



DIGITAL

SOLUTIONS IN A

TIME OF CRISIS



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The World Bank Group
1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

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Design/Layout: Shetty Foto Fast Ltd
Printed in Uganda by Shetty Foto Fast Ltd

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Uganda Economic Update, 15th Edition

DIGITAL SOLUTIONS IN A TIME OF CRISIS

July 2020

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FOREWORD

Six months ago, when we released the Fourteenth Uganda Economic Update, Uganda's economy was in a good place. Growth had rebounded over the previous two years and the outlook was positive. Today, Uganda is in a very different space.

The COVID-19 pandemic has emerged as the most significant adverse shock the global economy has experienced since the Second World War. It has taken a toll on human life and brought major disruption to countries across the globe. As a result, Uganda's economy is expected to slow significantly in 2020 and early 2021, and the outlook on all fronts has deteriorated significantly.

There are, however, areas of the economy that have shown resilience and are already adjusting to the current crisis as an opportunity to invent new ways of operating and doing business. A lot of this has been made possible by leveraging digital technologies and the digital economy.

It is against this backdrop that I am pleased to introduce the Fifteenth Uganda Economic Update, which includes the special topic of 'Digital Solutions in a Time of Crisis'. In line with the structure of earlier editions of the Uganda Economic Update series, this report reviews recent economic developments, provides an outlook for the macro-economy, and then delves into the special topic.

Digital technologies offer a chance to unlock new pathways for rapid economic growth, innovation, job creation, and access to services for underserved populations. Digital technologies have the potential to boost productivity and create better jobs in the private sector, including for informal businesses.

The special topic reviews recent advances in Uganda's digital economy, identifies policy challenges and proposes solutions to spur the development of a more robust digital ecosystem that will enhance Uganda's efforts to transform its economy.

Government is already committed to this process, with digital transformation being one of the key programs listed in the third National Development Plan (2020/21-2024/25). However, as discussed in this Update, Uganda still has significant hurdles to overcome if it is to reap the full benefits of a digital transformation for inclusive growth and job creation.

This report comes at a crucial time with Uganda in the grips of the COVID-19 pandemic. Digital solutions have already been significant in responding to the crisis and will be important as Uganda recovers and aims to build-back-better.

Camille Nuamah

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Kenya, Rwanda, Somalia and Uganda
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ABBREVIATIONS

3G	Third Generation	NSIS	National Security Information System
4G	Fourth Generation	o/w	of which
ADI	Africa Development Indicators	P2G	Person to Government
AI	Artificial Intelligence	PE	Private Equity
B2G	Business to Government	PIM	Public Investment Management
Bbl	Barrel	PIRLS	Progress in International Reading Literacy Study
BOU	Bank of Uganda	PMI	Purchasing Managers' Index
BRAC	Building Resources Across Communities	POS	Point of Sale
CHW	Community Health Worker	PPP	Public Private Partnerships
COVID-19	Corona Virus 2019	QR	Quick Response
DFS	Digital Financial Services	R&D	Research and Development
DRC	Democratic Republic of Congo	ROPA	Registration of Persons Act
DSA	Debt Sustainability Analysis	SACCO	Savings and Credit Cooperative Organization
DSL	Digital Subscriber Line	SCG	Senior Citizens Grant
EFU	Energy, Fuels and Utilities	SDM	Single Digital Market
EU	European Union	SFIA	Skills Framework for the Information Age
FDI	Foreign Direct Investment	SME	Small and Medium Enterprises
FID	Financial Investment Decision	SMS	Short Message Service
FY	Financial Year	SOE	State Owned Enterprise
G2P	Government to Person	SSA	Sub-Saharan Africa
GDP	Gross Domestic Product	STEM	Science Technology Engineering and Mathematics
GoU	Government of Uganda	TCP/IP	Transmission Control Protocol/Internet Protocol
GSMA	Groupe Spéciale Mobile Association	TIMSS	Trends in International Mathematics and Science Study
ICT	Information Communication and Technology	UAIS	Uganda Agricultural Insurance Scheme
ID	Identity Document	UBOS	Uganda Bureau of Statistics
ILO	International Labor Organization	UCC	Uganda Communications Commission
IMF	International Monetary Fund	UDB	Uganda Development Bank
ITU	International Telecommunications Union	UNCDF	United Nations Capital Development Fund
KLIP	Kenya Livestock Insurance Program	UNCTAD	United Nations Conference on Trade and Development
MDA	Ministries, Departments and Agencies	UNESCO	United Nations Educational, Scientific and Cultural Organization
MNO	Mobile Network Operator	US\$	Unites States Dollars
MoFPED	Ministry of Finance, Planning and Economic Development	US	United States
MPCI	Multi-Peril Crop Insurance	USh	Uganda Shilling
MSME	Micro, Small, and Medium Enterprises	VC	Venture Capital
NIR	National Identification Register	WEO	World Economic Outlook
NIRA	National Identification and Registration Authority	WHO	World Health Organization
NITA-U	National Information Technology Association-Uganda	WiMAX	Worldwide Interoperability for Microwave Access
NPL	Non-Performing Loan	y/y	Year to Year
NUSAF	Northern Uganda Social Action Fund		

ACKNOWLEDGEMENTS

The Fifteenth Edition of the Uganda Economic Update was prepared by a team consisting of Richard Walker, Tihomir Stucka and Qursum Qasim.

The team is grateful to Philip Schuler, Rachel Sebudde, Camille Nuamah, Wolfgang Fengler, Fernando Im, Tania Begazo, Gaurav Nayyar, Emiko Todoroki, Caroline Chepkorir Koech, Ernest Wasake, Moses Kibirige, Casey Torgusson, Charles Pierre Marie Hurpy, Aki Ilari Enkenberg, Luda Bujoreanu, Carolina Mejia-Mantilla, Ramya Sundaram, and Michael Munavu for additional inputs on the structure and messaging of the report. Barbara Katusabe provided logistical support, while Sheila Kulubya managed the communications and dissemination strategy.

Overall guidance provided by Abebe Adugna (Practice Manager, Macroeconomics, Trade and Investment), Michel Rogy (Practice Manager, Digital Development), Niraj Verma (Practice Manager, Finance, Competitiveness and Innovation) and Antony Thompson (Country Manager) is gratefully acknowledged.

Finally, we would like to thank the Hon. Minister of Finance, Planning and Economic Development, Matia Kasaija, and Hon. Minister of ICT and National Guidance, Hon. Judith Nabakooba, and their staff for their continuous commitment and close collaboration.

KEY MESSAGES

STATE OF THE ECONOMY: A TIME OF CRISIS

Real GDP growth is projected between 3–3.3 percent in FY20 (from 6.5 percent pre-COVID) and 2.9–3.7 percent in FY21, as COVID-19 related shocks, a locust invasion and floods hit the country. On a calendar year basis, real GDP growth in 2020 is projected between 0.4 and 1.7 percent, compared to 5.6 percent in 2019. Therefore, in real per capita terms growth has turned negative. The main external transmission channels of COVID-19 are through lower exports, tourism, remittances, as well as a sizable deceleration in Foreign Direct Investment (FDI) inflows and government project financing, creating a significant fiscal and external imbalance. This is amplified by a domestic demand contraction due to stringent mobility restrictions and a corresponding fall in incomes. The decline in Uganda's real GDP growth and corresponding loss of jobs could be even larger if the country were to face a more widespread pandemic, which would require more extended periods of mobility restrictions and/or overwhelm the capacity of the health system.

For poor and vulnerable households in Uganda, the impact of COVID-19 is expected to be especially severe. Given that many jobs will be lost, and livelihoods affected for several months, poverty is expected to increase even though real GDP growth is projected to be positive. Ugandan households also have limited coping mechanisms (e.g. savings and social protection) to deal with shocks. The effects will be observed in both rural and urban areas, although through different transmission channels. In urban areas, the prohibition of social gatherings, closure of

non-essential institutions and ban on public and private transport are significantly reducing the incomes of those engaged in the services, manufacturing and construction sectors. Rural households will be impacted by an overall drop in aggregate demand, together with a slowdown in trade, which will lower demand for food and agricultural products.

With the pandemic widening the current account deficit and slowing financing inflows, the external gap will amount to US\$1 billion in FY20 and FY21 (or about 2.4 percent of GDP). The combined fall in merchandise exports, tourism earnings and remittances are expected to outweigh the decline in imports. The crisis is also set to severely impact external financing inflows, with net FDI inflows projected to decline by 30 percent in FY20 compared to last year's outcome and recovering only at the margin in FY21. The external gap will be met by the IMF's Rapid Credit Facility and World Bank's emergency lending operation, both totaling US\$0.79 billion, and a drawdown of reserve buffers.

The fiscal deficit is projected to rise to 7.6 percent of GDP in FY20 (relative to a pre-COVID level of 5.8 percent of GDP) and range between 7 and 8.9 percent of GDP in FY21 (from 5.5 percent pre-COVID). The worsening deficit is due to a sharp decline in revenues, driven by the reduction in economic activity, tax payment postponements to support business liquidity and shrinking trade. At the same time, current spending is rising to manage the COVID-19

crisis, contain the locust invasion and support the economic recovery. The fiscal financing gap in FY21 is estimated at 3 percent of GDP, and hinges on available concessional and non-concessional financing and external capital spending execution. Hence, if government does not find needed financing and if it proceeds with re-prioritizing development expenditures, the fiscal deficit may only reach about 7 percent of GDP next fiscal year.

Despite the high fiscal deficits and expansion in public debt, Uganda remains at low risk of debt distress based on the April 2020 joint World Bank-IMF debt sustainability analysis. However, with total debt service (interest and principal due) expected to average around 55 percent of government revenues over the next three years, Uganda faces heightened liquidity vulnerabilities. This underscores the importance

of raising tax revenues and aggressively reducing tax exemptions after the elections in early 2021 to ensure fiscal sustainability.

The medium-term outlook for Uganda has worsened considerably due to the impact of COVID-19, and risks are tilted heavily to the downside. If the impacts of COVID-19 last longer globally, or spread more widely in Uganda, they could deter a reasonably rapid recovery in Uganda's exports, adversely impact tourism and remittances, and depress domestic economic recovery. This could lead to a more severe social and economic impact and amplify external and fiscal imbalances. Locusts, army worm infestation, weather shocks, and heightened uncertainty around the 2021 elections further exacerbate these risks.



To protect the most vulnerable, ensure transparency and accountability in the response to COVID-19, and sustain macroeconomic stability, policy actions in three key areas are needed:

- a) Time-bound expansion of existing and new social safety nets** The financial impact of the COVID-19 crisis on the poor is significant. Existing social protection programs are an effective means to swiftly protect households exposed to shocks and should, therefore, be expanded or new time-bound mechanisms introduced to provide a cushion on a temporary basis to vulnerable households. For example, Uganda has experience with labor-intensive public works, which can provide income to poorer households, especially for informal urban workers, affected by the crisis. The utilization of digital technologies (see Part 2) makes it easier to identify, target and pay potential beneficiaries of social safety net programs.
- b) Reprioritizing budget spending in FY21.** Considering the current crisis, the government needs to act quickly and decisively to ensure that the impacts are managed, and the economy positioned for a smoother recovery. This will require significant budgetary adjustments to protect lives and livelihoods; ensure that spending on goods and services that are not critical to survival, but important for recovery and long-term growth are maintained (e.g. education); and postpone any non-priority spending, such as new and large investment projects that have not commenced or are under-delivering.
- c) Transparency and accountability of government's response to COVID-19.** There have already been instances of resource mismanagement in government's response to COVID-19.¹ This does not bode well for government's credibility in managing the crisis and discourages development partner support. At a minimum, government needs to report COVID-19 expenditures separately, be transparent on large procurement contracts of COVID-19 expenditures (including revealing the names of awarded companies and their beneficial owners) and undertake an independent audit of COVID-19 expenditures in about a year's time and publish the results.



¹ Otago (2020)

UGANDA'S DIGITAL TRANSFORMATION IS ONLY JUST BEGINNING

As a cross-cutting enabler, digital technologies impact the entire economy. They allow the government to deliver services digitally in key sectors such as health and education. They connect farmers with markets, facilitate consumer access to a broader range of goods and services, and drive innovations in manufacturing. Digital technologies also enable growth, productivity and employment.² Particularly relevant for Uganda is the job creation potential of the digital economy. In Africa, the arrival of faster internet has been linked to increased employment and job creation, even for workers with only secondary or primary school educations. Research from the Sub-Saharan Africa (SSA) region shows that female labor force participation also rises with increased access to digital technologies such as broadband internet. The digital economy has already powered the rise of financial inclusion in Uganda and has had important livelihood benefits for poor rural households. Greater financial account ownership in Uganda can be attributed to the growth and penetration of mobile money, which rose to 51 percent in 2017, from 35 percent in 2014. Additionally, digital transformation has driven financial technology, with fintechs³ offering a number of payment solutions, digital credit applications, and even some innovative insurance products.

While Uganda has made strides in digital transformation with increased access to digital connectivity and digitally enabled services, it continues to lag behind peers. The country has

approximately 27 million mobile subscriptions, which is a penetration rate of 69.2 percent of the population, far below the average of 84 percent for Africa. Even though the internet market is growing steadily, it is still underdeveloped. Only about 8 percent of the population are mobile broadband subscribers (approximately 186,000 subscribers), a smaller proportion compared to peer countries. Demand-side factors inhibiting greater uptake include affordability, limited uptake of broadband services, skills gaps, limited access to reliable energy, and a lack of digital content in local languages. On the supply side, development of the requisite infrastructure and connectivity services is often impeded by regulatory, policy and market bottlenecks in addition to unattractive investment returns for commercial projects in some rural areas.

There is a gender and geographical gap in access to digital technologies. According to Finscope 2018, only 46 percent of female adults have access to mobile phones compared to 58 percent of male adults. Similarly, adults in urban areas are more likely to own mobile phones (70 percent) and have access to the internet (25 percent) compared to adults in rural areas (46 percent own phones and 5 percent have internet access). Broadband access is also limited, given there are only 0.028 fixed broadband subscriptions per 100 people in Uganda compared to 0.5 in SSA.

Traditional businesses are increasingly leveraging digital technologies for market development and as a new source of revenue,

² GDP per capita in 96 developed and developing countries rose by 0.15 percentage points after a 10 percent increase in 2G to 3G technology penetration and by 0.5 percentage points after a doubling of mobile data use. Economy-wide productivity in these countries also rose by 4.2 percentage points with a 10 percent increase in mobile penetration.

³ Fintech is the term used to refer to innovations in the financial and technology crossover space, and typically refers to companies or services that use technology to provide financial services to businesses or consumers.

yet technology adoption is still low. A number of tech startups have been pushing the envelope on innovation and generating excitement around the sector while more traditional businesses have been increasingly incorporating digital technologies into their business models. However, more consolidated linkages between traditional industry and the tech sector are needed, driving adoption of productivity-enhancing technologies and systems for the manufacturing and agribusiness sectors, which have higher potential to boost employment at scale.

Gaps in basic and advanced digital skills are a challenge for the digital transformation of Uganda. Nearly 90 percent of households in Uganda do not have internet access with a majority citing lack of confidence, knowledge or skills as a key reason. There is no national Digital Skills framework or ICT in Education policy or strategy around which to organize efforts to begin to address the skills gap.

The national ID system is a critical asset for improving digital service delivery in key sectors such as agriculture, health and social protection. Significant progress was made since the Government of Uganda (GoU) launched a “National Security Information System” (NSIS) in 2014 and established the National Identification and Registration Authority (NIRA) in 2015. Although current coverage is extensive, estimated at about 27 million people (above 16 years of age), or about 66 percent of the population,

much remains to be done to reap full benefits. Specifically, gaps in birth and death registration need to be addressed so that the accuracy of the National Population Register is improved. There is also a need to develop digital authentication capabilities to enable service delivery without requiring physical presence. Lastly, an e-signature framework needs to be established so that online services and transactions requiring a higher level of security can be facilitated.

Digital solutions can play a key role in addressing the economic growth and health challenges posed by COVID-19. Digital solutions can support delivery of essential services for firms (e.g. utility and tax payments, access to markets via digital platforms and e-commerce, and digital SME finance), consumers (e.g. mobile money, remittances and e-commerce) and the most vulnerable (e.g. expanded and new short-term social safety nets). Scaling up of digital health solutions offers the opportunity to undertake holistic disease surveillance and monitoring (e.g. through geo-tracking applications), leverage data from public systems to strategically allocate resources and pre-empt outbreaks (e.g. through community health data), reduce the burden on medical facilities by transitioning some activities to digital communications, disseminate public health messages and cautionary guidelines (e.g. through SMSs in a low-tech environment like Uganda), and improve inventory management of medical supplies. The latter is especially relevant as regional and global production and supply chains face sustained interruptions.

In order to leverage digital solutions in response to COVID-19 and advance Uganda’s digital transformation, policy actions in five key areas are needed:

a) Leverage digital technologies to mitigate the health impact of COVID-19 and support the recovery. Equipping and training the Community Health Workers (CHWs) network offers a viable channel for integrating digital solutions at scale and relatively quickly. For example, equipping and training CHWs in digital data collection can generate close

to real-time data for disease surveillance and monitoring. Existing digital inventory management solutions can also be scaled up for the public health sector. Finally, public information campaigns and medical chat bots could be deployed relatively easily, leveraging the strong social media participation among the population.

b) Strengthen regulatory environment to allow for the continued expansion of the digital economy.

The National Payments Law has recently been passed by Parliament and is expected to be assented to by the President. There will be need to draft regulations with a clear time-bound implementation plan to enable the private sector to align their business and product strategies and further drive the digitization process with wide consultation from stakeholders. The adoption of the Data Protection and Privacy Law was a big step forward, but its operationalization is delayed. Uganda is yet to make it fully operational through the establishment of a Data Privacy office and by issuing regulations to make it effective. While recent growth in digital consumer credit in Uganda is impressive, a regulatory framework on digital credit is required to mitigate the risks of unregulated digital lending, which include high interest rates and predatory lending that could result in high default rates and systemic risk.

c) Review taxation of the digital economy. The priorities of short to medium term revenue mobilization from sector specific taxes should be balanced against the long-term benefits of digital market development, financial inclusion and universal internet access. The social media tax appears not only to be reducing the proportion of internet users but may also be affecting both digital and income inequality. Therefore, policymakers are advised to re-evaluate this policy and its social costs. The imposition of taxes on mobile money withdrawals should likewise be revisited and re-examined given the impact on suppression of transaction volumes and access, particularly among the poorest.

d) Develop coherent strategy of support for the digital entrepreneurship ecosystem, including skills development and building firms' capabilities. Despite the high-level support for digital entrepreneurship in Uganda, tangible support for entrepreneurs is somewhat ad-hoc and fragmented. A more

coherent approach that combines public investments in enhancing support services for entrepreneurs and stimulating private sector investments in venture finance with continued policy commitment and more coordinated implementation can serve to enhance the value of public investments in the digital transformation of Uganda. In addition, a national digital skills framework could be developed by adapting existing international frameworks for advanced digital skills and professional ICT skills training. An ICT in Education policy should set standards and guide the integration of digital technologies across the entire curriculum. Investing in firm capabilities is essential to catalyze technology adoption that can enhance market demand for digital solutions and yield productivity enhancements for the private sector.

e) Catalyze regional and global integration of Uganda's digital economy.

Uganda's digitally enabled firms need a bigger consumer market base to scale and reach critical mass. A more deeply integrated digital market would also drive increased investment, competition and performance of digital infrastructure while helping reduce consumer prices and extending the reach of digital services to underserved communities. A more integrated digital market in East Africa (a "Single Digital Market") has the potential to unleash critical gains through the creation of seamless connectivity, data and online markets across the region. Some key steps that can be taken towards the Single Digital Market (SDM) include cross-border integration of network infrastructure and harmonization of regulation and policy governing telecoms, financial services, data protection and privacy. Estimates find that regional GDP would rise US\$ 1-2.6 billion (US\$2 billion from broadband integration alone) and benefits of about US\$ 632 million would accrue to existing mobile broadband subscribers in Uganda through lower prices and increased network effects.

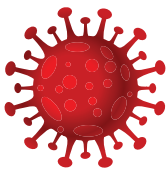


PART 1:

STATE OF THE ECONOMY

1. RECENT ECONOMIC DEVELOPMENTS

1.1 COVID-19 has devastated the global economy⁴



1. The COVID-19 pandemic has taken a toll on human life and brought major disruption to countries across the world.

The impact of this crisis on human life and the global economy reflects the speed and magnitude of the contagion, greater global integration, and the significant role China plays in global supply chains, travel and commodity markets. Despite its late arrival, compared to other continents, the COVID-19 virus has spread rapidly across SSA in recent weeks. As of 10 May 2020, almost 38,000 cases of COVID-19 had been confirmed in 47 of the 48 countries in SSA. Insufficient testing capacity in many countries in the region suggests that these figures most likely understate the true number of infections.

