.

Providing an off-grid or mini-grid solar energy generator for rural communities through:

> Lease-to-own models

> Private investment

> PPP models

COVID-19 Related Need Case

In Rwanda, 65% of the population lives with no access to grid electricity, with rural areas having the lowest rate of electrification.[614] With high costs and long introduction times for grid solutions, only off-grid and mini-grid solutions can contribute to solving the day-to-day challenges caused by lack of electricity. This need has intensified due to the new reality of remote working and schooling due to COVID-19.[615]

Business Potential

- The National Strategy for Transformation (NST 1) aims at scaling the use of electricity with special consideration for energy quality, affordability and reliability.[616]
- Current energy capacity equals 218 MW with 45% being hydropower, 27% from diesel and heavy fuel oil combustion, 14% from methane gas, 7% from peat and 6% from solar radiation. Yet the demand is estimated to reach between 282-376 MW in 2024.[617] The government plans to provide 100% of the Rwandan population with access to electricity by 2024. According to estimates, 52% of the electricity will come from the main grid, whereas 48% will be generated by off-grid solutions.[618] The demand for electricity is growing 8% annually, and private investments can bridge the current insufficient supply gap.[619]
- The government aims to provide 250,000 solar and mini-grid installations each year between 2019/20 - 2023/24, which is twice as much as it used to be. For example, between 2016/17 and 2019/20, sales of solar home systems reached around 300,000 households.[620] Hence, a higher demand for investments and providers of solar solutions is expected.
- In 2018, total investment in the solar off-grid sector equaled 11.58 million USD.[621]

SDG Related Need Case

- Only around 35% of Rwandans have access to electricity, which is a major constraint for livelihood, production and growth.[622]
- Currently the demand for electricity is growing faster than the available production capacity. Additionally, the average cost of electricity is higher than the regional average (based on regional benchmarks).[623]
- The present energy mix in Rwanda strongly relies on hydropower, which is highly susceptible to seasonal changes that can contribute to disruptions in supply.[624]

IOAs in Rwanda

Sector	Healthcare
Sub-sector	Medical eEquipment & Supplies

Direct SDG:

Indirect SDG:

Manufacturing of First Aid Health Products and Medical Equipment

Business Model

Private investment in the establishment of facilities and upscaling of medical equipment and first aid or personal protection equipment production (e.g., face masks, syringes or bandages).[625]

COVID-19 Related Need Case

To improve overall health and mitigate the spread of the COVID-19 virus, appropriate medical equipment such as masks and gloves is needed.[626] The WHO requested manufacturers to increase production of personal protective equipment by 40% to meet rising demand and meet a monthly estimated global need for 89 million masks.[627]

Business Potential

- The government plans to ensure quality healthcare for all with a focus on improving services, constructing medical infrastructure, enhancing financing and strengthening the capability of the healthcare sector workforce.[628]
- The potential market includes 1,700 health posts, 500 health centers, 42 district hospitals, and 5 national referral hospitals from the public sector, and 2 general hospitals, 2 eye hospitals, 50 clinics and polyclinics, 8 dental clinics, 4 eye clinics, and 134 dispensaries from the private sector.[629]
- There are 45,516 community health workers in Rwanda serving the population at the village level, who are in need of basic first aid health products (as well as first aid kits for citizens).[630]
- In 2019, the total import of medical appliances (commodity code 9018) and surgical dressing (commodity code 3005) equaled 15 million USD and 2.7 million USD respectively.[631]

SDG Related Need Case

- Although the situation has improved gradually, Rwanda faces many challenges in the healthcare sector and meeting SDG 3 is considered a major challenge. [632] Resilient healthcare is crucial to coping with the spread of COVID-19 with a special focus on proper sanitation and personal protective measures.[633]
- There is need to strengthen the medical manufacturing supply chain and the availability of pharmaceutical products through the engagement of the private sector. The government forecasts that between 2018 and 2024 around 50 million USD will be required to cover the Infrastructure and Equipment components of health policy expenses.[634]

IOAs in Rwanda

Sector	Financials
Sub-sector	Consumer Finance

Direct SDG:

Indirect SDG:

Affordable Loans for Agriculture and MSMEs

Business Model

Provide affordable loans for farmers and MSMEs to maintain liquidity in the short-term and boost growth and recovery in the mid-term through:

> Conventional loans from traditional banking sectors and/or lending institutions

> Fintech based solutions, using alternative data sources to assess the creditworthiness of MSMEs and farmers

COVID-19 Related Need Case

The virus has posed a threat to MSMEs and their liquidity in the agricultural sector, which can lead to mass lay-offs or bankruptcies. Companies require financial support and affordable loans to recover.[635] Around 25% of the companies surveyed by the University of Rwanda, mentioned liquidity as a major challenge during the COVID-19 pandemic.[636] Multiple efforts have been made to launch loans for smallholder farmers to ensure financial inclusion and promote agricultural development.[637]

Business Potential

- MSMEs account for 99.7% of around 186,000 enterprises present in Rwanda, where 92% are microenterprises.[638]
- Farmers are rarely targeted by the formal finance sector. Despite that around 89% have access to formal and informal sources of financing, only 5% received loans in 2017 due, in part, to a lack of collateral to secure a loan. Of this 5%, 96% of the loans had a form of informal lending (mainly SACCOs or ROSCAs).[639] This trend is confirmed by the total value of loans for agriculture between 2014 and 2018, accounting just for 6.15% of total loans.[640] This leaves untapped potential for a well-designed microfinance product for farmers.