2. The COVID-19 outbreak has emerged as the most significant adverse shock the global economy has experienced since the Second World War. Containment measures to slow the spread of the COVID-19 virus have curbed global trade by reducing international travel and disrupting global value chains. Factories around the world have slowed or halted production due to shortages in intermediate inputs or labor. Large parts of the services sectors, an important contributor to global growth, have been closed in many countries. Countries across the world have sealed their borders and many have also implemented lockdowns, curfews and restrictions on mobility. These measures reduce both domestic demand (as a major part of aggregate consumption involves public gatherings) and

domestic supply (as workers stay at home). The economic consequences of domestic containment measures are compounded by several related external shocks, whereby economies face much lower commodity prices, lower demand for exports across the board and disruptions to value chain linkages, as well as a collapse in tourism and business travel.

3. The global economy is projected to contract sharply by 3 percent in 2020, significantly worse than the 0.1 percent contraction in 2009 during the global financial crisis (see Figure 1).

In a baseline scenario, which assumes that the pandemic fades in the second half of 2020 and containment efforts can be gradually unwound, the global economy is projected to grow by 5.8 percent in 2021 as economic activity normalizes, helped by policy support. However, there is great uncertainty around these forecasts. The economic fallout depends on factors that interact in ways that are hard to predict, including the pathway of the pandemic, intensity and efficacy of containment efforts, extent of supply disruptions, repercussions of the dramatic tightening in global financial market conditions, shifts in spending patterns, behavioral changes (such as people avoiding service suppliers, public transportation and traveling), confidence effects, and volatile commodity prices. Many countries face a multi-layered crisis comprising a health shock, domestic economic disruptions, plummeting external demand, capital flow reversals, and a collapse in commodity prices. Risks of a worse outcome predominate.

⁴ This section is based on: World Bank, Africa's Pulse, April 2020 & IMF, World Economic Outlook, April 2020

Figure 1: Global growth projection, 2019-21

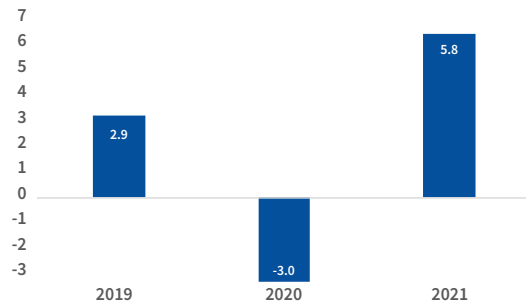
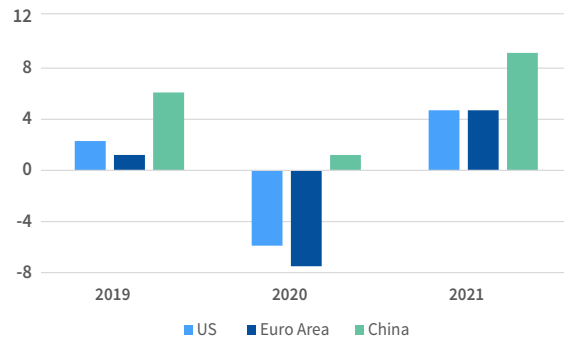


Figure 2: Real GDP growth – US, EU and China (% y/y)



Source: WEO, April 2020

4. Commodity prices have declined sharply since the COVID-19 pandemic worsened.⁵ Mitigation measures have significantly reduced transport, causing an unprecedented decline in demand for oil, while weaker economic growth will further reduce overall commodity demand. Crude oil prices are expected to average US\$35/bbl this year and US\$42/bbl in 2021, which may limit external inflationary pressures for import dependent Uganda; but these prices are well below the estimated breakeven price of US\$60 for oil production in Uganda and are likely to negatively affect the country’s prospects for becoming an oil producer within the planned timeframe of four to five years.⁶ Food commodity prices also fell in the first part of 2020, which is a concern for Uganda’s agro-exports. For example, the price of Robusta coffee fell almost 12 percent from the middle of January to the middle of April. The risks to food price forecasts are large in both directions and depend on the speed at which the pandemic is contained, and mitigation measures are lifted. Gold has been a notable exception – benefitting from its safe-haven status – with its price increasing by 8 percent from January to April 2020. This may be some respite for Uganda given that refined gold has become Uganda’s leading export product over the past two years.

5. Governments around the world have responded rapidly to provide economic support and put measures in place to aid the recovery. Central banks have taken bold steps to provide further monetary accommodation, boost liquidity, and ensure the smooth functioning of financial markets. Many governments have provided guidelines on forbearance to enable restructuring and extension of loans and introduction of temporary holidays when it comes to repayment of loans. Many governments have also pledged large-scale fiscal support to individuals and firms experiencing loss of income in order to avoid mass layoffs and facilitate a speedy recovery once consumption restrictions are lifted. These governments and central banks are having to set aside restraints imposed by institutional arrangements and usual practice to implement policies that are “unconventional” by developed market standards. Developing countries, including Uganda, are also trying to put in place similar policy responses, but are constrained by limited resources and financing options, and concerns over ballooning fiscal deficits.

⁵ World Bank, Commodity Markets Outlook, April 2020

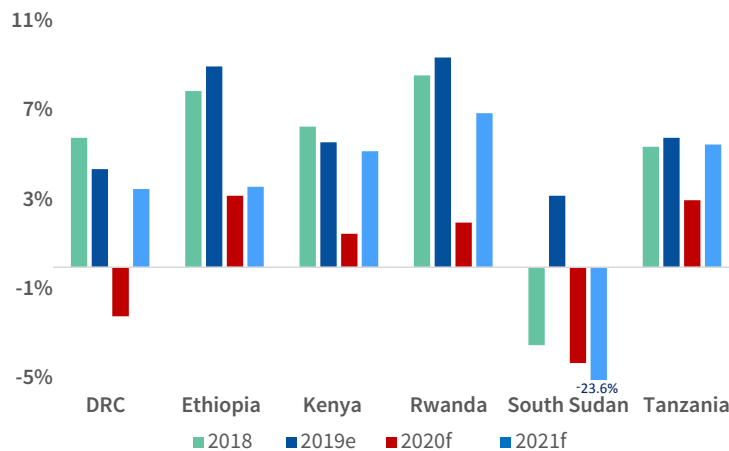
⁶ Patey (2015)

1.2 Sub-Saharan Africa will experience its first recession in 25 years⁷

6. Economies in the region are likely to contract by an average of 2.1–5.1 percent in 2020. This is a dramatic revision from the forecast of 2.9 percent growth made in January 2020.⁸ The downward growth revision in 2020 reflects macroeconomic risks arising from the sharp decline in output growth among the region's key trading partners, including China and the euro area, the fall in commodity prices, reduced tourism activity in several countries, as well as the effects of measures to contain the COVID-19 global pandemic (see Box 1 for a summary of

COVID-19's impact on Uganda). Countries that depend on oil exports and mining are expected to be the hardest hit. In non-resource-intensive countries, like Uganda, growth is expected to slow but remain positive. Characteristics of the region such as limited access to safe water and sanitation facilities, urban crowding, weak health systems, the large informal economy, and insufficient policy space pose challenges to the protection of African lives and livelihoods amid the COVID-19 outbreak.

Figure 3: Real GDP growth in Eastern Africa, including Uganda's main regional trading partners (percent y/y)



Source: World Bank, 2020 & World Bank staff estimates
 Note: e = estimate; f = forecast; Ethiopia and South Sudan are fiscal-year-based numbers

7. Growth will decline substantially in Eastern Africa due to weak external and internal demand, and disruptions to supply chains and domestic production. All of Uganda's main trading partners in the region (Kenya, DRC, Rwanda and South Sudan) are expected to face a significant slowdown in 2020 (see Figure 3). However, there are significant risks to these

projections. Unanticipated large-scale community transmission of COVID-19 could disrupt domestic economic activity more severely and give rise to border closures that would be disastrous for regional trade. Furthermore, a second-round locust invasion (expected in the middle of 2020) is another risk to the regional outlook.

⁷ This section is based on World Bank, Africa's Pulse, April 2020

⁸ World Bank (2020, January)

Box 1: Uganda – COVID-19 transmission channels and impact

The macroeconomic impact of COVID-19 comprises spillovers from the global recession and from domestic mobility restrictions, with the following key transmission channels:



Exports, global supply chains and terms of trade. Exports are expected to decline due to shrinking global demand and restrictions on trade (e.g. about 40 percent of Uganda's exports go to Europe, Kenya and China). Beyond the disruptions affecting the supply chains for Uganda's imports (about one-fourth are from China and Europe), Kenya's mobility restrictions and Uganda's COVID-19 testing at border crossings will likely reduce the pace of clearing goods through Mombasa port and at border posts. A large share of these goods in Uganda's retail stores are shipped in and a depletion of stocks could raise consumer prices.⁹ At the same time, Uganda is a net oil importer (roughly 35 percent of goods imports in FY19), with lower global oil prices offsetting possible inflationary pressures. Much lower oil prices are likely to result in terms-of-trade improvements as export prices are expected to decelerate much slower, with some export prices such as gold even increasing, and thereby exerting a dampening effect on the current account deficit.



Tourism and remittances. Tourism is an important source of foreign exchange and employment. Travel to Uganda has already sharply declined, with adverse effects on jobs and private investment in this sector. Tourism revenues are estimated to halve in FY20 to about US\$540 million compared to pre-COVID-19 estimates of US\$1.1 billion. This slowdown will translate into significant job losses, with tourism jobs having tripled over the last decade to more than 600,000. Job losses in this sector will have significant spillover effects on private consumption. Similarly, the global slowdown will have adverse impacts on remittances, which totaled US\$1.4 billion in FY19, equivalent to 4 percent of GDP. These funds, coming from Europe, the Middle East and North America, are critical for consumption smoothing and partly fund residential and commercial construction activities.



FDI and portfolio investments. Recent FDI has been largely into the nascent oil industry (especially from companies in Europe and China), as well as mining and manufacturing sectors. Net FDI inflows are set to decline significantly, from a pre-COVID-19 level of US\$1.9 billion to US\$0.9 billion, due to the negative impact of the virus on FDI source country economies and the significant drop in oil prices to a projected US\$30 per barrel in 2020 (compared to the estimated breakeven price for Ugandan production estimated at US\$60). Net portfolio outflows are expected to intensify. Official Development Assistance for project financing could also be lower. Whereas government has been in the process of negotiating up to US\$1.9 billion in debt to finance infrastructure projects and its budget, only US\$670 million is expected to be disbursed in FY20, as creditor countries continue to battle the virus, and because of likely delays in project execution and disruptions to the supply of project inputs.

The overall economic impact under the baseline, which assumes mitigation and containment in advanced countries by June 2020, projects real GDP growth in Uganda to decelerate on a fiscal year basis to between 3 to 3.3 percent in FY20 (from 6.5 percent pre-COVID) and between 2.9 to 3.7 percent in FY21 (from 6.2 percent pre-COVID), depending on the intensity of the crisis. On a calendar year basis, real GDP growth in 2020 is projected between 0.4 and 1.7 percent, compared to 5.6 percent in 2019. The fiscal deficit is projected to rise to 7.6 percent of GDP in FY20 (relative to pre-COVID of 5.8 percent of GDP) and 8.9 percent of GDP in FY21 (from 5.5 percent pre-COVID). The latter hinges on available financing and external capital spending execution. The fiscal gap is estimated at 1.5 percent of GDP in FY20 and is covered by part of an IMF loan and expected loans from the World Bank and other creditors. However, the fiscal gap in FY21, estimated at 3.5 percent of GDP, is only partially covered (Table 3). Hence, if government does not find needed financing, the fiscal deficit could reach around 7 percent of GDP next fiscal year. The current account deficit is projected to widen to 10.4 percent of GDP in FY20 and narrow to 8.8 percent of GDP in FY21, as export growth exceeds imports due to favorable terms-of-trade developments, among other things (see Section 2).

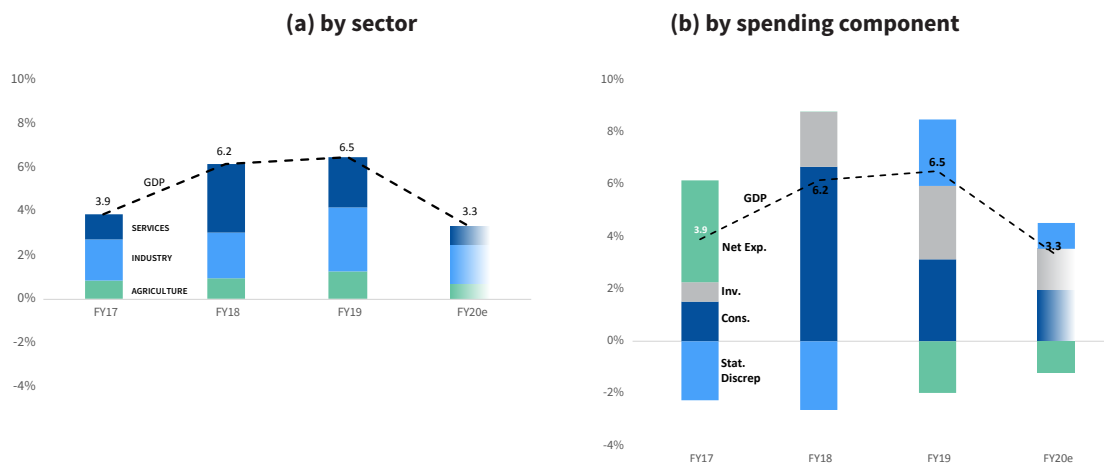
⁹ From February 2020, supply chain disruptions already started to impact the import of inputs and other materials for the domestic manufacturing and trading sectors.

1.3 Uganda's growth set to collapse in wake of COVID-19

8. The triple shocks of locusts, COVID-19 and floods are expected to slow Uganda's growth to 3.3 percent in FY20 from 6.5 percent in FY19 (see Figure 4).¹⁰ This projection incorporates existing data for the first two quarters, which were unaffected by the COVID-19 crisis, and makes assumptions for growth levels in the final two quarters where at least four months of economic activity was affected by the pandemic.¹¹ On a calendar year basis, however, real GDP growth in

2020 is projected to drop substantially to between 0.4 and 1.7 percent, compared to 5.6 percent in 2019. This is in line with Kenya's expected growth in 2020 of 1.5 percent, and lower than Rwanda and Tanzania's projected growth in 2020 of 2 and 3 percent, respectively (see Figure 3). It also means that, on a calendar year basis, real per capita GDP growth has ranged between -1.9 and -3.2 percent.¹²

Figure 4: Sources of real GDP growth in Uganda (percent y/y)



Source: UBOS, World Bank staff estimates

Note: FY20 are estimates. The statistical discrepancy is an adjustment factor to ensure any omissions or differences in source information used to measure GDP from the income, production and expenditure sides are accounted for and the final GDP numbers are aligned.

9. COVID-19 related shocks in the second half of FY20 (January to June 2020) add to a slowdown in real output growth experienced in Uganda in the first half of FY20 (July to December 2019). This slowdown was caused by heavy rains and flooding, and a deceleration in growth

in services, primarily in real estate activities and the Information and Communications (IC) sector. This is a continuation of the decline in the IC sector over the last two fiscal years (see Box 2). Growth in manufacturing is expected to decelerate to just above 4 percent in FY20, from

¹⁰ Uganda's fiscal year is from 1 July to 30 June of the subsequent year. For FY20, this is from 1 July, 2019 to 30 June, 2020.

¹¹ The assumptions are that: (i) FY20 third quarter growth will be about half of FY19 third quarter growth, given that about a month and a half of the quarter was affected; and (ii) FY20 fourth quarter growth declines by 1 percent compared to the fourth quarter of FY19. This is also in line with the IMF forecast, and lower than the government forecast of 3.9 percent real GDP growth in FY20.

¹² This assumes a population growth rate of 3.6 percent in 2020 – see Box 3.

7.1 percent during FY19, as manufacturers have reported that international trade disruptions had reduced shipping and raw material availability, especially from China. Meanwhile, growth of trade and tourism-related activities, such as hotel accommodation and restaurants, are expected to shrink from an average of 3.5 percent to about 1 percent over the same period. The wholesale and retail trade sector started feeling the impacts of the pandemic already in January 2020, as traders were unable to fully replenish inventories given tighter border controls and production delays, particularly in China. This was compounded from March onwards by the country-wide lockdown, including closure of nonessential retail services, and mobility restrictions that limited the ability of wholesalers and retailers to trade. The decline in Uganda's real GDP growth and corresponding loss of jobs could be even larger if the country were to face a more widespread pandemic, which would require more extended periods of mobility restrictions and/or overwhelm the capacity of the health system, and thus bringing economic activity to a halt. Under such a downside scenario, real output growth could decelerate to about 3 percent in FY20.¹³

10. Shocks from COVID-19 are felt on the demand side (see Figure 4b). Mobility restrictions and falling remittances, incomes and employment have reduced household consumption from an average of about 6 percent growth over the last two fiscal years to an estimated 1 percent growth in FY20.¹⁴ Government consumption spending is, however, expected to cushion this fall, given the increase in public spending to contain and mitigate the impacts of COVID-19 (see section 1.6). Investment spending in the nascent oil industry,

as well as mining and manufacturing sectors, has slowed as well, due mainly to lower foreign financing (especially from companies in Europe and China) caused by the recession in source countries. Notably, the Purchasing Managers' Index (PMI) plunged to 45.3 in March 2020 from 56.2 in February, which is the first contraction since January 2017.¹⁵ Due to the impact of COVID-19, both output and new orders declined for the first time in 38 months, and employment shrank for the first time since the survey began in June 2016. International trade dragged more heavily on Uganda's GDP growth in FY20 as the combined fall in merchandise exports and tourism earnings outweighed the decline in imports.



13 This assumes that: (i) FY20 third quarter growth will be just lower than the baseline for this quarter; and (ii) FY20 fourth quarter growth declines by 2.2 percent compared to the fourth quarter of FY19.

14 World Bank staff estimates, May 2020

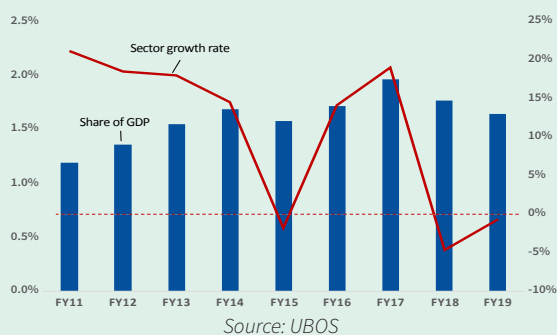
15 The PMI is compiled monthly by IHS Markit and is sponsored by Stanbic Bank Uganda. It is a composite index, calculated as a weighted average of five individual sub-components: new orders (30%), output (25%), employment (20%), suppliers delivery times (15%), and stocks of purchases (10%). It gives an indication of business operating conditions in the Ugandan economy.

Box 2: Uganda's Information and Communications Technology (ICT) sector

The broad ICT sector includes activities in both the services and manufacturing sectors. The sector is dominated by the IC sector, which is made up of publishing, audio-visual production and distribution, broadcasting and programming, telecommunications, computer programming and consultancy, and information services. Telecommunications accounted for about 94 percent of ICT gross value add in FY19.¹⁶ Broadcasting and programming had a share of about 3 percent, and grew almost 70 percent between FY11 and FY18. Other ICT service sectors include postal and courier, and repair of computers and personal and household goods. In manufacturing, the production of computer, electronic and optical products contribute a very small share (0.02 percent in FY19) to total manufacturing output.

The direct contribution of IC to the overall economy has declined sizably during the latest GDP rebasing exercise undertaken by the Uganda Bureau of Statistics (UBOS). According to new GDP estimates published in October 2019, the share of IC fell from almost 12 percent of GDP to under 2 percent in the new estimates. Furthermore, after growing on average 15 percent from FY11 to FY17, real growth of sector activities declined by about 3 percent over the last two fiscal years (see Figure B1). IC had been seen as a key growth driver of the economy. However, given a change in methodology for measuring activities in the sector from mostly monitoring talk-time to now assessing VAT outcomes, it seems this sector is neither as big, nor growing as fast, as previously estimated.¹⁷

Figure B1: IC share of overall GDP and IC sector growth rate (right-hand axis, constant, percent y/y)



Low levels of investment and limited penetration may be reasons for the lower than expected direct contribution of ICT to the economy. The share of ICT equipment and research and development as a proportion of *Gross Fixed Capital Formation* in the economy has fallen from about 3.5 percent in FY11 to about 2 percent in FY19. Furthermore, although the mobile phone provides a gateway for an expanded menu of services and options, Uganda's mobile phone subscriptions in FY19 were only 69 per 100 persons. This is far lower than Kenya, where mobile subscriptions were 103 per 100 persons in 2018. These lackluster levels of investment and penetration clearly demonstrate that Uganda has some catching up to do.

The ICT sector plays a catalytic role in enhancing economy-wide productivity and growth. Although ICT's direct contribution to the economy is limited, ICT is critical to operations in other sectors and has contributed to productivity improvements across the economy. As discussed in Part 2, the dynamism in mobile telephony, use of mobile money, contribution to financial inclusion, uptake of e-commerce and penetration of internet usage has allowed a host of new services and opportunities to emerge – including for poorer and marginalized communities. Moreover, although it is less than 2 percent of GDP, ICT contributes a significant share of domestic revenues – climbing to 10.5 percent of overall revenues in FY19.¹⁸ Of this, about 3 percent is from excise taxes on the ICT sector, as detailed in Table B1. Interestingly, the recent imposition of the over-the-top (OTT) tax only generated 0.27 percent of overall revenues in FY19.¹⁹

Table B1: Contribution of ICT excise taxes to overall revenue in FY19

Phone talk time	1.16%
Mobile money transfers	0.46%
International calls	0.21%
Levy on mobile money	0.91%
Over the Top	0.27%

Source: MoFPED²⁰

16 NITA-U Statistical Abstract 2019

17 This also reflects better estimation methodologies and expanded data sources that UBOS has adopted for all sectors, which has led to changes across the board – particularly manufacturing, which doubled its share from about 8 percent to over 16 percent of GDP.

18 NITA-U Statistical Abstract 2019

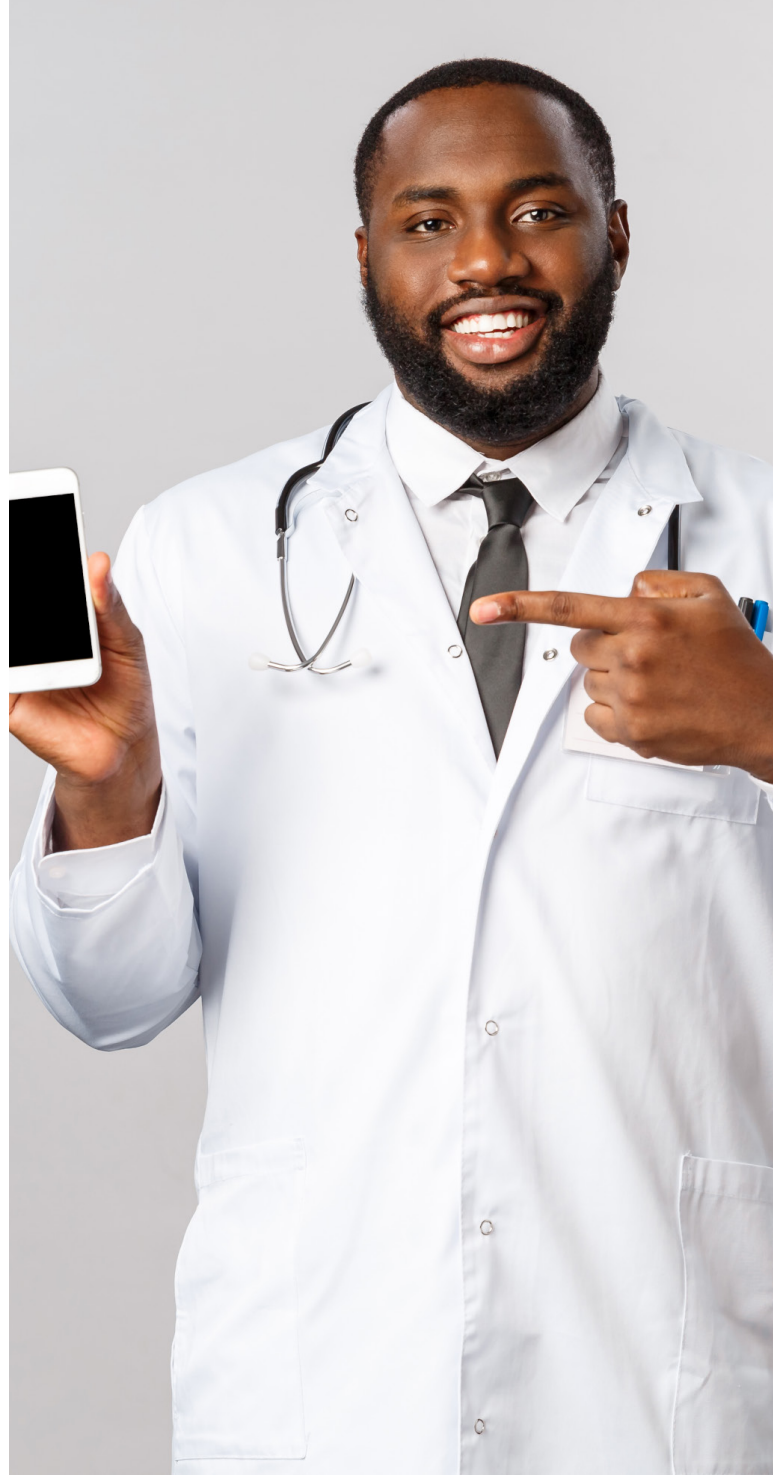
19 Over-the-top tax is an excise tax levied on internet-based social media, messaging and voice services.

20 <https://budget.go.ug/dataportal>, Draft Budget FY 2019-20 summary tables

11. Uganda has also been invaded by locusts and experiences an ongoing army worm infestation.

Swarms of Desert Locust, originating from Yemen, have been invading farmland and rangeland in the Horn of Africa and East African countries since the beginning of July 2019. These swarms entered north eastern Uganda on February 9, 2020 and, recently, multiple new swarms have been sighted in 24 districts in the regions of Karamoja, Teso, Acholi, Lango and Busigu – with some of the most affected areas being Nakapiripirit, Abim, Amudat, Kaabong, Moroto and Napak. The swarms have invaded some of the most economically and socially fragile regions of the country (e.g. Karamoja and Teso). Furthermore, the timing of the locust crisis is expected to coincide with the start of the main cropping season, which could then affect staple food crop production and have potentially adverse consequences for livelihoods and food access and availability, especially if the control measures in place are not fully effective. The potential impact of this crisis is one dimension of a much broader economic predicament brought on by COVID-19.

12. For poor and vulnerable households in Uganda, the economic costs of COVID-19, the locusts and floods are expected to be especially severe. Box 3 provides an explanation of the likely impacts of the COVID-19 crisis on poverty. The effects will be observed in both rural and urban areas, although through different transmission channels. These effects are also expected to be elevated in rural areas by the locusts and floods, where households are facing a ‘crisis within a crisis’. Furthermore, the disruptions in health and education systems disproportionately affect those with incomes in the bottom 40 percent. The closing of schools will aggravate two of the most pressing problems for poor children: low progression and completion rates to secondary education and low quality of education. The same applies to access to health services, given the limited capacity of the health care system and as resources are being redirected from the provision of public health services to the emergency response.



Box 3: COVID-19 impact on poverty in Uganda

Preliminary estimates suggest that the effects of the pandemic on poverty could be significant. Microsimulation exercises indicate that the poverty rate could increase by 2.7 to 8.2 percentage points, which translates into an additional 1.07 to 3.15 million poor people relative to the latest official estimate of 8.7 million in FY17.²¹ The wide range is driven by uncertainties around the length and depth of the economic disruption caused by the pandemic. The effects will be observed in both rural and urban areas, although through different transmission channels.

Given the nature of their economic activities, urban areas are expected to be particularly hard hit. These areas are likely to account for about 0.56 to 1.07 million of these additional poor, on top of the estimated 0.9 million urban poor in FY17. In urban areas, the prohibition of social gatherings, closure of non-essential institutions and ban on public and private transport are significantly reducing the incomes of those engaged in the services, manufacturing and construction sectors (around 35 to 40 percent of the labor force). In addition, remittances, which mainly reach urban households, are projected to decline by 43 percent in FY20 and almost halve in FY21 (compared to the level of US\$1.4 billion in FY19).²² Rural households will be impacted by an overall drop in aggregate demand, together with a slowdown in trade, which will lower the demand for food and agricultural products. In addition to the locust swarms, this is likely to result in a decline in crop production and, thereby, depress rural incomes.

Early evidence on the effect of the pandemic suggests that these estimates might be quite modest. A study by UNCDF estimates that up to 4.4 million informal sector workers will see their earnings fall below the poverty line or totally dry up.²³ Another study by Financial Sector Deeping (FSD) Uganda shows that 3 million Ugandans are already at survival risk. This is echoed in a Building Resources Across Communities (BRAC) survey, which shows that most respondents (79 percent) had seen their income reduced 'completely' or 'a lot',

with income loss more pronounced among casual workers and own-enterprise workers.²⁴

Poverty is expected to increase even though real GDP growth is projected to be positive. Firstly, the high levels of population growth, expected to reach 3.6 percent in 2020,²⁵ actually translate into negative or only marginally positive per capita income growth in FY20 and FY21 (see baseline and downside growth scenarios discussed in Section 1.3). Furthermore, the services sector will be especially affected by measures taken to prevent the spread of the pandemic (e.g. trade and tourism-related activities), leading to a sharper downturn (see Figure 4) and taking longer to recover. Considering that this sector employs about a third of the labor force, mostly in informal and low-productivity activities, the livelihoods of a large portion of households will be affected for several months.

Another factor that explains the expected impact on poverty is the high level of vulnerability of Ugandan households. On top of the 21 percent of Ugandan households classified as poor, about 44 percent of households are considered vulnerable to falling into poverty – even though they are not living below the poverty line.²⁶ Furthermore, these households have limited coping mechanisms (e.g. savings and social protection) to deal with shocks. Part of the problem is that the coverage and design of social protection programs in the country is currently insufficient to meaningfully address shocks for poorer households. The existing direct income support programs in Uganda have low coverage, with the overall reach of the two main programs at only 3 percent of the population,²⁷ and financing to the sector is limited, with spending on the two major programs amounting to only about 0.14 percent of GDP in FY18.²⁸ Other traditional coping mechanisms, such as internal and external remittances, will also not be available to the same extent, considering the global nature of the pandemic and associated skyrocketing unemployment rates across the globe.

21 See UNICEF and EPRI (2020). The estimates are based on two components. Firstly, an epidemiological or SIR model (with a virus reproductive ratio of 2) that projects the likely infection rate and degree of illness for different age-groups in Uganda. Secondly, a microsimulation of the impact on households of the infection along with the impacts of mitigating measures to contain the spread of the pandemic, using UNHS 2016/17 data. The impact on welfare (expenditure) is obtained by assuming that if an individual is infected, or if he/she is employed (includes self-employment) in an industry identified to be affected by the lock-down, then his/her per capita expenditure would decline. Different magnitudes of such a decline (by industry and type of worker) were then used to analyze several scenarios of the severity of the shock – ultimately providing a lower and an upper bound for the impact.

22 IMF (2020, April)

23 UNCDF (2020)

24 BRAC (2020)

25 UN World Population Prospects (2019)

26 World Bank (2019, June)

27 Direct income support reaches more than 6 percent of the population in neighboring Kenya.

28 GoU (2018, May). Direct income support in Uganda is currently composed of two major and several minor programs. The two major programs are the SCG and cash grants given through NUSAF3. Spending on the two major programs is lower than neighboring countries like Kenya and Rwanda who spend 0.4 percent and 0.3 percent of GDP, respectively.

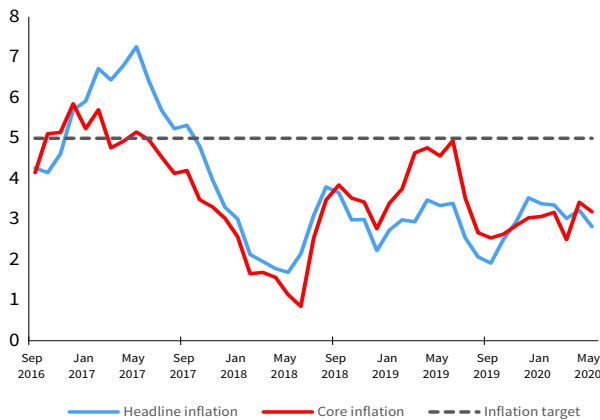
1.4 Inflationary pressures remain subdued

13. Headline and core inflation remain below the central bank's inflation target of 5 percent (Figure 5). Inflationary pressures in 2019 remained subdued, and the central bank loosened monetary policy in October 2019. Subdued price levels have been supported by a real appreciation of the shilling, while favorable weather and corresponding ample food supply maintained deflationary food price pressures. This trend persisted in 2020, with 12-month headline inflation in May at 2.9 percent, and core inflation at 3.1 percent. That said, the pandemic has caused a jump in the monthly core inflation rate to 3.5 percent in April (year-on-year) from 2.4 percent in March, but subsequently decelerated to 3.2 percent in May (year-on-year).

14. Persistent deflationary pressures in food crop prices observed since late 2018 started easing in 2020 (Figure 6). Good harvests intensified the decline in food crop prices in 2019

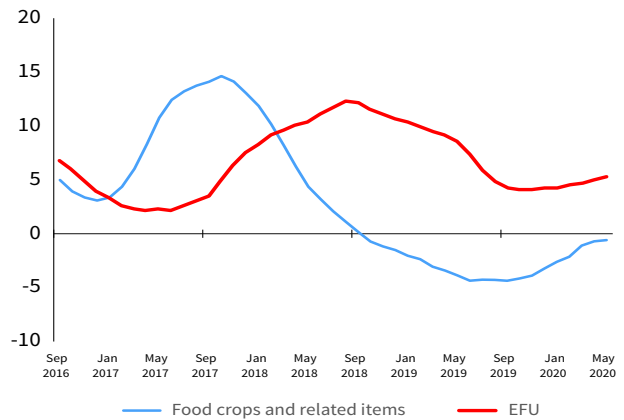
to an average of 3.2 percent from 1.5 percent the year before. These deflationary pressures started easing, however, with food crop prices declining only 2.1 percent during January-March 2020 (year-on-year). This was particularly noticeable in March when prices of tomatoes, oranges and cassava actually increased. With the onset of the pandemic and a reduction in demand, monthly food prices in April and May started dropping again, on an annual basis, by 2 and 4.3 percent, respectively. Meanwhile, Energy, Fuels and Utilities (EFU) inflation rose 7.9 percent in January-March (year-on-year) due to higher solid fuel prices. As a result, 12-month EFU inflation rose to 4.6 percent in March and reached 5.2 percent by May, a pick up compared to levels recorded over the past six months, but still much lower than the double-digit outcomes seen in the first half of 2019 (Figure 6).

Figure 5: Inflation remains below target (monthly percent change y/y)



Source: Bank of Uganda

Figure 6: Food crop price deflation starting to ease (12-month percent change y/y)



Source: Bank of Uganda

15. Increased bank lending to the government displaced credit to the private sector. Total domestic credit grew 12 percent during the first three quarters of FY20 in nominal terms, or 9.2 percent in real terms, due to an acceleration in net credit to government. The latter rose 34 percent in real terms from July 2019 to March 2020 when it accounted for 24 percent of domestic credit. This acceleration is the result of a 20 percent increase in the stock of T-bills, and a 12 percent increase in the stock of T-bonds. During this period, the higher issuance increased the interest rate of one-year T-bills from 11.5 percent to 13.4 percent in February 2020. Lending to the private sector, meanwhile, decelerated to 4.4 percent during the first nine months of FY20 from 6 percent during the same period last year. The average lending rate remained constant at around 19 percent. The impact of the coronavirus on the economy has led to a deterioration in the financial markets and an expected increase in non-performing loans (NPLs) from 3.8 percent of total loans at end-December 2019 to 4.7 percent by end-June 2020.²⁹

16. The deterioration in macroeconomic conditions required swift action by the Bank of Uganda (BoU) to prevent the crisis from destabilizing the financial sector, which prior to the crisis was stable and growing in strength.³⁰

Leading into the crisis, the banking sector remained well capitalized, and all banks met the minimum core and total capital adequacy ratios of 8 and 12 percent, respectively (Table 1). Asset quality had also improved as NPLs contracted to 3.8 percent of total gross loans at end-December 2019, after peaking at 10.5 percent in December 2016. Banks had maintained adequate liquidity buffers above the regulatory minimum requirements, thus keeping liquidity risk low. However, given the COVID19-related steep decline in economic activity and the severe shock it presents to the financial sector, BoU has swiftly introduced measures to prevent the destabilization of the sector. These measures include the provision of exceptional liquidity assistance to commercial banks that are in liquidity distress for a period of up to one year, liquidity provision to commercial banks for a longer period through issuance of reverse REPOs of up to 60 days, and permitting certain financial institutions to restructure loans of corporate and individual customers including a moratorium on loan repayments (Table 1).

²⁹ IMF (2020, April)

³⁰ Stress in global financial markets has already surged to historical levels and market volatility has spurred demand for liquidity.

Table 1: Financial sector indicators

	2018				2019			
	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
Capital adequacy								
Regulatory capital to risk-weighted assets	23.8	21.8	21.6	21.6	22.2	22.1	22.1	21.8
Regulatory tier 1 capital to risk-weighted assets	21.5	19.7	19.8	19.8	20.4	20.3	20.3	20.1
Asset quality								
NPLs to total gross loans	5.3	4.4	4.7	3.4	3.8	3.8	4.4	4.7
NPLs to total deposits	3.4	2.8	3.1	2.3	2.5	2.5	2.8	3.0
Large exposures to gross loans	36.4	43.2	44.5	42.9	42.6	44.3	45.0	42.8
Earnings and profitability								
Return on assets	2.6	2.8	2.8	2.5	2.8	2.7	2.8	2.9
Return on equity	15.0	16.7	16.3	14.4	15.9	15.8	16.1	16.8
Liquidity								
Liquid assets to total deposits	52.9	46.6	43.9	45.5	44.1	45.5	50.3	48.6

Source: Bank of Uganda and UBOS

1.5 The current account deficit has widened sharply

17. The COVID-19 pandemic is placing new pressure on the current account, reversing gains made in the first half of FY20. The external shortfall shrank to 4.8 percent of GDP during the first half of FY20 from 7.7 percent of GDP during the same period the year before. In the first half of FY20, the merchandise trade deficit more than halved (from 8.1 percent of GDP to 3.8 percent of GDP). Cheaper oil imports and a continued reduction in project-related government imports fully offset higher spending on non-oil imports. Meanwhile, exports grew faster, at 7.4 percent (compared to 6.2 percent a year ago), driven by larger exports of gold, coffee, maize and cotton. The country's two biggest exports – gold and coffee – grew by 58 and 10 percent, respectively. Remittances grew by 7 percent during the first half of FY20, keeping the income account in surplus. The COVID-19 crisis is, however, reversing these gains and is expected to widen the current account deficit from 8.6 percent of GDP in FY19 to 10.4 percent of GDP in FY20 (Table 2). The combined fall in merchandise exports, tourism earnings and remittances are expected to outweigh the decline in imports.

18. With the pandemic widening the current account deficit and slowing financing inflows, the external gap would amount to US\$1 billion in FY20 and FY21 (or about 2.7 percent of GDP).³¹ Net FDI inflows are projected to decline by 30 percent in FY20, and government project-related borrowing is expected to slow considerably due to weak execution. The latter is offset in part by government borrowing for budget support purposes, including the syndicated loan from Stanbic and the Trade Development Bank totaling close to US\$0.7 billion in March 2020. Even with overall expected net government borrowing of US\$1.8 billion in FY20, this leaves an external financing gap of 1.2 percent of GDP (US\$0.4 billion) in FY20 and 1.5 percent of GDP (US\$0.6 billion) in FY21. This financing gap of US\$1 billion is being met by emergency operations from the IMF and World Bank – totaling US\$0.79 billion in FY20 – and likely support in FY21 from the African Development Bank and bilateral donors such as the French.

³¹ Refers to projected GDP in FY21 amounting to US\$37 billion.

Table 2: Balance of payments (percent of GDP)

	2016/17	2017/18	2018/19	2019/20
	Actual		Est.	Proj.
Current account	-3.3	-5.4	-8.6	-10.4
Trade in goods and services balance	-5.7	-7.6	-10.5	-10.8
Merchandise trade balance	-4.9	-6.4	-8.4	-6.8
Exports, f.o.b.	10.7	10.8	11.5	10.4
Of which: coffee	1.6	1.5	1.2	1.1
Imports, f.o.b.	15.5	17.2	19.9	17.2
Of which: oil	2.3	2.8	2.9	2.3
Service trade balance	-0.9	-1.2	-2.1	-4.0
Of which: net travel	2.7	2.4	2.7	2.0
Primary income (net)	-2.4	-2.7	-3.5	-3.1
Of which: interest on public debt (debit)	0.3	-0.3	-0.3	-0.3
Secondary income (net)	4.8	4.8	5.3	3.5
Of which: workers' remittances (credit)	3.8	3.8	4.0	2.3
Capital account	0.5	0.3	0.3	0.3
Of which: project grants	0.5	0.3	0.3	0.3
Net lending (+) / net borrowing (-) (balance from current and capital accounts)	-2.8	-5.1	-8.4	-10.1
Financial account	3.7	3.3	8.2	9.9
Direct investment (net)	2.3	3.0	4.2	2.7
Portfolio investment and financial derivatives (net)	-0.6	-1.0	-0.5	-0.3
Other investment (net)	1.9	1.4	4.5	7.5
Public sector (net)	2.8	3.1	3.3	7.3
Of which: IMF RCF				1.4
World Bank				0.8
Commercial banks (net)	-0.3	-1.2	0.8	-0.4
Other private (net)	-0.5	-0.5	0.3	0.5
Net errors and omissions	0.5	1.3	0.4	0.0
Overall balance	1.4	-0.5	0.2	-0.2
Financing	-1.4	0.5	-0.2	0.2
Central bank net reserves (increase = -)	-1.4	0.5	-0.2	0.2

Source: Bank of Uganda, IMF and World Bank estimates
Note: o/w stands for "of which"

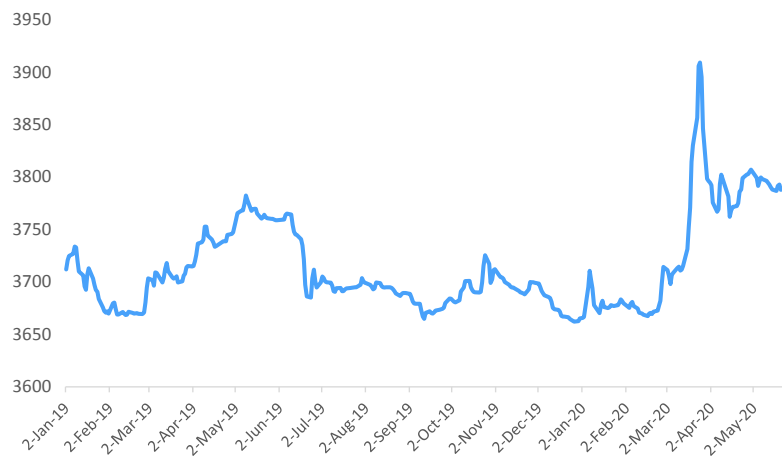
19. Since mid-February, the nominal exchange rate depreciated strongly because of COVID-19, prompting a central bank intervention in the foreign exchange market (see Figure 7). Between

February 17 and March 25, 2020, the shilling depreciated 6.1 percent as capital outflows accelerated. In parallel, the US dollar appreciated

as capital flows rushed to safe havens. To stabilize the market and smooth out excess volatility, the central bank intervened with US\$200 million in the market – compared to a stock of reserves of US\$ 3.3 billion at end-February 2020. Although the shilling recovered somewhat since then, appreciating 2.9 percent by mid-April, it has

instead averaged close to 3,800 and not returned to the range seen prior to the crisis (US\$ 3,650-3,700). The real exchange rate, meanwhile, continued appreciating by 2 percent during the first three quarters of FY20 compared to the same period last year, after appreciating almost 3 percent in FY19.