SDG Related Need Case

- In Rwanda only 68% of people have access to formal financing and 89% have access from all sources. That leaves 11% of Rwandans with no access to finance at all.[641] However, in 2017, only 50% of Rwandan citizens had a bank account.[642]
- In terms of gender disparity, significantly more males than females were formally served (74% vs. 66%). Even more gender discrepancy is visible in access to agricultural credit, where 75% of males received loans compared to only 25% of females. [643]
- The MSMEs' financial gap equaled 1.3 billion USD in 2017, which accounted for around 16% of total GDP.[644]
- The challenges identified include: no habit of saving money; limited access to financial services (especially in rural areas); lack of long-term financial security; little access to collateral; lack of skilled financial and managerial labor; and high default risk.[645]

Appendix III

Acknowledgement and Key Contacts

About the Study

The novel Coronavirus outbreak has shown the fragility of our systems, social structures, policies and global economy, putting into question their capacity of response and the resilience of our models and societies. For the past several months, a global health and social crisis has been accompanied by incremental levels of uncertainty, unprecedented risks, disruptions and mobility limitations reshaping countries' realities, as well as the livelihoods and well-being of citizens globally. Societies all over the world have been affected, but the consequences for emerging markets and more fragile economies may be particularly severe. All of these variables are creating new scenarios for current and future investments worldwide.

According to different estimations, COVID-19's direct and indirect effects will cause a regression in the progress Africa has made in its development and achievement of SDGs. Specifically, there are expectations for an increase of socioeconomic disparities, and the deepening of risks factors and vulnerabilities for population on the continent.[646]

In order to maintain a sustainable development path, which has already been underway for several years, and to promote inclusive and resilient recovery, it is critical to attract private sector investments to African countries.

As part of SDG Impact - a flagship UNDP initiative - in February 2020 PwC was engaged to support in the development of SDG Investors Maps in Ghana, Kenya, Nigeria, Rwanda and Uganda. These maps are a tool that provide **market intelligence** for private sector investors transforming country-level SDG gaps and priorities into **private sector investment opportunities**.

The Investors Maps provide insight into local market conditions, local SDG investment opportunities and highlight business opportunities as well as the expected SDG-impact of such investments.

Due to the severe and uncertain challenges directly and indirectly associated with the Coronavirus outbreak**, PwC Poland was engaged by UNDP SDG Impact to develop a COVID-19 Rapid Assessment as an add-on to the SDG Investor Maps Methodology** with the purpose of identifying specific Investment Opportunity Areas for response and recovery in the selected countries.

The assessment was carried out in Ghana, Kenya, Nigeria, Rwanda and Uganda during mid-June and September 2020, following a mix-methods approach that combines desk research - particularly publicly-available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies, as well as National Policies/responses to the COVID-19 outbreak - with primary data from a questionnaire and in-depth interviews of active investors, private sector and key public sector stakeholders in the analyzed countries.

The main goals of the study are to:

- Identify investors' perspective on the impacts of COVID-19 on their current investments and their investment plans/strategies,
- Identify new business models and Investment Opportunity Areas where emerging public sector priorities, development needs and private sector interests overlap, and
- Share findings to national public and private sectors to increase investments for immediate responses to COVID-19 preparedness, response, and recovery.

This publication provides a summary of the COVID-19 Investor Assessment including collected private and public sector insights, the impact of the pandemic on the investment landscape and countries' development needs, along with the identified investment opportunity areas where emerging public sector needs, and private sector interests coincide.

Methodology and Limitations

COVID-19 Rapid Assessment as an add-on to SDG Investor Maps: Providing the Investors' Lens for Response and Recovery

The COVID-19 Rapid Assessment approach was developed by PwC as an add-on to the UNDP SDG Investor Maps created by the SDG Impact/UNDP. The Maps provide **market intelligence** for private sector investors translating country-level SDG gaps and priorities into **private sector investment opportunities**. The SDG Investors Maps are currently under development for Ghana, Kenya, Nigeria, Rwanda and Uganda. The Rapid Assessment allows for the inclusion of specific Investment Opportunity Areas with COVID- 19 recovery and response lenses into the Maps.

The methodology for the study is based on a mix-method approach that combines:

- Survey results - country-specific surveys conducted among investors, investment associations and key public sector actors, collecting primary data on the investment landscape in the country, identifying perspectives on the COVID-19 response and recovery strategies/programs, and developing a better understanding of the private sector challenges and opportunities as well as additional potential solutions to be introduced by the public sector.
- In-depth interviews - collecting additional insights from the investors to validate initial findings and collect additional information
- Desk research and analysis - particularly publicly-available data and assessments by Financial Institutions, the United Nations Development Programme, other UN Agencies and National Policies/responses to the COVID- 19 outbreak.

The Survey

The survey was based on a standardized online questionnaire covering:

- COVID-19 implications for investors on their current portfolios in the country
- COVID-19 implications for planned investments
- Priorities and opportunities for COVID-19 response and recovery

The survey was conducted separately in each of the countries to properly reflect national specificities and differences during mid-June and August 2020 for Kenya, Ghana, Nigeria and Uganda, and during September for Rwanda.

In each of the countries it was disseminated to institutional investors, commercial banks, Venture Capital (VC), Impact Investors and Investors Associations, as well as key public sector actors shaping the enabling environment for the private sector. Separate sets of questions were used to cover private and public sector perspectives about COVID-19's impacts on the investment landscape in the selected countries.

In-Depth Interviews

Over 27 in-depth semi-structured interviews (60 minutes each) were conducted with key investors in the selected countries.

Secondary Research and Publicly Available Data Analysis

To complement the study, desk research and an analysis of secondary sources was conducted. These were particularly focused on available studies and assessments to better understand COVID-19's effects on the analyzed countries as well as their key development needs, and to identify sectors and subsectors relevant for COVID-19 response and recovery. When available, UNDP socioeconomic impact assessments conducted for each of the countries were utilized as relevant input for the analysis.

Acknowledgements and Key Contacts

Appendix IV

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