Figure 7: Nominal exchange rate changes



Source: Bank of Uganda

1.6 The rapid deterioration in the fiscal balance to be financed by external resources

20. After reaching 5 percent of GDP in FY19, the fiscal deficit is set to expand to 7.6 percent of GDP in FY20 due to COVID-19 (see Table 3). Although total revenues rose to 13.7 percent of GDP in the first half of FY20 – thanks to higher non-tax revenues – total spending rose to 19.2 percent of GDP, roughly 1 percentage point more compared to the year before. Higher expenditures were mainly driven by an increase in recurrent spending of 0.7 percent of GDP, and a moderate expansion in capital spending. By the end of FY20, the fiscal deficit is expected to widen considerably to 7.6 percent of GDP, due to the expected decline in revenues from the slowdown in the economy and the fiscal response – both revenue and spending

measures (see Box 4 and Table 4) – to manage the impacts of COVID-19. This has created a fiscal financing gap in FY20, which government has estimated at about 1.5 percent of GDP (Table 3), or US\$540 million.

21. The COVID-19 crisis is exacerbating Uganda's low revenue mobilization. Although revenues in the first half of FY20 outperformed last year's outturn, they remain below the budget target and, due to COVID-19, are set to decline significantly compared to the expectations for FY20. In the first half of FY20, total revenues reached 13.7 percent of GDP, an increase of 0.3 percentage points compared to the same period last year, with most of that increase coming from non-tax revenues,

specifically a large one-off payment for mobile license fees. Still, this falls short of the budgeted revenue target in FY20 of 16.1 percent of GDP.³² The GoU estimates that the total revenue shortfall resulting from slower than expected collections and COVID-19 impacts will be about US\$900 million, or 2.5 percent of GDP. To provide much needed liquidity to taxpayers (as outlined in Table 4), the GoU introduced tax exemptions and deferrals with a clearly defined sunset clause and is planning to accelerate the payment of tax

refunds, in addition to a reduction in taxes levied on imports. These measures imposed for the final three months of FY20 (i.e., April to June 2020) are estimated at 0.2 percent of GDP (see Table 4). As a result, tax revenues in FY20 as a whole are expected to total 11.6 percent of GDP, almost 1 percentage point less than a year ago, of which US\$ 1.3 trillion, (equivalent to 1 percent of GDP), is attributed by the GoU to the COVID-19-induced economic slowdown.

Box 4: Summary of the Uganda government's response to the COVID-19 pandemic

Government has employed a multi-pronged response to manage the spread of the COVID-19 virus and its effects on the economic and social well-being of the population:

1. Imposed mobility restrictions. Stringent domestic mobility restrictions include banning private and public transport (except for food trucks), closing of non-essential businesses, and prohibiting gatherings of more than five people.

2. Health response. The Ministry of Health prepared a National COVID-19 Preparedness Plan (January-June 2020) with technical support from the World Health Organization (WHO). As part of the plan, the following actions have been undertaken: (i) activated the National Task Force and the District Task Forces and engaged the Presidency and the Office of the Prime Minister; (ii) activated the incident management system and the emergency operational center; (iii) heightened surveillance, active case search, contact tracing, follow up of high risk travelers; (iv) designated three hospitals to manage COVID-19 cases and currently building capacity of all 15 regional referral hospitals to manage cases; (v) ramped up the capacity to diagnose cases at the Uganda Virus Research Institute; and (vi) produced and disseminated education and communication materials and various guidelines including for mass gatherings and clinical management.

3. Fiscal policy response. Additional spending, estimated at 0.6 percent of GDP, aims to address the health emergency and crisis mitigation, social

protection and private sector liquidity issues in the last quarter of FY20. This includes US\$81 million for medical supplies and equipment, hiring of additional health workers, free food for vulnerable groups, and additional security measures. It also comprises support to the private sector through a proposed loan to the Uganda Development Bank of US\$153 million. In addition, Cabinet is discussing both a doubling of domestic arrears repayments to US\$213 million (0.6 percent of GDP) and tax measures (e.g. tax exemptions/deferrals) estimated at 0.2 percent of GDP, to provide liquidity to the private sector (Table 4).

4. Monetary policy response. BoU reduced the policy rate in April 2020 by 1 percentage point to 8 percent, its lowest level since its inception in 2011, and announced measures to provide liquidity to commercial banks, and grant exceptional permission to restructure loans of corporate and individual customers, including a moratorium on loan repayment for borrowers that have been particularly affected by the pandemic (Table 4).

In the first few months of the crisis, government has made a concerted effort to provide support to those most affected by the mobility restrictions and economic slump. However, as discussed in Section 2.3, there are a few key areas that need attention in order to manage the risks of a prolonged crisis and promote more inclusive growth.

³² Uganda's revenue effort also remains lower than that recorded by regional peers in 2019 – Kenya at 17.9 percent of GDP and Rwanda at 16.3 percent. If the government is to achieve its revenue ambitions, then it must expand the tax base, foster greater efficiency in tax administration, and close leakages in policy instruments. Estimates suggest that revenue forgone across all tax sources due to tax exemptions were in the range of 4.5–5.0 percent of GDP in FY18 alone. Therefore, establishing a framework to manage tax exemptions will minimize the drain on the system of revenues forgone.

Table 3: Key fiscal indicators, FY17 – FY20e

	FY17	FY18	FY19	FY20e	FY20 budget
(percent of GDP)					
Total revenue and grants	12.8	12.7	13.9	13.6	16.1
Revenue	11.8	12.1	13.0	12.9	14.7
Tax	11.5	11.5	12.4	11.6	13.5
International trade taxes	1.1	0.4	0.7	1.2	
Income taxes	4.4	4.7	4.7	4.8	
Excises	2.8	2.8	2.9	3.0	
Value-added tax	4.1	4.2	4.3	4.5	
Nontax	0.3	0.6	0.5	1.3	1.2
Grants	0.9	0.6	0.9	0.6	1.4
Expenditures and net lending	16.1	16.9	18.9	21.2	23.6
Current expenditures	9.2	9.1	9.6	11.5	11.0
Wages and salaries	3.1	2.9	3.3	3.6	3.3
Interest payments	2.2	1.9	2.0	2.7	2.3
Other current	3.9	4.3	4.4	5.2	5.4
o/w COVID-related spending	...	...	...	0.2	
Development expenditures	6.2	6.3	7.8	8.4	11.8
External	2.3	2.7	3.2	2.6	6.3
Domestic	3.9	3.6	4.6	5.8	5.5
o/w COVID-related spending	...	...	...	...
Net lending and investment	0.5	1.2	1.1	1.0	0.6
o/w COVID-related spending	...	...	...	0.4	
Hydropower projects	0.4	1.1	1.0	0.4	
Recapitalization BoU	0.1	0.0	0.0	0.2	
Other spending	0.2	0.3	0.3	0.3	0.3
Clearance of domestic arrears	0.2	0.3	0.3	0.3	0.3
o/w COVID-related spending	...	...	...	...
Overall Balance	-3.3	-4.1	-5.0	-7.6	-7.5
Primary balance	-1.1	-2.2	-3.0	-4.9	-5.2
Financing	3.3	4.1	5.0	6.1	7.5
External financing (net)	2.4	3.0	2.7	3.9	5.3
Domestic financing (net)	0.9	1.1	2.2	2.2	2.2
Other financing				1.5	
World Bank				0.8	
IMF				0.4	
Other budget support				0.3	

Source: Ugandan authorities; World Bank and IMF staff estimates and projections

Table 4: Government economic policy response to COVID-19 crisis

Tax revenue implications of the fiscal policy response FY20		
Sector and type of tax	Expected revenue loss in US\$ billion	% of GDP in 2019/20
Manufacturing: Corporate tax	12.5	0.01
Manufacturing: PAYE	57.4	0.04
Tourism: PAYE	8.0	0.01
Floriculture: PAYE	0.2	0.00
SMEs: Presumptive	1.4	0.00
Tax refunds	120.5	0.09
Interest and penalty on tax arrears	50.0	0.04
Total	250.0	0.18
Expenditure implications of the fiscal policy response FY20		
Type of expenditure	Costing in US\$ billion	% of GDP in 2019/20
Strengthening health systems	120.0	0.09
Emergency funds for sectors complementing health sector:	220.0	0.16
<i>Security</i>	81.0	0.06
<i>Local Government</i>	36.0	0.03
<i>ICT</i>	14.0	0.01
<i>KCCA</i>	30.0	0.02
<i>Disaster preparedness/food to vulnerable groups in Kampala</i>	59.0	0.04
Sub-total: health and complementary measures	340.0	0.25
Support to Water and Electricity Utilities	not costed yet	
Recapitalization of UDB to provide investment funding for SMEs	1040.5	0.76
Recapitalization of UDC to provide investment funding for SMES	100.0	0.07
Total	1480.5	1.1
Monetary policy response		
<ol style="list-style-type: none"> 1. Exceptional liquidity assistance to commercial banks that are in liquidity distress for a period of up to one year. 2. Provide liquidity to commercial banks for a longer period through issuance of reverse REPOs of up to 60 days at the CBR, with opportunity to roll over. 3. Purchase Treasury Bonds held by Microfinance Deposit taking Institutions (MDIs) and Credit Institutions (CIs) in order to ease their liquidity distress whenever it arises. MDIs and CIs that do not hold Treasury bills or bonds in their asset holdings will be provided with liquidity secured by their holdings of unencumbered Fixed Deposits or Placements with other SFIs. 4. Grant exceptional permission to SFIs to restructure loans of corporate and individual customers including a moratorium on loan repayment for borrowers that have been affected by the pandemic, on a case by case basis at the discretion of the SFIs for up to 12 months, effective April 1st, 2020. 		

Source: Cabinet paper: Government economic policy responses to cope with the effects of COVID-19 (revised)

Notes: Recapitalization of UDB applies to FY20 and FY21

22. Spending pressures rose throughout FY20. In the first half of the year, current spending rose to 10.5 percent of GDP from 9.2 percent of GDP the year before, driven by higher transfers for recurrent spending of tertiary institutions, other agencies, and higher interest payments on domestic debt. Stronger spending pressures are expected as the country battles both COVID-19 and the locust invasion. In early April, the Ministry of Health's COVID-19 Response Plan budget was revised upwards to about US\$126 million (or 0.4 percent of GDP) for the next 6 months, the spending of which would therefore spill over into the next fiscal year. The government committed substantial resources in the last four months of FY20 to manage the health crisis and complementary measures in the amount of 0.2 percent of GDP (Table 4). Additional expenses are anticipated for the support of the most vulnerable groups through cash transfers and for creating credit facilities to provide liquidity support to SMEs, among others (Table 4). At the same time, the Ministry of Agriculture has requested about US\$10 million to meet its arrears to the Desert Locust Control Organization for Eastern Africa (US\$3.5 million), hire planes for aerial spraying, procure materials and equipment, and for operational costs. Moreover, there are uncertainties regarding the cost of still evolving government plans to support the private sector and other institutions through the crisis. Subsidies on water and electricity could require additional spending following the government's temporary suspension of disconnecting unpaid household utilities. Net lending and investment are also expected to be higher mainly due to recapitalization of the Uganda Development Bank (0.4 percent of GDP), as well as the Central Bank.

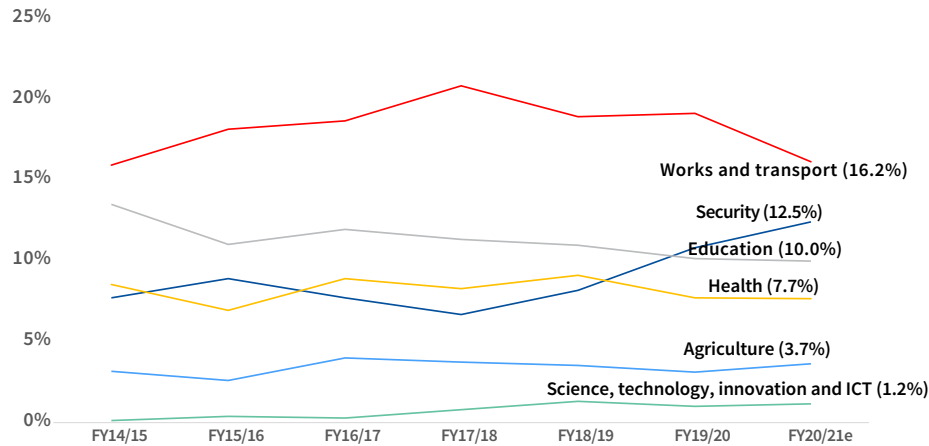
23. Capital spending continued to grow in FY20. Capital spending averaged 6.8 percent of GDP during FY17–FY19 and is expected to reach 8.4 percent of GDP by the end of FY20 (Table 3). That said, about one-fifth of capital spending in FY20 was due to purchases of aircraft for the recently revived Uganda Airlines. This is in line with government's intention over the last few years to increase spending on physical infrastructure, which, together with greater allocations to security, has been at the expense of the social sectors, such as health and education – as shown in Figure 8, which highlights the sectoral spending trends over the last decade.³³ Furthermore, at about 1 percent of the National Budget, spending on science, technology, innovation and ICT is relatively low. This will need to be reconsidered if Uganda wants to generate more home-grown technologies and take full advantage of the digital economy, as discussed in Part 2.³⁴

24. The sustained growth in capital spending obscures the high rates of under-execution, which reflect weaknesses in PIM systems.³⁵ Although capital spending is expected to reach 8.4 percent of GDP by the end of FY20, this is, however, below the budgeted 11.8 percent of GDP. With the COVID-19 crisis, the under-execution of externally financed projects is set to worsen due to import supply chain and project financing interruptions, particularly for projects executed or funded by Chinese firms. This under-execution is detrimental to increasing the productive capacity of the Ugandan economy. Furthermore, government is also planning to re-prioritize expenditures, including capital spending, to deal with the COVID-19 emergency. Whereas it is difficult to stop ongoing projects, government is planning to postpone some new non-priority projects that had been planned for FY21.

33 Non-wage recurrent transfers per capita declined by 51 percent in primary education and 65 percent in health from their peaks in the 2000s. Three years ago, the government embarked on reforms to start reversing this trend, increasing fiscal transfers to local governments for non-wage recurrent and capital spending in education and health.

34 An example of the poorer levels of home-grown technology generation is that more than a third of firms in Uganda use technology licensed from foreign companies against less than a quarter in Rwanda and about 20 percent in Kenya (World Bank, Enterprise Survey).

35 World Bank (2016, April)

Figure 8: Sectoral composition of spending (percent of budget, selected sectors)

Source: MoFPED and World Bank calculations

Notes: FY20/21e is the draft National Budget approved by Parliament in April 2020.

25. The government is making progress in addressing the stock of domestic arrears. The stock of domestic arrears, which stood at 3.1 percent of GDP at end-FY17, declined to 2.7 percent of GDP at end-FY19, and is on track to reach 2.4 percent of GDP by end-FY20. This stock of domestic arrears has been verified by an external auditor and the Auditor General, which in FY20 was published for the first time with a lag of less than a year. About 80 percent of the stock of arrears is spending on goods and services (24 percent), other recurrent and development spending (28 percent), and court awards and compensations (27 percent). The remaining arrears are unpaid utility bills, rental costs, pensions and contributions to international organizations. Hence, most of these domestic arrears have a negative impact on the domestic economy, private sector liquidity, and the government's cost of business – which is amplified during the current crisis. The government is putting in place

measures to reduce the generation of arrears, including strengthening the commitment control system, establishing a pre-payment system for utilities, earmarking a separate budget for the repayment of arrears, and implementation of a comprehensive domestic arrears strategy.

26. Financing over the past three years was driven by external borrowing, although recourse to the domestic debt market has intensified in FY19 and FY20 (see Table 3). External project-related disbursements largely drove government borrowing in the past. However, domestic borrowing started playing a more prominent role in FY19, when it doubled compared to the year before. Domestic borrowing rose further during the first half of FY20, especially from commercial banks and through issuance of securities to non-bank institutions. The latter follows the depletion of the Petroleum Fund, which helped finance the budget in FY18 and FY19.³⁶ However, by the end

³⁶ Resources from the petroleum fund are already being used to help finance the budget. The reduction in the value of the petroleum fund from US\$470 billion in June 2018 to US\$289 billion at the end of December 2018 was due to a transfer of US\$200 billion to help finance the FY18/19 budget (this follows a similar withdrawal of US\$ 125 billion in FY17/18).

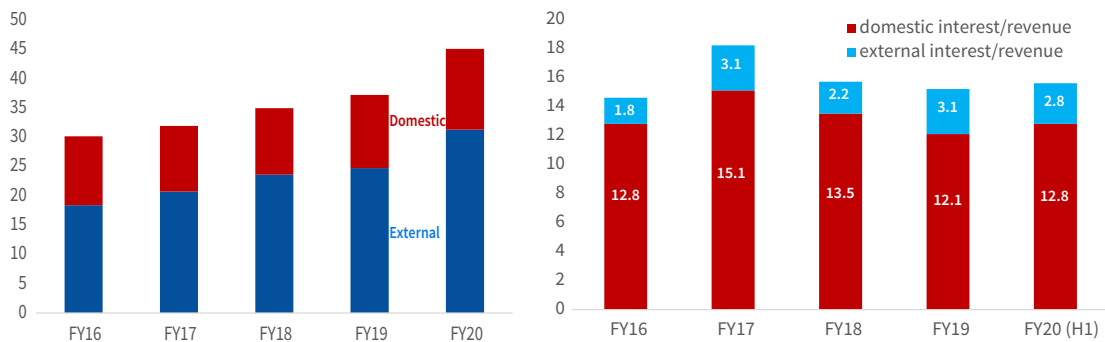
of FY20, World Bank and IMF financing, as well as a syndicated loan from Stanbic and Trade Development Bank for US\$670 million, buttressed the external financing of the gross borrowing requirement. The government is in discussions with other creditors to close the remaining financing gap of 0.3 percent of GDP in FY20.

27. Persistently high fiscal deficits since 2015 have driven public debt to about US\$12.8 billion, or 37.3 percent of GDP at end-FY19. Public debt grew by 10 percent of GDP over the past five years. Given the significant external borrowing in late FY20 to cover the COVID-19 induced financing gaps, public debt to GDP is expected to exceed 45 percent by the end of the fiscal year (see Figure 9). Despite the rise in debt-to-GDP ratio, Uganda remains at low risk of debt distress based on the April 2020 joint World Bank-IMF debt sustainability analysis (DSA), largely because highly concessional loans dominate the portfolio and because Uganda has not resorted to issuing international bonds.³⁷ About two-thirds (US\$8.5 billion) of outstanding public debt is owed to external creditors, largely for energy and infrastructure projects, and with a weighted

average interest rate of about 2 percent. Domestic debt totaled US\$4.3 billion, with roughly three-fourths in Treasury Bonds with maturities from 2 to 15 years, while the rest is in short-term Treasury Bills.

28. Interest payments on public debt are consuming a large share of government revenue. Over the last two fiscal years, interest payments accounted for around 15.5 percent of revenues (tax and non-tax). This share has risen in the first half of FY20 and is expected to accelerate by the end of this fiscal year. The latter reflects increased domestic borrowing at high interest rates, and the COVID-19 induced drop in revenue collections that has exacerbated Uganda’s low tax collection described above. Costly domestic borrowing accounts for most of the increased burden, as shown in Figure 9. The weighted average interest rate on domestic debt was 14.4 percent in FY19, equivalent to a real interest rate of around 12 percent. Uganda’s fragmented bond market infrastructure, limited secondary trading, and under-developed money market contribute to high interest rates on domestic government securities.

Figure 9: Public debt (in percent of GDP) and interest payments (as share of revenues)



Source: BoU, UBOS and World Bank calculations

37 IMF and World Bank (2020, April)

29. Government finances could also be affected by COVID-19 through shortfalls in State Owned Enterprise (SOE) finances, PPPs, other contingent liabilities, and compensating utilities that are temporarily prohibited from disconnecting households. There were eight active loan guarantees amounting to about US\$65 million (0.2 percent of GDP) at end-December 2019. IsDB and BADEA are the two creditors with the largest value of government guarantees held, while the two beneficiaries are Uganda Development Bank (UDB), accounting for 71 percent of total outstanding guarantees, and the Uganda Islamic University (29 percent of the total). None of the guarantees have so far been called. Meanwhile, implicit contingent liabilities have increased, but remain small. Non-guaranteed debt (excluding government on-lent loans) totals 1.8 percent of GDP, of which close

to 95 percent represents domestic borrowing by SOEs. Contingent liabilities from court proceedings amounted to 7.4 percent of GDP as of end-June 2019 and had increased 16 percent compared to the previous year. The key drivers of these potential claims include civil lawsuit cases, contractual disputes, human rights cases, and employment/labor disputes³⁸ – the resolution of these cases typically takes several years. Notwithstanding the limited explicit and implicit guarantees, collections by water and electricity utilities have declined abruptly, as economic activity has slowed dramatically, and, due to a government ban, these utilities are not allowed to disconnect users who are unable to pay their bills. To respond to this fall in utility revenues, the government has established a compensation mechanism and provided funds in the FY21 budget.



38 See Report on public debt, guarantees, other financial liabilities and grants for FY19/20, March 2020

2. ECONOMIC OUTLOOK AND RISKS

2.1 Outlook has worsened as COVID-19 hits the economy and vulnerable

30. The medium-term outlook for Uganda has worsened considerably due to the impact of COVID-19, locusts and floods. Under the baseline, real GDP growth in FY21 is projected at about 3.7 percent – a 2.5 percentage point decline compared to the pre-COVID baseline and January 2020 *Uganda Economic Update* projection – as the likely health and economic fallout from COVID-19 spreads over several months (see Box 1). Some mobility restrictions may stay in place to control the spread of the virus, which could sustain lower levels of private consumption and investment, and lead to intermittent closures of non-essential businesses, thus exposing the economy to continued domestic demand and supply shocks. The agricultural sector is likely, however, to display some resilience in the face of these shocks given that agricultural operations may be less hindered by mobility restrictions and because of the government’s continued emphasis on keeping agriculture and rural-to-urban supply chains open and running effectively. Furthermore, the impact of the locust invasion seems to be limited to the north-eastern part of Uganda, with smaller damage compared to a more broad-based infestation. Under a downside scenario, real GDP growth in FY21 could be as low as 2.9 percent, despite an expansionary fiscal policy, as the global economy takes longer to recover, remittances slow further, adversely impacting domestic demand, and continued low oil prices mute net FDI inflows and hence dampen private investment (Figure 10 and 11). Both

scenarios could be further adversely affected by uncertainties in the run-up to presidential elections currently scheduled for January 2021, a more adverse effect of a second wave of the locust invasion, or a much more pronounced impact of the pandemic. A post-election rebound to 5.7 percent is projected for FY22, as private consumption and private and public investments, including FDI inflows, recover.

31. The sharp decline in world oil prices resulting from the COVID-19 crisis could delay oil sector investments in the medium term and oil production beyond 2025, but the private sector remains optimistic about oil production in Uganda. A final investment decision (FID) in the oil sector was expected in 2020, which would have encouraged private and public sector investments into the oil sector and unlocked private investment. However, given the significant fall in oil prices to date and the projection that they will remain well below the estimated breakeven price of US\$60 for Ugandan production over the next two to three years, this could postpone key investment decisions into the oil sector, thus pushing back further the timing of oil production.³⁹ Furthermore, OPEC-plus negotiations could change the outlook – although large uncertainties remain around the negotiations themselves. Nevertheless, the private sector still seems to see the oil production outlook in Uganda as positive, given Total’s recent purchase of Tullow’s oil interests.⁴⁰ The start of oil production may also be impacted by lending decisions of the Chinese

39 World Bank Commodities Price Forecast (April 2020)

40 For example, in April 2020 the French oil company Total acquired Tullow’s entire interests in Uganda’s Lake Albert development project with a transaction of US\$575 million. Under the terms of the deal, Total will acquire all of Tullow’s existing 33.3 percent stake in each of the Lake Albert project licenses EA1, EA1A, EA2 and EA3A, and the proposed East African Crude Oil Pipeline System. In addition, conditional payments will be made to Tullow linked to production and the oil price, which will be triggered when Brent prices are above US\$62/bbl.

EXIM Bank, which already has a large exposure to financing of Uganda's infrastructure investments.

In sum, if the FID is taken in 2021, oil production could still start in 2024/25.

Figure 10: Real GDP growth rate (percent)

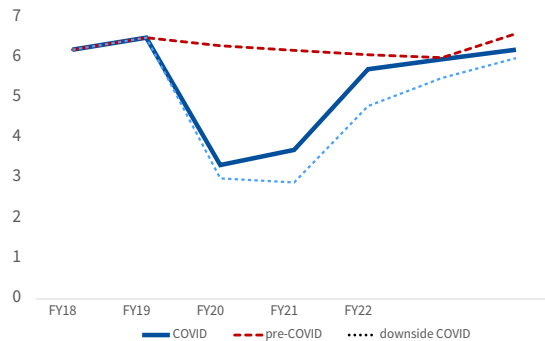
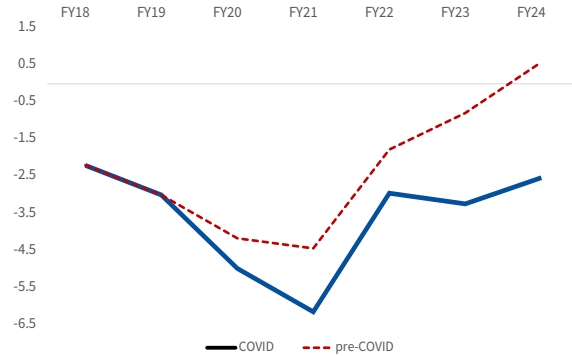


Figure 11: Primary fiscal balance (percent of GDP)



Source: IMF/World Bank joint DSAs May 2019 and May 2020

Baseline COVID Scenario

The baseline assumes that the pandemic peaks in advanced economies such that containment measures are gradually removed from April to June 2020, the pandemic fades in China, and the outbreak is contained in Uganda and neighboring countries. Under the baseline scenario, FY21 first half (July to December 2020) growth is about 2 percent, more than doubling to about 5.5 percent in the second half (January to June 2021) of FY21. Most of the second half of FY21 will be after the elections in early 2021 and during the period that the global economy is expected to be recovering strongly.

Downside COVID Scenario

The downside assumes that the COVID-19 outbreak continues to weigh on the global and regional economy into the second half of 2020 and early 2021, and Uganda faces a more widespread pandemic, requiring extended periods of mobility restrictions and/or overwhelming the health sector response. Under the downside scenario, there is zero growth in the first half (July to December 2020) of FY21, but it improves dramatically to about 6 percent in the second half (January to June 2021) of FY21. Note that the second half FY21 growth numbers are derived from a lower base due to the expected downside outcome in the second half of FY20.

32. In the absence of private investment driving the rebound over the medium term, private consumption and export growth will drive the recovery – although at a lower trajectory and likely closer to the downside scenario. After the slump in growth in FY17, consumption, and especially private consumption, rebounded and drove growth over the next two years FY18-FY19 (see Figure 4). A similar consumption rebound is expected after this downturn – although the size depends on the duration of the COVID-19 crisis. If COVID-19 spreads further in Uganda and causes

economic disruption well into FY21, then the economic recovery could take an extended 'U' shape (see Figure 10). On the other hand, if the spread of COVID-19 is well contained within FY21, pent up demand would drive stronger private consumption in FY22. Considering the external sector, a steady depreciation of the Uganda shilling would strengthen the competitiveness of domestic companies and reduce imports of companies without foreign exchange earnings. Furthermore, with the price outlook for Robusta coffee, maize, cotton and tobacco positive over

the next three to five years,⁴¹ growth in exports is set to exceed the growth in imports, particularly if in the downside scenario net FDI inflows remain muted and, thus, corresponding imports do not materialize.

33. Inflation is expected to remain in line with the inflation target of 5 percent. The aforementioned low oil prices should help limit non-food inflationary pressures, including from the depreciation of the shilling. Food price inflation

is assumed to remain low as pests (including locusts) and supply interruptions caused by the pandemic ease slowly over the medium term. Against this relatively low inflation outlook, the BoU is expected to maintain the policy rate at around 8 percent over the short to medium term, the lowest policy rate since inflation targeting was instituted. This should provide some support to the economy in alleviating the demand and supply shocks brought about by the pandemic.

Table 5: Macroeconomic outlook

	FY19	FY20e	FY21p	FY22p	FY23p
Output, prices, and exchange rate					
	(Annual percentage change)				
Real GDP	6.5	3.3	3.7	5.7	6.0
GDP deflator	0.6	2.8	4.6	5.3	4.6
Headline inflation (period average)	3.1	4.7	5.0	5.0	5.0
Core inflation (period average)	3.8	4.0	4.1	5.0	5.0
Terms of trade ("–" = deterioration)	-4.8	4.0	4.1	-1.2	-1.3
Exchange Rate (Ugandan Shilling/US\$)	2.1	...	...	...	...
Real effective exchange rate ("–" = depreciation)	1.3	...	...	...	...
Money and credit					
Broad money (M3)	7.3	8.3	8.5	11.4	10.9
Credit to non-government sector	12.7	8.9	10.2	14.8	13.9
Bank of Uganda policy rate	10.0	8.0	...	...	...
M3/GDP (percent)	19.0	19.4	19.4	19.4	19.4
NPLs (percent of total loans)	4.7	...	...	...	...
	(Percent of GDP, unless otherwise indicated)				
Central government budget					
Revenue and grants	13.9	13.6	13.8	14.1	14.1
Of which: tax revenue	12.4	11.6	11.8	12.1	12.6
Expenditure	18.9	21.2	22.7	19.6	19.7
Of which: capital expenditure	7.8	8.4	8.9	8.2	8.5
Overall balance	-5.0	-7.6	-8.9	-5.5	-5.7
Public debt	37.3	45.3	52.8	55.6	59.0
External sector					
Current account balance (including grants)	-8.6	-10.1	-8.7	-5.5	-5.0
Exports (goods and services)	19.4	13.4	13.9	15.6	16.0
Imports (goods and services)	26.7	24.4	23.3	22.0	22.0
Gross international reserves					
In billions of US\$	3.2	2.8	2.5	3.0	3.7
In months of imports of goods and services	4.4	3.9	3.5	3.9	4.3
<i>Memorandum items</i>					
GDP at current market prices					
Ush. billion	128,181	136,177	147,751	164,553	182,464
US\$ billion	34.3	35.7	...	...	...

Source: Ugandan authorities, World Bank and IMF staff estimates and projections

41 World Bank Commodities Price Forecast (April 2020)

34. After a sharp widening in FY20 to 10.4 percent of GDP, the current account deficit is projected to narrow and approach 9 percent of GDP in FY21 and drop below 6 percent of GDP in FY22.

The global downturn is likely to ease in the first half of FY21, with spillover effects to Uganda. As discussed previously, exports are expected to pick up with the recovery in imports lagging. Remittances, meanwhile, are projected to remain below FY20 outcomes as the recovery is gradual and the impact of COVID-19 affects the entire FY21 fiscal year. That said, there is uncertainty as to the speed of recovery in remittances. Similarly, there is significant uncertainty about travel habits in a post-COVID world and corresponding tourism inflows to Uganda, which are assumed to recover gradually, and remain well below the net inflow of 2.3 percent of GDP in FY20.

35. The external financing requirement is expected to be largely met by concessional and commercial government borrowing in FY21. The expected sizable deceleration in net FDI inflows in FY21 and sluggish recovery, thereafter, combined with projected portfolio outflows, will likely create an external financing gap that is estimated at around 1.5 percent of GDP or US\$0.6 billion in FY21. This gap is set to be met by excess financing in FY20 that is assumed to be accumulated as reserves and drawn down in FY21, and also by the disbursement from multilateral creditors – the size and timing of which is uncertain at this point. Whereas reserves are expected to decline from 4.4 months of imports to an estimated 3.5 months of imports in FY21 (Table 5), the magnitude of the decline will be determined by the degree of depreciation as the country adjusts to a new post-COVID equilibrium.

36. The fiscal deficit is projected by government to expand to 8.9 percent of GDP in FY21, followed by a contraction to 5.5 percent and 5.7 percent of GDP in FY22 and FY23 respectively (Table 5). The increase in the deficit in FY21 is explained by the government's response to the pandemic, in the form of higher current spending

and lower revenues (Table 4). The latter is caused by a full-year impact of revenue shortfalls due to the drop in economic activity. However, a sizable amount – totaling roughly 3 percent of GDP – of the FY21 deficit remains unfunded. It is expected that the sharp rise in current spending will in part be offset by a decline in externally financed capital spending, given the historical and significant under execution of capital spending. The government is also currently in the process of reprioritizing, with lower priority projects likely to be postponed. Hence, a deficit of 8.9 percent of GDP in FY21 is unlikely and a more realistic fiscal shortfall of around 7 percent of GDP is expected – assuming that government is able to secure sufficient financing, particularly external concessional finance. In FY22, a rebalancing between current and capital spending is expected. As the impact of COVID-19 eases and elections are concluded, current spending is set to decline, while public capital expenditures will increase to meet investment demands in oil-related roads, the Kampala-Hoima corridor, the East African Crude Oil Pipeline (from Uganda through Tanzania), and power transmission and distribution networks to special economic zones and rural growth centers.

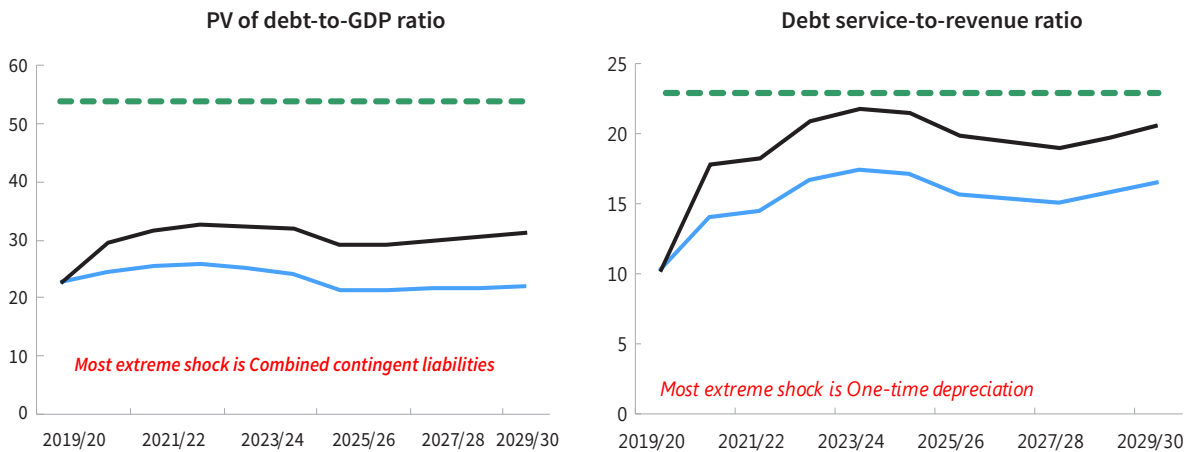
37. Total public debt is projected to rise to close to 60 percent of GDP by FY24 from 37 percent in FY19. This significantly exceeds the government's commitment in recent years to maintain public debt below 50 percent of GDP in nominal terms. However, despite the steep trajectory in nominal terms, in present value terms debt is projected to reach only 25 percent of GDP in FY24 because of the greater weight of concessional loans in the debt portfolio, which suggests a lower burden on the economy. Nevertheless, despite the high share of concessional external debt in the portfolio, the government's sizable domestic borrowing—22.6 percent of GDP in nominal terms—is projected to raise the gross financing

need in FY21 to almost 14 percent of GDP. While the government has not issued international bonds, and therefore does not face external maturity concentrations, total debt service (interest and principal due) is expected to average around 60 percent of government revenues over the next four years.⁴² This exposes the government to liquidity risks and underscores the importance of raising tax revenues and aggressively reducing tax expenditures after the elections in early 2021 to ensure fiscal sustainability.

38. The joint World Bank-IMF DSA undertaken in April 2020 concludes that Uganda remains at

low risk of debt distress.⁴³ Despite higher debt burden trajectories relative to the May 2019 DSA, all external debt and total public debt burden trajectories in the April 2020 DSA remain below their respective indicative thresholds⁴⁴ under the baseline and stress test scenarios (the blue and black line in Figure 12, respectively). The updated baseline scenario includes additional non-concessional borrowing and COVID-19 related financing from International Financial Institutions.⁴⁵ The two most extreme stress tests (lines in black in Figure 12) represent the contingent liability scenario, which reflects a shock of about 17 percent of GDP, and a one-time 30 percent exchange rate depreciation shock.

Figure 12: Uganda remains at low risk of external debt distress



Source: IMF/World Bank joint DSA May 2020

Note: the green dotted line represents the indicative threshold; the black line depicts the most extreme shock described at the bottom of the chart, and the blue line is the baseline scenario

42 The total debt service-to-revenue debt burden indicator does not have an indicative threshold in the DSA. This ratio averages 60 percent because of the large share of domestic debt that has short maturities and very high interest rates (13-14 percent). The external debt service-to-revenue ratio remains well below the indicative threshold under the baseline, which reflects the government's prudent borrowing strategy to largely borrow on concessional terms and not tap the international bond market. The latter results in a relatively smooth debt service trajectory, without any maturity concentrations.

43 Its debt-carrying capacity is assessed at 'strong' in the revised Low-Income Country Debt Sustainability Framework (LIC DSF).

44 The thresholds represent a level of debt burden that if exceeded results in a higher risk assessment.

45 The authorities also requested a non-concessional borrowing ceiling of US\$2 billion in FY20 from IDA's NCBP, two-thirds of which would finance infrastructure investment, while US\$665 million represents budget support and has been disbursed in early 2020.

2.2 Risks remain tilted heavily to the downside

39. The macroeconomic outlook faces significant downside risks, mostly from COVID-19. If the impacts of COVID-19 last longer globally, or spread more widely in Uganda, they could deter a rapid recovery in Uganda's exports, adversely impact tourism and remittances, and depress domestic economic recovery. This could lead to a more severe impact on society and the economy, including on health, poverty, growth, and external and fiscal balances. Locusts and weather shocks could also further exacerbate these impacts.

40. Heightened uncertainty around the 2021 elections could slow investments and economic activity, as well as lead to higher fiscal deficits. While factored into the outlook for FY21, political risks could arise sooner or be more pronounced. Furthermore, there have been higher levels of civil unrest during recent election periods; if such unrest were to happen again leading into the 2021 elections, this may increase uncertainty and lead to a fall in longer-term investor sentiment (both domestic and international). This may also slow oil investments and deter a recovery in the tourism sector.

41. Spending pressures and adjustments to government's debt profile could jeopardize Uganda's hard-earned macroeconomic stability. Whereas Uganda's spending boom has been mainly related to investments, additional pressures may arise from excessive spending in the run-up to the 2021 elections and unexpectedly high subsidies to sustain the revived Uganda Airlines. Furthermore, new ad-hoc tax exemptions ahead of the elections and weak implementation of new tax-enhancing measures and reforms may strain the government's ability to raise additional revenue to offset higher expenditures. A significant shift in debt towards more non-concessional borrowing and/or the issuance of a Eurobond would disrupt the smooth repayment

profile Uganda currently enjoys and raise debt burden trajectories and further increase debt vulnerabilities.

42. Businesses continue to face critical constraints such as access to finance, skills and electricity, and an uncertain regulatory environment. The cost of finance is particularly high in Uganda, so very few Ugandan firms have a bank loan or line of credit, and the ones who do face high costs and large collateral requirements. Only 26.7 percent of the population currently has access to electricity compared to 70 and 33 percent in Kenya and Tanzania respectively.⁴⁶ This has resulted in one of the lowest electricity consumption rates per capita in the world. Such circumstances inhibit productivity and private sector development. Although Uganda has improved across several measures of business environment performance in recent years, significant challenges remain. These include cumbersome processes to obtain an investment license and difficulties with the regulatory environment and contract enforcement.

43. Global factors could also undermine Uganda's outlook. Any intensified regional instability due to, for example, a renewed escalation of conflict in South Sudan or the Democratic Republic of Congo (DRC) – Uganda's second and fourth top export destinations – could reduce Uganda's exports and adversely impact growth and the external outlook. While lower oil prices are beneficial to Uganda's trade balance and real growth outcomes, significantly lower oil prices could also mean increasing risks to investment plans in the Ugandan oil sector. If oil prices remain well below the estimated break-even price for Ugandan production, different choices with respect to the phasing of extraction and investments into the refinery and oil pipeline may be required.

⁴⁶ World Bank Development Indicators, 2016

44. Uganda continues to be amongst the world's most vulnerable and simultaneously least adapted countries to climate change. The increasing frequency of climatic shocks (e.g. drought and floods) pose a heavy burden on the economy, export earnings and rural livelihoods. Most Ugandan households lack adaptive capacity to natural disasters and climatic stressors. This is further exacerbated by generally low technology adoption rates and limited access to alternative off-farm income streams – although, as discussed in Part 2, this is changing, with some instances where technology is being used to improve adaptive capacity. The country also lags its East African peers in water management, storage and irrigation, which is key to building resilience of the agriculture sector.⁴⁷ However, even with these improvements, poorer Ugandans, particularly in rural areas, will still face increasing climatic risks to their livelihoods.

45. Overall, there are mitigating factors to some of these risks. First, in order to manage a rapidly expanding fiscal deficit, the government has announced it will not commit to new large capital projects in the near term and will only finalize projects that are underway and cannot be canceled. Second, the Ministry of Finance will closely monitor the budget on a quarterly basis in FY21 and make needed adjustments given the uncertainty of the current economic environment. Third, unidentified financing for the large budgeted fiscal shortfall in FY21 may result in an adjustment to narrower fiscal deficits and hence less pronounced debt vulnerabilities. Finally, although the outlook for oil prices is bleak, Total, one of the major investors in Uganda's oil sector, still seems positive about the industry in Uganda given its recent agreement (April 2020) to purchase Tullow's oil interests in the country for over US\$0.5 billion.

2.3 Policy actions for macroeconomic stability and inclusive growth

46. COVID-19 poses significant risks to Uganda's socioeconomic stability that need to be carefully managed. The likelihood of many Ugandans falling into poverty is high. COVID-19 has for the foreseeable future altered Uganda's development options and priorities. The government is also going to have to rely increasingly on external financing to manage the expected budget shortfalls, which can quickly dry up if mismanaged. Policy actions in three key areas are required to manage these risks and promote more inclusive growth:

a) Expand existing and new social safety nets. The financial effects of the direct and indirect impacts of COVID-19 on the population, particularly the poor, is significant. As discussed in section 1.3, preliminary estimates suggest that the pandemic could increase poverty incidence

by 2.7 to 8.2 percentage points, resulting in 1.07 to 3.15 million additional poor relative to the latest official estimate of 8.7 million in 2016/17. Social protection programs are an effective means to address poverty, protect households exposed to increasing shocks and put them in a better position to recover after a shock. When deployed quickly after an emergency, they are also cost-effective as they prevent households from falling into destitution and prevent long-term and often irreversible damages to both physical assets and human capital. In Uganda, safety net programs such as the Northern Uganda Social Action Fund (NUSAF) and Senior Citizens Grant (SCG) are key tools for risk mitigation and responding to shocks. However, the coverage and design of these programs are currently insufficient to meaningfully address the scope of the economic and health shock that has hit

47 See World Bank (2018). Currently only about 7,000 ha of cultivated land is under formal irrigation, about 1.2 percent of an estimated irrigation potential of 600,000 ha.

Uganda.⁴⁸ Social safety nets should, therefore, be expanded or new time-bound mechanisms introduced during the crisis to provide a cushion to vulnerable households. For example, Uganda has experience with labor-intensive public works, which can provide income to poorer households, especially informal urban workers affected by the crisis. Public works also ensure maintenance, rehabilitation or building of important physical infrastructure. Furthermore, safety nets can help prevent the erosion of human capital if targeted, for instance, to poorer households with infants under 2. Children born during times of crises are far more likely to be stunted and face life-long health challenges.⁴⁹ Thus, targeting these households with cash transfers helps prevent erosion of human capital to maintain their future productivity. The utilization of digital technologies (see Part 2) makes it easier to identify, target and pay potential beneficiaries of social safety net programs.

b) *Rebalance government spending in FY21 to support recovery from the crisis.* The COVID-19 pandemic presents a significant shock to the Ugandan economy. The government needs to act quickly and decisively to ensure that the impacts are managed, and the economy positioned for a smoother recovery. This will require significant budgetary adjustments. In the immediate term, the primary concern is about protecting lives and livelihoods and ensuring continued provision of essential services, such as water and electricity, which in themselves are key elements to limiting the spread of the virus. This will require additional allocations to health and social welfare budgets (as discussed above). It will also require support to utilities to maintain the supply of services. At a household

level, spending on goods and services that are not critical to survival may also decrease – this includes, for example, education spending. Given that the burden of financing education has been shifting to households, whose share currently represents almost two thirds of total funding, any cut to this spending may have dire consequences for a country that is already underinvesting in the future productivity of its citizens.⁵⁰ Government will need to step in to ensure these cuts are limited. Finally, non-priority spending needs to be reduced. For example, any new and large investment projects that have not commenced or are under delivering should be postponed. Disruptions to global supply chains and further intermittent mobility restrictions are likely to hamper project execution anyway.

c) *Transparently report COVID-19 response measures and ensure accountability.*

There have already been instances of resource mismanagement in government's response to COVID-19.⁵¹ This does not bode well for government's credibility in managing the crisis and discourages development partners wanting to support the response. In order to improve the transparency and governance of COVID-19 related resources and spending, government, at a minimum, needs to report COVID-19 expenditures separately, be open about large procurement contracts of COVID-19 expenditures (including revealing the names of awarded companies and their beneficial owners), and undertake an independent audit of COVID-19 expenditures in about a year's time and publish the results.

48 See World Bank (2020, January). The existing direct income support programs have low coverage, with the overall reach of the two main programs at only 3 percent of the population. Hence, spending on these two major programs amounted to about 0.14 percent of GDP in FY17/18.

49 Adserà et al (2019). Individuals who were born or were one or two years old around the time when the Berlin Wall fell and when large economic and social transformations occurred in Europe and the Former Soviet Union are, on average, 0.6 centimeters shorter than their older or younger counterparts.

50 World Bank (2019c, May)

51 Otage (2020)



PART 2:

THE DIGITAL ECONOMY

3. DIGITAL SOLUTIONS IN A TIME OF CRISIS

3.1 The digital economy is an important contributor to inclusive economic growth and crisis management

47. As a cross-cutting enabler, digital technologies impact the entire economy, connecting farmers with markets, facilitating consumer access to a broader range of goods and services, and driving innovations in manufacturing. In 2016, the global digital economy accounted for 15.5 percent of the world's overall GDP and was worth about US\$11.5 trillion. It is expected to reach 25 percent in less than a decade. According to the IMF, the “digitalization of economic activity can be broadly defined as the incorporation of data and the internet into production processes and products, new forms of household and government consumption, fixed-capital formation, cross-border flows, and finance.”⁵² In Africa, the need to accelerate productivity gains in agriculture and industry can be addressed by leveraging digital technologies.

48. Digital technologies have led to the social and economic inclusion of previously underserved communities, which has also opened up new avenues for economic activity. With the advent of digital technologies, made widely ubiquitous by mobile phones (basic and smartphones), the proportion of mobile phone users in the world has risen from less than 15 percent in 2001 to 108 percent⁵³ in 2019, while internet users have risen from 8 percent to nearly 54 percent.⁵⁴ Research shows that GDP per capita in 96 developed and developing countries rose by 0.15 percentage points after a 10 percent increase in 2G to 3G technology penetration and by 0.5

percentage points after a doubling of mobile data use. Economy-wide productivity in these countries also rose by 4.2 percentage points with a 10 percent increase in mobile penetration.⁵⁵ In Africa, mobile phone penetration is found to have a significant impact on economic growth, including through the rise in digital financial inclusion.⁵⁶ However, it is essential to ensure that populations are ready, adequately equipped and trained to take advantage of the expansion in digital technologies.

49. The digital economy is also proving important for job creation. In Africa, the arrival of faster internet has been linked to increased employment and job creation; not only for workers that have gone to university, but also for those with secondary and even primary school educations.⁵⁷ The mobile economy (technologies and services) generated nearly 9 percent of GDP in SSA in 2018⁵⁸ and this proportion is likely to continue increasing. Research from the SSA region shows that female labor force participation also rises with increased access to digital technologies such as broadband internet.⁵⁹

50. In times of crisis, as demonstrated by the ongoing COVID-19 pandemic, digital technologies can play an important role in maintaining access to essential services and expanding the options to drive the recovery. The nature of the COVID-19 crisis and the need for physical social distancing makes the use of digital technologies even more relevant. The urgent

52 IMF (2018)

53 Note that this figure exceeds 100% as it reflects instances of multiple subscription or sim card ownership by the same individuals.

54 ITU (2020)

55 GSMA (2012)

56 IMF (2011)

57 Hjort and Poulsen (2019)

58 GSMA (2019)

59 Efobi et al. (2018)

need to manage demands on local health systems and allow local populations to maintain safe social distancing is for the large part being made possible through various digital technologies. From the use of big data in developing effective epidemiological interventions to managing hospitals and health services and deploying tech-enabled contact tracing, digital technologies are playing an important role in crisis management in the short-term. However, these technologies also raise pertinent questions for consumer privacy, safety and data protection. The private sector can be a key contributor to the overall recovery and for building resilience of health systems by enhancing the integration of technologies in logistics and supply chain management, allocating and disbursing credit to firms, and scaling up the use of digital financial services for consumers.

51. Digital ID systems are a critical infrastructure needed for any government to respond effectively to COVID-19. They are a core part of a government’s ability to deliver emergency

payments digitally to the poorest and most vulnerable. Together with payment ecosystems and social protection information systems (e.g. social registries), ID systems are part of the backbone of delivery systems that governments rely on to provide quick and efficient assistance to those in need. Among the 190 countries and territories that have so far deployed social protection measures in response to the pandemic, a key differentiating factor in getting assistance to people fast and effectively (while minimizing fraud), is the presence of digital ID systems that uniquely, reliably, and remotely identify populations. Where assistance programs have been most effective, beneficiaries did not have to complete paper forms and contend with crowded lines – as they could apply online or by SMS to receive benefits digitally. Identities and eligibility could also be verified without physical interaction, and transfers were made within days. Countries without high-coverage ID systems or those with limited interoperability and functionality, have and will continue to struggle to deliver services and assistance efficiently.

Uganda has made strides in digital development, but gaps in infrastructure and private sector innovation remain

52. The Ugandan government aims to promote economic growth through digitalization by leveraging the country’s expanding ICT infrastructure and technological base, and its young and increasingly literate population. The government’s Vision 2040⁶⁰ calls for greater availability of digital content and e-products, more automated processes and inter-agency connectivity, greater linkages between researchers and industry, and acceleration of R&D commercialization. To implement Vision 2040, the government aims to ensure effective

interoperability of processes and systems across the whole of government, private sector and civil society, and to promote the development of a hi-tech industry by reviewing and revamping the legal and regulatory frameworks governing the ICT sector. This will promote operational efficiency, enhance information security and facilitate the enforcement of cyber security rules and procedures.

53. Uganda is at the cusp of a digital transformation that can accelerate its

⁶⁰ Vision 2040 is aiming at “a transformed Ugandan society from a peasant to a modern and prosperous country within 30 years” As part of this, the Ugandan Government identifies ICT as cutting across all sectors and a key enabler for social and economic development.

advancement towards middle income status by 2040 and create significantly more jobs. With a population largely under 30 years of age, Uganda is poised to reap a significant demographic dividend. This, however, comes with the attendant challenges of creating jobs and transitioning to a more diverse economic base. According to estimates, Uganda will require jobs for almost 700,000 labor force entrants per year until 2030. Thereafter, an expected 1 million job seekers will enter the job market annually from 2030-40.⁶¹ The digital economy offers a crucial enabling force for growth by enhancing productivity in the real sectors, addressing information asymmetries, matching buyers and sellers, matching jobs, and reducing information asymmetries through general purpose digital technologies. Relatedly, linking the informal and formal economies is possible by leveraging digital tools and channels, which can connect informal workers to greater economic opportunities.⁶² Given that Uganda's informal sector is estimated to comprise about 43 percent of GDP and employs at least 70 percent of the labor force,⁶³ the potential benefits are immense and structurally significant.

54. The gains from a digital economy would allow Uganda to deliver services to a broad range of consumers, allow firms to adopt productivity-enhancing technologies and allow policymakers to undertake data-based policymaking. As discussed in Box 2, although the share of the Information and Communications sector itself was less than 2 percent of GDP in FY19, it is already playing a catalytic role in enhancing economy-wide productivity and growth. Furthermore, usage of digital technologies like mobile phones,

mobile internet and social media has risen in recent years and is driving the growth in the ICT and related sectors.

55. The government has set out an ambitious agenda for digital transformation, the implementation of which will require stronger coordination and resource management than has been the case to date. The Digital Uganda Vision 2019 highlights the government's commitment to "Transform Uganda into a digitally-enabled society that is innovative, productive and competitive".⁶⁴ This entails coordinated efforts by ministries, departments and agencies (MDAs) to enhance the regulatory framework for the development of the digital economy. At the same time, it is important to note the related challenges of privacy and data protection, inclusion of segments of the population with limited digital literacy and access, and the need to embrace a wider range of products and services than are currently available in the market.

56. Drawing on findings from the World Bank's Uganda Digital Economy Assessment,⁶⁵ this section outlines the state of Uganda's digital economy and concludes with key policy recommendations. It assesses five key pillars for a vibrant, safe and inclusive digital economy (see Figure 13): (i) digital infrastructure; (ii) digital skills; (iii) digital platforms; (iv) digital financial services; and (v) digital entrepreneurship. This section will consider how each pillar can contribute to inclusive growth and poverty reduction, present the status of each pillar in Uganda, and identify areas where Uganda can do better to realize the pillars' potential contribution.

61 World Bank (2020, February)

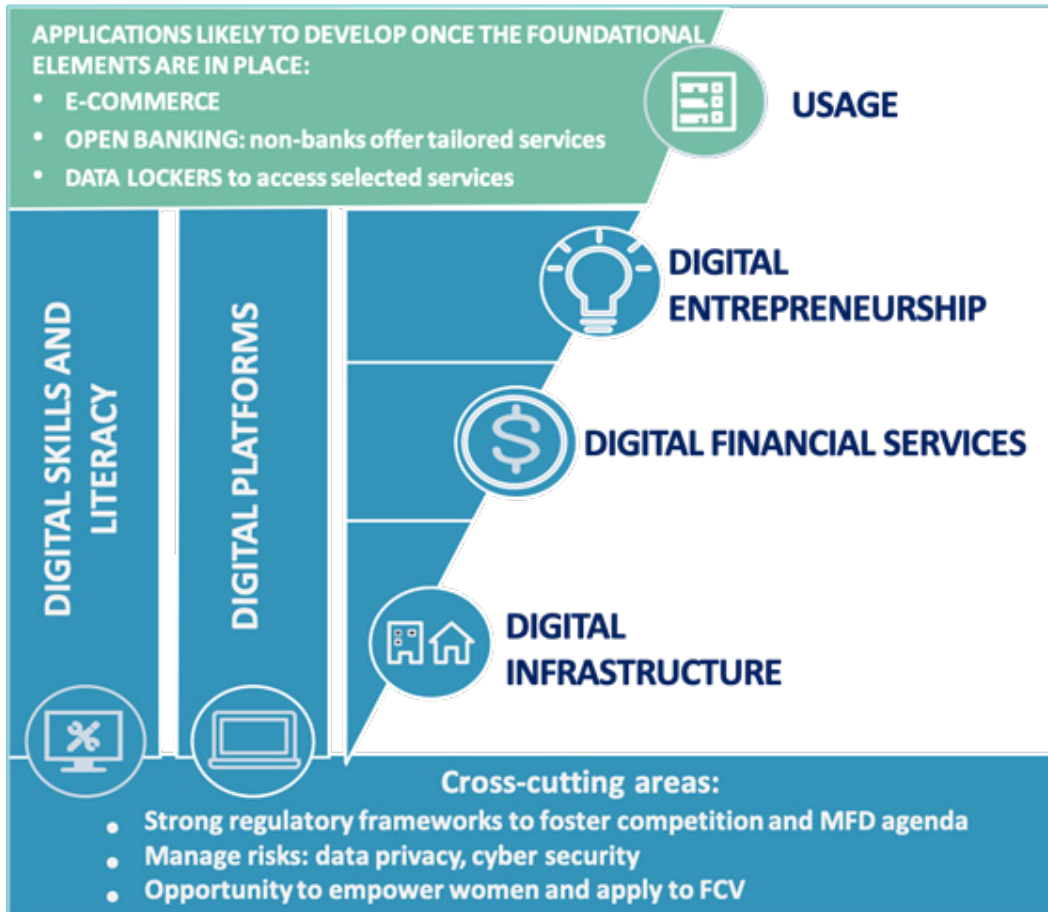
62 Pathways for Prosperity Commission (2018)

63 Lloyd-Jones et al (2017)

64 Digital Uganda Vision

65 The full assessment will be issued in July 2020.

Figure 13: Five key foundations of the digital economy ecosystem



Source: World Bank, June 2019. Digital Economy for Africa Initiative. Every African Individual Business and Government to be Digitally Enabled by 2030. Note: FCV refers to situations of Fragility, Conflict, and Violence. MFD is Maximizing Finance for Development

Digital tools and solutions are key to managing the COVID-19 crisis and supporting economic recovery

57. Digital technologies and the digital economy will play a key role in mitigating the ongoing COVID-19 crisis and its expected impact on the medium-to-long term growth prospects of Uganda. As discussed in section 1.3, these effects are magnified for lower-income communities and informal sector workers. With firms facing a sharp drop in aggregate demand, supply chain interruptions and reduced labor force participation, there is a need for short-term mitigation measures combined with more medium-to-long term interventions that can support firms' recovery. As discussed below, digital solutions can support delivery of essential services for firms (e.g. utility and tax payments, access to markets via digital platforms,⁶⁶ and e-commerce, and digital SME finance), consumers (e.g. mobile money, remittances and e-commerce) and the most vulnerable (e.g. expanded and new short-term social safety nets).

58. The health sector response to COVID-19 in particular stands to benefit from integration and scaling up of digital health solutions. For the health sector, digital solutions offer the opportunity to undertake holistic disease surveillance and monitoring (for example, through geo-tracking applications), leverage data from public systems to strategically allocate resources and pre-empt outbreaks (for example, through community health data collected by CHWs), reduce the burden on medical facilities by transitioning some activities to digital communications, and improving inventory management of medical supplies. The latter is especially relevant as regional and global production and supply chains face sustained interruptions. Even very basic digital communications technologies such as Short Message Service (SMS) can be deployed in low-tech environments to disseminate public health messages and cautionary guidelines.



⁶⁶ Digital platforms are online businesses that facilitate commercial interactions between at least two different groups—with one typically being suppliers and the other consumers.

3.2 A snapshot of Uganda’s digital economy

59. Overall, Uganda’s digital economy is gaining momentum, though gaps in access, affordability and market development constrain its development.

 <p>Digital infrastructure</p>	<p>Uganda appears to be performing at an average pace within developing countries, ranking 20th out of 38 SSA countries in the 2017 ICT Development Index (IDI) of the International Telecommunications Union (ITU). Although lagging more advanced economies, Uganda has a ranking of 40 on the GSMA mobile connectivity index, which is comparable to peers Rwanda (42.9), Kenya (50.7) and Tanzania (40.9).</p>
 <p>Digital platforms</p>	<p>The GoU has introduced digital platforms and shared systems that enable online communication and digital collaboration among government bodies. Public service delivery is continuously improved through an increasing number of e-services provided by various government bodies over the e-Citizen portal. Despite this progress, uptake of digital public services still remains relatively low, with one of the reasons being the absence of digital authentication and seamless e-signature capability and lack of integration and interoperability of many government IT systems, which constrains opportunities for improving efficiency of service delivery and end-user experience.</p>
 <p>Digital financial services</p>	<p>Digital Financial Services (DFS) is a dynamic sector with many players operating in payments, digital credit, savings, micro insurance, and remittances.</p>
 <p>Digital entrepreneurship</p>	<p>Digital entrepreneurship is nascent, but expanding in Uganda. Support services and digital firms are concentrated in Kampala, as is the potential market. Startup funding overall and for digital firms is very limited. Regional/international investors are beginning to enter the market to support more advanced firms. There is low take-up of digital products and services beyond payments as the level of internet usage remains low among the population.</p>
 <p>Digital skills</p>	<p>Basic digital literacy in Uganda is limited – a contributor to and a consequence of the fact that a majority of households and individuals do not currently use the internet. Moreover, basic and intermediate digital skills courses at secondary schools are optional, advanced digital skills instruction is generally in short supply, and enrolment in STEM programs is low. Overall quality is also an issue because an outdated curriculum leads to widely differing learning outcomes. Despite these challenges, opportunities abound to accelerate digital skills development. Examples include the Universal Access Fund, which has potential to enhance school connectivity, a new secondary school curriculum, and the third National Development Plan, which prioritizes human capital development in ICT.</p>

Digital infrastructure in Uganda is improving, but access is uneven and expensive

60. Development of the digital economy requires a solid digital infrastructure and ubiquitous access to the internet. Private and public investments in Uganda’s digital communications networks have driven growth and access, but at a relatively moderate pace compared with potential. Uganda has approximately 27 million mobile subscriptions (September 2019), which is a penetration rate of 69.2 percent of the population, below the average of 84 percent for Africa. The internet market is growing steadily, with mobile broadband subscribers standing at 49 percent in 2019 according to GSMA. As Table 6 and Figure 14 show, Uganda lags on broadband

services which are mostly provided by mobile telecommunications operators using 3G and 4G technologies. Fixed technologies such as DSL, cable and Fiber to the Home, which allow for much higher speeds and productivity, remain underdeveloped. Uganda has a liberalized telecommunications market with an independent regulator, the Uganda Communications Commission (UCC). The market has attracted several international industry players, most of which are offering comparable services in a competitive environment; however, there is still a significant urban-rural divide in access to digital services.

Table 6: Regional comparison of Uganda and peers on select indicators

	Uganda	Nigeria	Kenya	Rwanda	Tanzania
Affordability Drivers Index Rank (out of 61 countries) ⁶⁷	36	19	37	31	32
Mobile subscriptions per 100 people (2018)	57	88	96	79	73
Fixed broadband subscriptions per 100 people ⁶⁸	0.02	0.04	0.72	0.06	1.53
Cost of 1GB mobile data, % GNI per capita	7.75	1.70	3.10	3.39	5.11
Cost of 1GB mobile data, US\$ ⁶⁹	4.00	2.78	4.19	2.21	4.34

Source: Alliance for Affordable Internet; World Bank data
Note: Using the latest comparable data up to end-2018.

61. Investments in “middle”⁷⁰ and “last mile”⁷¹ networks have helped more Ugandans get online, but broadband infrastructure and market bottlenecks persist, which reduce coverage, speed, reliability, and affordability. Last mile connections to the end user are predominantly provided by Mobile Network Operators (MNOs) and other smaller internet service providers. Last mile connections range from high speed direct

fiber connections to the home and businesses in urban areas to lower cost, lower performance wireless solutions in rural areas. Approximately 85 percent of the population is now covered by a 3G or higher signal, and an estimated 46 percent of citizens had access to broadband connectivity at the end of 2018, with mobile broadband being the predominant means of internet access according to statistics from the UCC.⁷²

67 ADI Africa Report 2019

68 ITU database (2020)

69 Alliance for Affordable Internet, Mobile broadband pricing data 2019

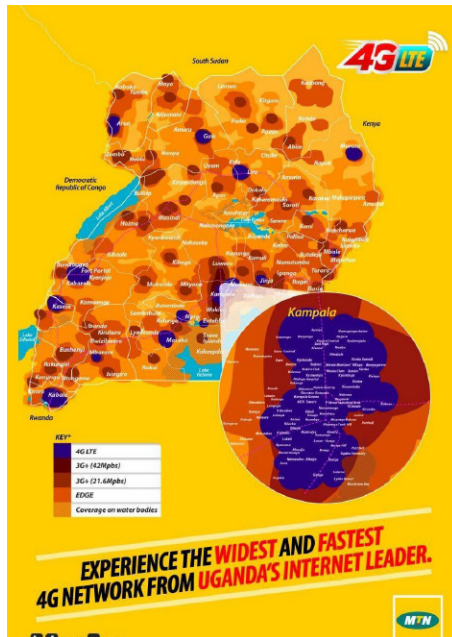
70 Middle mile: segment of a telecommunications network linking a network operator’s core network to the local network plant, typically situated in the incumbent telco’s central office.

71 Last mile: local links which provide service to the retail customer or end user.

72 UCC

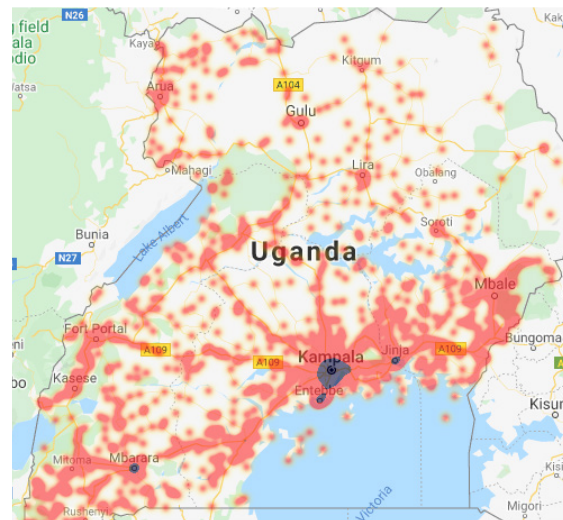
Figure 14: Mobile network coverage in Uganda

Mobile network MTN Uganda, 2020



Source: MTN

Mobile network (antennas) of Airtel Uganda, 2020



Source: Airtel Uganda

62. There is a gender and geographical gap in access to digital technologies. According to Finscope 2018, only 46 percent of female adults have access to mobile phones compared to 58 percent of male adults.⁷³ Similarly, adults in urban areas are more likely to own mobile phones (70 percent) and have access to the internet (25 percent) compared to adults in rural areas (46 percent own phones and 5 percent have internet access). Broadband access is also limited, given there are only 0.028 fixed broadband subscriptions⁷⁴ per 100 people in Uganda compared to 0.5 in SSA.

63. Affordability remains a key challenge to broadband access in Uganda, even where broadband services are available. Various factors are reducing investment and affordability including license and spectrum fees, taxes on digital services and devices, as well as cost of bandwidth. The introduction of the social media tax of US\$ 200 (US\$ 0.05) a day has significantly increased the cost of mobile services, particularly for the most price sensitive consumers, already at risk of digital exclusion. Handset costs, though falling significantly, still pose an entry barrier for a broad section of Ugandan society, compounded

⁷³ FinScope Uganda (2018)

⁷⁴ Fixed broadband subscriptions refer to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to or greater than 256 kbit/s. This includes cable modem, DSL, fiber-to-the-home/building, other fixed (wired)-broadband subscriptions, satellite broadband and terrestrial fixed wireless broadband. This total is measured irrespective of the method of payment. It excludes subscriptions that have access to data communications (including the Internet) via mobile-cellular networks. It should include fixed WiMAX and any other fixed wireless technologies. It includes both residential subscriptions and subscriptions for organizations. World Bank Data 2018.

by the import duties on digital devices. There are some limited initiatives to test the scope of subsidized devices though these would need to be scaled up to reach underserved communities in rural areas, refugee hosting areas and amongst women.

64. Uganda ranks poorly compared to other countries on access and affordability. Compared to its regional peers, Uganda lags on mobile and broadband subscriptions even though it ranks fairly well on the affordability drivers index, which measures government policies that impact internet affordability. According to

the International Telecommunications Union's 2019 price comparison report,⁷⁵ Uganda ranked 160 out of 184 countries on price of mobile-voice services. While policies may be moving in the right direction, they have not yet enhanced affordability for consumers to the extent which regional peers have been successful in doing. Low levels of affordability are driven by a combination of high cost of devices (e.g. Uganda imposes an import tax on mobile phones and domestic manufacturing of phones was only initiated in 2019) and high cost of services. Handset costs continue to pose an entry barrier for a broad section of Ugandan society.

Development of digital platforms in the public and private sectors is advancing, but their reach is limited

65. Over the past few years a number of policies, strategies, laws and regulations have been adopted to improve public sector management, service delivery, operational efficiency and customer satisfaction through a greater use of ICT services in the public sector.⁷⁶ The Government has also initiated a number of IT enabled modernization and service delivery projects, currently in different stages of completion. The reforms and investments are aiming to tackle challenges such as duplication and low level of integration of ICT systems across government, piecemeal procurement of licenses for software, limited ability to exchange and analyze data, and low utilization of shared infrastructure and platforms for the provision of services (e.g. payment gateway, SMS gateway, digital authentication). These efforts remain a work in progress.

66. The National Information Technology Authority-Uganda (NITA-U) is responsible

for centralized deployment and oversight of government digital platforms and IT standards.⁷⁷ By centralizing this role within NITA-U, government is working to build a unified government IT architecture, infrastructure and shared services which can be used by all ministries, departments and agencies (MDAs) to more quickly, securely and cost-effectively communicate, run digitized information systems and productivity tools, and launch new citizen facing services. This contrasts with the common practice of each MDA launching such infrastructure, digital systems and services in silos – often at high cost and level of time and effort, and with challenges of security, interoperability and sustainability. Accelerating development of the digital government “stack” and improving adoption by the MDAs presents an opportunity to dramatically improve the efficiency of government operations and improve the user experience of citizens accessing public services. It can also improve the resilience of government

⁷⁵ ITU (2019)

⁷⁶ Policies: National ICT Policy, Telecommunications Policy, National Broadband Strategy, IPv6 Transition Policy, E-Waste Management Policy; Laws: Uganda Communications Act, 2013, the NITA-U Act, 2009, the Computer Misuse Act 2011, Electronic Transactions Act 2011 and the Electronic Signatures Act 2011.

⁷⁷ Digital platforms are intermediaries that connect users and service providers through a digital interface.

operations in the face of pandemics and natural disasters, enabling the civil service to work and communicate remotely via the government cloud network.

67. The national ID system is a critical asset for improving digital service delivery in key sectors such as agriculture, health, finance and social protection. Significant progress has been made since the GoU launched a “National Security Information System” (NSIS) in 2014 and established the National Identification and Registration Authority (NIRA) in 2015, which resulted in the registration of about 66 percent of the population over 16 years of age. However, much remains to be done to reap full benefits that come from the seamless ability to verify identity digitally. There is immense demand from multiple stakeholders to provide access to the National ID register through Third Party Interface (TPIs) with the aim to authenticate identities in the context of service delivery. Conversations are on-going, but very few stakeholders have the technical and human capacity to get this done. Additionally, and despite recent progress in the banking sector through an electronic Know-Your-Customer (KYC) facility, there have been harmonization challenges in terms of what solutions should follow this demand.

68. While Uganda still needs to work towards increasing the coverage of national ID, the gap in civil registration is another pressing concern. Making the national ID and civil registration systems interoperable is critical for a dynamic, sustainable, and accurate National Identification Register that can account for every birth and death. Special attention is needed to improve low birth and death registration rates. Death registration, for example, is estimated at 24 percent, while only about 7 percent of children below one year of age are registered in the civil registration system. Most

birth records are notified through the mobile vital registration system, but not officially registered, which presents challenges to keep NIRA’s database up to date. Without near real time updates to birth and death registration, stakeholders’ trust in NIRA’s ability to effectively verify/authenticate identities is low and the veracity of the system may be compromised if this continues.⁷⁸

69. The National IT Authority of Uganda (NITA-U) is planning to introduce digital authentication and e-signature capabilities for Uganda, with a launch expected by the end of 2020. The ability to securely identify and authenticate a person or entity and bind the user of an online transaction with their “real world” identity would allow the government to provide services remotely, without requiring physical presence. These efforts would provide a foundation for effective delivery of e-government services in an entirely paperless manner, which is critical in response to COVID-19 and for achieving larger digital service delivery and digital commerce aspirations.

70. Private sector platforms are also growing in Uganda, although usage is substantially less than in peer countries. According to one estimate,⁷⁹ there are about 35 (mainly international) platforms currently active in the transportation, retail and accommodation sectors compared to 62 platforms in Kenya, 87 in Nigeria, and 38 in Tanzania. The platforms in Uganda offer e-commerce, freelancing, rentals, ride-hailing, and courier services. About 44 percent of the platforms accept mobile money payments, 41 percent accept cash, and nearly 80 percent take debit and credit cards. While growth of mobile money in Uganda bodes well for greater uptake of platforms, the larger challenge of mainstreaming digital platform use and boosting consumer digital literacy will need to be addressed.

⁷⁸ NIRA undertook changes in their business process to facilitate registration of some of these events to ensure they have all the required information and are following-up on those with missing information. Under the Uganda Reproductive Maternal and Child Health Services Improvement Project (URMCHIP), the World Bank is investing US\$10 million to improve both birth and death registration.

⁷⁹ Insight2Impact (2019)

Basic and advanced digital skills are limited

71. Human capital development is a key contributor to economic growth in general and to effectively leveraging the technologies of today and tomorrow. Digital skills – basic and advanced – contribute to market development and to a workforce that is ready for the changing labor market and adaptable to the demands of emerging categories of jobs.

72. The overall quality of the education system influences the development of digital skills.

In Uganda, despite immense progress towards achieving universal access to primary education, a significant percentage of those who enter primary school do not reach the final primary grade. Indeed, primary completion rates for Uganda are very low and have not shown much improvement for nearly a decade, standing at 44 percent in 2017.⁸⁰ As a result, most Ugandan children do not even enter secondary level, which is where basic digital skills and competencies are acquired under the current system.⁸¹

Table 7: Comparative indicators on education and human capital (data from 2017)

	Kenya	Nigeria	Rwanda	Tanzania	Uganda
Expected years of schooling	10.7	8.2	6.6	7.8	7.0
Learning adjusted years of schooling	7.8	4.3	3.8	4.8	4.5
Human Capital Index, scale 0-1	0.5	0.3	0.4	0.4	0.4
Harmonized test scores ⁸¹	455	325	358	388	397
Individuals using internet in last three months (% population)	17.8	42	21.8	25	23.7

Source: World Bank data; International Telecommunication Union

73. Basic digital literacy is quite limited in Uganda, which is consistent with overall low performance in literacy and education. Uganda trails peers on numeracy skills with only 2 percent of students able to solve a simple, age-appropriate mathematics problems by the end of fourth grade, which is far below Kenya (10 percent) and Tanzania (9 percent).⁸² The quality

of the education system remains uneven and transition into secondary schooling is a persistent challenge.⁸³ There is also a gender gap in basic literacy, which influences digital literacy and basic skills among women. Moreover, nearly 90 percent of households in Uganda do not have internet access with a majority citing lack of confidence, knowledge or skills as a reason (see Figure 15).

⁸⁰ World Bank (2019c, May)

⁸¹ Harmonized Test Scores from major international student achievement testing programs. They are measured in TIMMS-equivalent units, where 300 is minimal attainment and 625 is advanced attainment. Test scores from the following testing programs are included: TIMSS/PIRLS: Refers to the average of test scores from TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study), both carried out by the International Association for the Evaluation of Educational Achievement.

⁸² World Bank (2019c, May)

⁸³ Ibid

Figure 15: Reasons why households and individuals do not use internet



Household use of Internet

89.2%
Of all households, did not have internet access at home

54.8%
Of households with no internet access, indicated “Lack of confidence, knowledge or skills to use the internet” as reason



Individual use of Internet

92.8%
Of all individuals, had not used the internet in last 2 months

75.0%
Of individuals that had not used the internet, cited lack of knowledge or skills as reason for having not used the internet from any location (most-cited reason)

Source: NITA IT report 2018

74. There is a need to upskill teaching staff and equipment in the school system. Almost all 1,100+ government owned secondary schools and all national teacher training colleges were equipped with ICT labs between 2008 and 2014. Feedback received is that this equipment is mostly end-of-life and quality of connectivity is a challenge. An equipment refresh and continual maintenance and upgrading of both hardware and software, paired with adequate teacher training and accompanying digitized educational content is needed to both introduce students to technology and as a means of improving the quality and impact of teaching more broadly.

75. High quality, more advanced technical skills are also in short supply. At the university level, stakeholders indicate that there is a need to improve the ICT infrastructure and reskill human resources. There is very limited data on existing ICT skills and demand for ICT skills by industry or employers. This data gap makes it difficult to ascertain the level, quality and availability of skills in the domestic market. However, market demand has led to the development of some innovative approaches towards meeting the needs of the private sector; one of these is an academia-industry collaboration by *Refactory*, which has developed a targeted bootcamp program to increase the supply of quality advanced digital skills in Uganda.



Box 5: An innovative approach to developing advanced digital skills

Refactory offers a unique model to address the talent gap in the tech sector in Uganda. Established in 2015 as an initiative of Clarke International University that later morphed into an industry led collaboration with Laboremus Uganda and Fontes Foundation Uganda, a two-staged program is offered – the ‘Catalyst’, which provides introductory level software development training, and the ‘Bootcamp’, which targets advanced software development skills. The Catalyst features an industry prototype where students completing the program demonstrate considerable growth. The programs are open to applicants with tech and non-tech backgrounds. Across both programs, there is a strong emphasis on workplace skills like communication, leadership and time management, which are cited by employers in Uganda to be much in need.

In two years, 71 people have graduated from the catalyst program, of which nearly 27 percent are women. The placement rate for the bootcamp is 90 percent. The program has attracted over 10 industry partners working directly with the students. *Refactory* has expanded its offerings to include a digital job matching platform for job seekers and employers.

76. Girls’ enrolment in Science, Technology, Engineering and Mathematics (STEM) is noticeably low. At Makerere University, the largest university in the country, female enrolment in STEM courses stood at about 30 percent.⁸⁴ Government is, however, aware of this situation and is taking steps to address low female participation in STEM. For example, the Makerere University Council recently passed an Affirmative Action Policy to establish a 40 percent enrollment quota for female students in STEM.⁸⁵

77. While the government recognizes the importance and need to develop ICT skills, there is no systematic plan to develop basic and advanced digital skills or integrate digital skills in formal education. The National Development Plan II, the formal education sector and the ICT sector have all called for the development of digital skills. There are standalone basic digital skills courses at the secondary level, which are optional, and advanced digital skills programs at university. There is, however, no digital skills

training at the primary school level. There is no national Digital Skills framework and there is no ICT in Education policy or strategy. Putting in place these frameworks and facilitating execution will be critical to prepare students for the future of work, to generate more home-grown technologies and take full advantage of the potential of the digital economy.



84 Makerere University (2017)

85 Makerere University (August 2019)

Digital financial services are expanding, but there are gaps in the regulatory framework

78. Digital financial services have powered the rise of financial inclusion in Uganda and have had important livelihood benefits for poor rural households. Financial inclusion appears to have been largely driven by mobile money, although traditional financial institutions have also played a part. The percentage of financial account ownership amongst the population age 15+ has risen to 59 percent in 2017 as compared to 44 percent in 2014. This has been driven by increasing mobile money account ownership,

which has risen to 51 percent in 2017 from 35 percent in 2014. The rise reflects a similar trend in other peer countries such as Kenya, Rwanda, and Tanzania (with Kenya having the highest percentage of the population age 15+ with mobile money accounts).⁸⁶ A study of the impact of mobile money access for poor, rural households in northern Uganda found that as access expanded, nonfarm self-employment increased and food security improved.⁸⁷

Table 8: Financial inclusion indicators

Country	Account (% age 15+) ⁸⁸		Financial institution account (% age 15+) ⁸⁹		Mobile money account (% age 15+)		Sent or received domestic remittances in the past year (% age 15+)		Made or received digital payments in the past year (% age 15+)	
	2014	2017	2014	2017	2014	2017	2014	2017	2014	2017
Kenya	75%	82%	55%	56%	58%	73%	70%	67%	69%	79%
Nigeria	44%	40%	44%	39%	2%	6%	58%	51%	37%	30%
Rwanda	42%	50%	38%	37%	18%	31%	46%	46%	27%	39%
Tanzania	40%	47%	19%	21%	32%	39%	57%	46%	35%	43%
Uganda	44%	59%	28%	33%	35%	51%	65%	58%	40%	55%

Source: Findex 2017

79. However, unequal access between women and men and urban and rural areas poses a challenge. According to FinScope 2018, 62 percent of men have made or received digital payments; however, only 53 percent of women have done so with a larger proportion of women relying only on cash (see Figure 16).

80. Digital credit is a fast-growing phenomenon in many emerging markets and Uganda is no exception. These loans are having a large impact, allowing millions of low-income consumers to

borrow money with just a few taps on a phone menu or clicks on an app screen. Digital credit grew by 26.6 percent between 2016 and 2017 in Uganda; most of these loans are smaller-sized, unsecured personal loans. The “new wave” of digital credit is reaching consumers through digital channels rather than requiring customers to visit a bank branch or a banking agent. Telecoms operators in Uganda have, in the last three years, disbursed more than US\$100 billion in mobile loans.

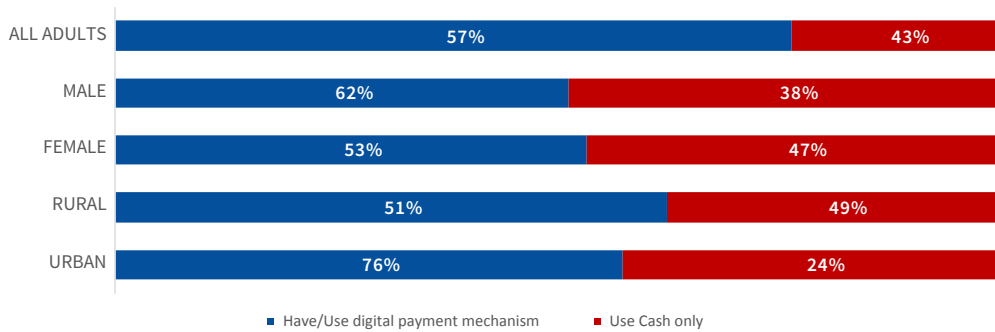
⁸⁶ Nigeria is an outlier with only 6 percent of the population age 15+ having a mobile money account.

⁸⁷ Wieser et al. (2019)

⁸⁸ The percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution or report personally using a mobile money service in the past 12 months.

⁸⁹ The percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution.

Figure 16: Use of digital payments in Uganda

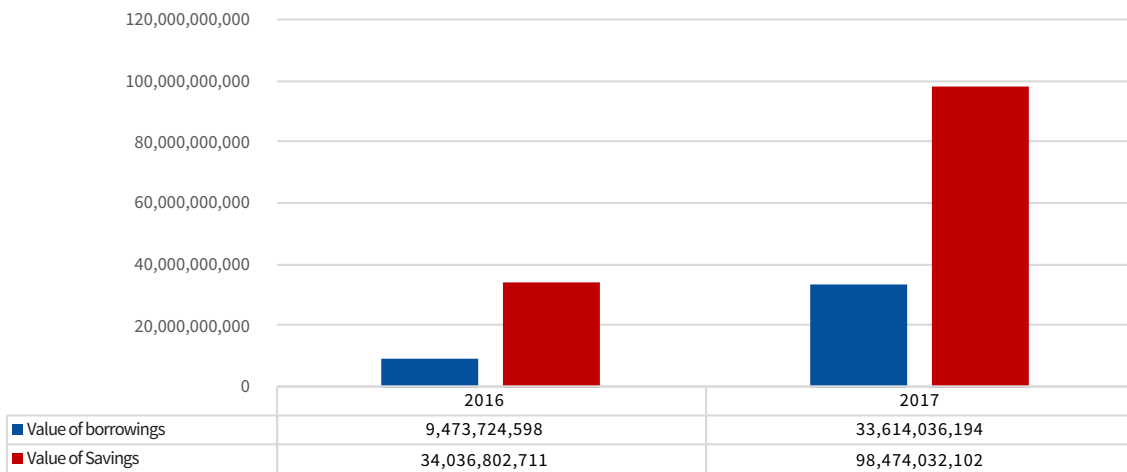


Source: FinScope 2018

81. Due to lack of borrower data to support lending decisions, digital lenders are using alternative credit data to determine

creditworthiness. Types of alternative credit data include mobile money transactions, balance information and mobile phone activity.

Figure 17: Digital Credit & Savings Transactions



Source: Uganda Communications Commission

82. Digital insurance is another growing sector within digital financial services. The insurance penetration in Uganda of 0.85 is exceptionally low and all insurers are looking for strategies to increase growth. Increasing amounts of digital consumer and geospatial data, mobile payment technologies and platform use (i.e. matching consumers and providers via digital

means) is enabling insurance providers (often in partnership with governments) to deploy an array of innovative, low cost insurance products suitable to the local market.

83. The introduction of a tax on mobile money withdrawals poses a challenge for the continued development of digital financial services in

Uganda. A 1 percent tax was imposed on mobile money withdrawals in July 2018, which, following a public outcry, was revised downwards to 0.5 percent in October 2018. The volume of mobile money transactions fell by 25 percent and peer-to-peer transactions fell by 50 percent in the two months following the implementation of the tax.⁹⁰ Although transactions have since recovered and continue to grow, there is a concern that the full growth potential of mobile money is not being realized. There is also a broader question of leveling the playing field between mobile money agents where transactions are subject to withdrawal taxes and traditional bank agents where transactions are not subject to such taxes. The indirect impact on utility payments (60 percent of which are made using mobile money), ability of non-bank financial institutions to serve clients (often in remote areas), and access to digital credit has yet to be fully studied. Though the tax was reduced, the challenges it poses for the development of digital financial services and the spillover effects on wider digital service and e-commerce adoption remain. Mobile money often serves as a gateway digital service that affords the versatility of digital products and services to the average consumer, which in turn can facilitate the use of other digital products and services, and ultimately broaden the tax base as the digital economy expands. Therefore, taxation policies that constrain the growth of mobile money may have spillover effects on the extent to which consumers use other digital products and services. A focus group study in Kampala found that even after the reduction in tax, 70 percent of respondents reported decreased transactions using mobile money, with more than 50 percent of these using alternatives like in-person transactions.⁹¹

84. Fintechs abound in Uganda, focusing on developing and providing digital solutions

for payments integration and aggregation.

These include fintech entities engaged in agent management, payment service providers, payment gateways, payment aggregators and switching services for smaller mobile money issuers. Another fintech provides a core banking solution on the cloud for Savings and Credit Cooperative Organizations (SACCOs), offers integration with major mobile money issuers (MTN money and Airtel money), and also facilitates digital transactions of SACCOs and their members. A motorbike ride sharing service also issues e-money (in partnership with a licensed entity) with different wallets for customers and drivers, which can be used for paying fares and fuel payments. As seen in several markets, private sector platforms are also offering digital financial services.

85. NITA-U is also involved in setting up a Government e-Payment gateway to facilitate electronic payments for Government services, including person-to-government (P2G), business-to-government (B2G), and government-to-person (G2P) payments. This work is currently in progress, with the gateway now being used in a limited way for disbursements to farmers under the Ministry of Agriculture's e-Voucher program. Over a period of time and in a phased manner, the intention is to digitize all government payments to improve efficiency in government spending and reduce costs. The e-payment gateway is proposed to be used for all social protection payments, B2B, B2C, and P2G payments in a phased manner.

86. The e-voucher program allows farmers to leverage digital payment solutions and access a wide range of inputs. Under the e-voucher program (Figure 18), the farmer is registered on the e-Voucher app which is linked with NITA-U's e-payment gateway. At the time of registration

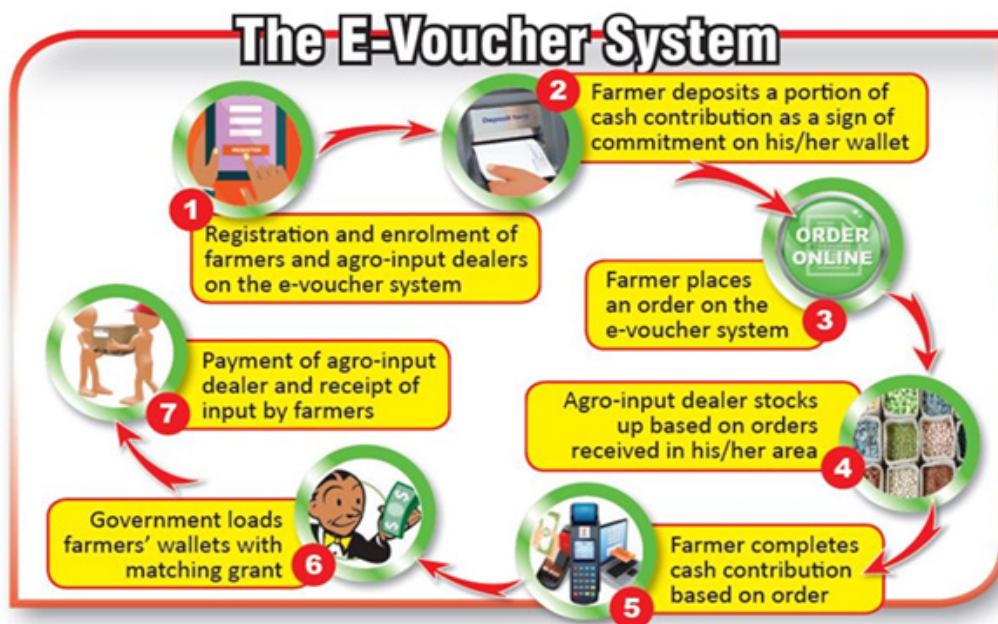
⁹⁰ GSMA (2018)

⁹¹ Pollicy.org (2019)

itself, the e-Voucher system creates a virtual wallet account in the farmer's name. Thereafter, the farmer is required to first pay his/her share of the cost for the farm inputs – including fertilizers, pesticides, seeds, on-farm storage equipment, and other agricultural services – to a specified bank account designated by the Ministry of Agriculture. The interface with the e-Payment gateway provides various online digital payment options to the farmer such as payment through bank account, mobile wallets, etc. In addition, farmers also have the option to use agent banking and pay in cash or through digital means at agent locations. Once the commercial bank confirms

receipt of funds from the farmer, the Ministry of Agriculture contributes its share and instructs the commercial bank to credit the full amount to the farmer's virtual wallet in the e-voucher system. On completion of this funding process, the farmer can go to the agricultural dealer and utilize the amount for purchase of farm inputs. The agricultural dealers are also linked and registered on the e-Voucher system. In conjunction with the partial subsidy for the purchase of inputs, the e-Voucher program also provides focused training and extension services in the use of the purchased inputs to ensure their most effective on-farm use.

Figure 18: The e-Voucher system is enhancing productivity in the agricultural sector



87. For the private sector in Uganda, however, digital technologies still do not play a significant role in facilitating access to credit. Private sector credit in Uganda is 16 percent of GDP compared

to 46 percent in SSA, and digital models to channel credit to the private sector remain underdeveloped. Some companies like DPO are, however, testing a model of unsecured lending,

whereby they disburse loans of up to US\$ 8,000⁹² without requiring their users to post collateral. This model can be expanded to other platforms, which can leverage merchant generated data (like cash flow patterns) to expand access to credit.

88. Moreover, the regulatory framework for digital financial services is still evolving and gaps remain. The National Payment System Bill has just been passed by Parliament, but there is no concrete timeline for next steps and implementation. An action plan for the

broader National Payments Policy is also yet to be finalized. Consumer protection is another concern; currently it is not clear whether the consumer protection measures outlined in Bank of Uganda's policy and regulatory framework are also applicable to e-money/mobile money providers and to payment aggregators/integrators. A clear policy stance in this regard will strengthen consumer confidence and help build the trust factor in digital payment services among consumers.

The digital entrepreneurship ecosystem is nascent, but dynamic

89. Uganda places well in global entrepreneurship rankings in terms of quantity of entrepreneurial activity (including both necessity⁹³ and opportunity-driven),⁹⁴ but lags on quality. While the total early stage entrepreneurship ranking of Uganda is among the highest in the world, the 2018 Global Entrepreneurship Development Index (GEDI) puts Uganda near the bottom of the rankings, at 131 out of 137 countries,⁹⁵ based on the quality of

its entrepreneurship ecosystem. In this context, the quality of the entrepreneurship ecosystem measures perceptions of entrepreneurship opportunities, levels of innovation and technology adoption, availability of skills, and integration with the international economy. These aspects are underdeveloped in Uganda and relatedly, the tech ecosystem in Uganda is limited in size and scope.

Table 9: Comparison of entrepreneurship ecosystem indicators

	Kenya	Nigeria	Rwanda	Tanzania	Uganda
Global Entrepreneurship Index Rank (out of 137 countries)	109	101	91	115	131
Availability of venture capital (score out of 7)	3.03	1.8	3.24	2.65	2.46
UNCTAD E-commerce Index Rank (out of 152 countries)⁹⁶	88	79	121	96	105
Opportunity perception⁹⁷ score (out of 1)	0.30	0.37	0.36	0.29	0.28

Source: Global Entrepreneurship Index; TCdata360; UNCTAD

90. The Ugandan economy is diversifying, albeit slowly, and can be driven by the digital economy. The services sector amounted to

nearly 52 percent of GDP in SSA in FY19 and about 46 percent of GDP in Uganda, exceeding that of Kenya (43 percent) and Tanzania (38 percent).

92 <https://www.dpogroup.com/africa/easy-advance/>

93 Necessity entrepreneurship: entrepreneurship driven by the lack of other options in the labor market.

94 Opportunity entrepreneurship: entrepreneurship driven by the recognition of business opportunities.

95 GEDI (2018)

96 The UNCTAD E-commerce Index measures an economy's preparedness to support online shopping.

97 Opportunity perception measures the following aspects: percentage of the population that can identify good opportunities to start a business in the area where they live; economic freedom and property rights.

Digital technologies can boost diversification by addressing challenges of productivity and information asymmetries and enhance tradability across borders. Growth in digitally enabled services is expected to be the fastest growing segment of the global services economy and if Uganda can tap into that trend, this would boost the country's journey to economic diversification.

91. There is a growing network of entrepreneurship hubs and service providers aimed at supporting digital startups and Ugandan enterprises are doing well in regional business competitions. But there is little differentiation between incubation⁹⁸ and acceleration⁹⁹ services and sources of financing are limited. In general, hubs find it difficult to develop financial sustainability, as most tend to rely on donor funding for operational expenses.

92. Donor-funded initiatives drive the service provision by hubs. While donor resources are important, they can sometimes detract from a more market-driven approach. Reliance on donor resources can also take away a startup's incentive to move beyond prototyping into market access and growth stages.

93. Uganda is an emerging market for Private Equity (PE)¹⁰⁰ and Venture Capital (VC)¹⁰¹ in the region. Private equity in Africa is expanding with nearly 150 tech start-ups having raised more than \$1 billion in 2018.¹⁰² Uganda was the second most popular destination for deals in the technology, media and telecom sector (Kenya led with 8 deals in the sector).¹⁰³ However, local investors are not particularly active in the digital space. The Kampala Angel Investment Network was formed in 2018 and has invested in about four startups in the payments and skills platforms spaces.¹⁰⁴



Box 6: SafeBoda – A entrepreneurial success story in Uganda

Created in 2015, SafeBoda addresses the dual challenges of navigating Uganda's notorious traffic jams and high rates of road accidents. Uganda's motorcycle taxis (popularly known as 'boda bodas') while affordable, were not always the safest option. In five years and after onboarding nearly 10,000 drivers, SafeBoda has brought a ride-hailing revolution to Uganda with the introduction of safety features like helmets for drivers and riders. Drivers also have access to emergency cash loans and financing to purchase motorcycles and insurance products.

The company is also expanding its menu of services, now offering a mobile wallet, payment services and peer-to-peer transfers for users. A partnership with the Foundation for International Community Assistance (FINCA) offers a savings product to users with the aim of using alternative data generated by activity on the platform (e.g. number of rides, pattern of financial transactions) for access to credit for motorcycle purchases. Since its launch in 2017, the virtual wallet has grown significantly, opening up further opportunities for the development of locally customized solutions and integrated onto digital platforms.

98 Entrepreneurship incubation: support for creating a new business through provision of services like office space, internet, management training, legal and business registration, access to finance and mentorship. Can last from 1-5 years.

99 Entrepreneurship acceleration: support an existing business with a viable idea and business model, for 3-6 months, in reaching the growth stage through provision of services like access to investors, access to markets, targeted management advisory, and mentorship.

100 PE: private capital invested in a company in exchange for a share in the business; usually focused on more mature businesses.

101 VC: private capital invested in a company in exchange for a share in the business; usually focused on younger businesses.

102 Collon and Dème (2018)

103 KPMG and EAVCA (June 2019)

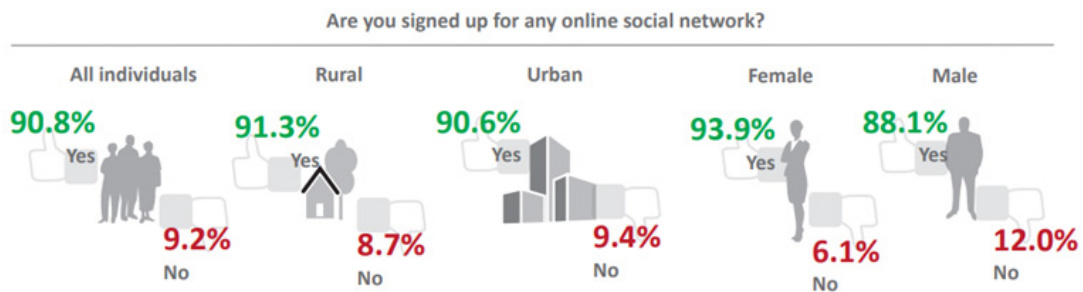
104 <https://kain.co.ug/>

94. Traditional businesses are also leveraging digital technologies for market development and to tap into new sources of revenue. Sectoral trends in the digital entrepreneurship space follow both digitization of traditional business models and new innovative businesses. For example, mobile health is a growing area with companies like Teheca innovating to provide homecare and quality medical services accessible via locally developed apps. The agri value chains offer rich ground for value added digital solutions. For example, farmers require low tech provision of timely information. M-farmer and Yo! Uganda are some examples of digitization in the agri value chain. Data accumulated through farmers’ activities on the platforms can be leveraged to create dynamic profiles that can support data-based decision-making. However, the digitization of traditional business models remains limited. There is a need to establish more consolidated linkages between traditional industry and the tech sector, which can contribute important productivity-enhancing technologies and systems for manufacturing and agribusiness sectors. There is also a need to generate demand

within traditional sectors and invest in firm’s capabilities to facilitate greater integration of technology. One of the ways this can be achieved is through innovation vouchers, whereby firms can use subsidized access to digital solutions as an incentive to integrate technology into their operations.

95. E-commerce is a sector with great potential in Uganda. Uganda ranks 105 out of 152 countries in UNCTAD’s e-commerce index.¹⁰⁵ While only 23 percent of internet users currently shop online, this is roughly equivalent to or even more widespread relative to Zambia (21 percent), Kenya (24 percent) and South Africa (13 percent).¹⁰⁶ As social media usage grows, especially among rural communities and women (Figure 19), it opens a range of entrepreneurship opportunities – for example, Instagram reports a reach of about 420,000 people in Uganda.¹⁰⁷ This highlights the opportunity for market development by developing digital products and services that can leverage social media platforms. However, access and affordability challenges will need to be addressed, otherwise e-commerce platforms like Jumia will remain limited in scope and reach.

Figure 19: Proportion of Ugandan internet users that are registered users of social networks by location and gender¹⁰⁸



Source: NITA-U, 2018

¹⁰⁵ UNCTAD (2019). The e-commerce index measures an economy’s preparedness to support online shopping.

¹⁰⁶ Ibid

¹⁰⁷ Kemp (2019)

¹⁰⁸ <https://www.nita.go.ug/sites/default/files/publications/National%20IT%20Survey%20April%2010th.pdf>

96. There is reason to be optimistic as Ugandan digital businesses expand regionally and regional businesses find Uganda to be a viable market for entry. Homegrown Ugandan businesses, tested in the challenging domestic context, are seeking to expand beyond Uganda. Some fintechs, for example, provide services in Democratic Republic of the Congo and Rwanda, and some platforms for farmers are also branching out regionally into Kenya. SafeBoda launched in Kenya in 2017 and in Nigeria in March 2020.¹⁰⁹ Regional businesses also see Uganda as a viable market and are seeking to expand in the country, driving further development of the ecosystem. Further integration of networks and harmonization of digital regulation across the region would help further this comparative advantage.

97. The regulatory environment that has enabled digital entrepreneurship has evolved in a mostly piecemeal fashion so far, but further development will require a more cohesive approach. Governance is a cross-cutting theme that impacts all pillars of the digital economy. Several legislative actions have been passed including the National Information Technology Authority – Uganda (NITA-U) Act 2009, the Electronic Signatures Act 2011, the Electronic Transactions Act 2011, the Computer Misuse Act 2011, the Uganda Communications Act 2013, the Access to Information Act 2005, the Data Protection and Privacy Bill 2019, and the National Payment Systems Bill 2020. However, not all are being adequately implemented and gaps remain, for example, with limited scope for venture capital (e.g. with the Companies Act 2012 not allowing for compulsorily convertible preferred shares) and delayed implementation of the data protection law.

The digital divide constrains growth of Uganda's digital economy

98. Across most pillars of the digital economy, a gender gap prevails. Gender inequities exist in both access to and usage of digital technologies, which in turn influences the participation of women in the digital economy. This is of particular concern because the digital economy offers avenues to overcome traditional constraints for women such as mobility, access to information and services, and the ability to build networks. Even as financial inclusion of women has increased since 2014, a gender gap remains. Women's use of basic digital services such as mobile money, digital payments, online utility payments and e-commerce is well below that of male counterparts. These basic disparities

provide insights into gender gaps across the broader digital economy.

99. Moreover, there are geographical disparities in access and usage of digital technologies. Network coverage in Uganda has grown, but remains limited in the northern region and in rural areas.¹¹⁰ While infrastructure investments continue to be made, more work needs to be done in enhancing digital literacy across potential consumer segments and making basic digital services accessible.

100. Refugees in Uganda are also underserved. The more than 1 million refugees in Uganda are a potential consumer segment for digital products

109 Kemp (2020)

110 GSMA (2020)

and services and an underutilized source of talent that can support Uganda's digital economy. At present, financial institutions like Equity Bank and career platforms like Fuzu are engaged in providing limited financial and job matching

services to select refugee communities. However, refugee women are far less likely to own and use mobile phones (and access mobile internet) than refugee men.¹¹¹

3.3 Looking ahead: Key messages for the next phase of Uganda's digital transformation

Leverage digital technologies to mitigate the health impact of COVID-19 and support the recovery

101. There is significant scope for digital solutions to support the COVID-19 health response, including through leveraging MNO data. As discussed in Part 1, the COVID-19 crisis has had a significant impact on Ugandans and the economy. Even though emergency measures have been put in place, there is still significant scope to expand mobile health and digital solutions to track cases, preempt outbreaks and manage public health resources (see

Table 10). Mobility indicators based on mobile operators' data can inform epidemiological models and monitor the implementation of isolation measures. However, implementing this approach requires high standards of data privacy in the use of personal information for tracing and monitoring. Such standards are not currently in place in Uganda, but progress may be made if the recent Data Protection and Privacy Law can be fully implemented.



111 GSMA (2019, March)

Table 10: Digital technologies and public health

Public Health measures	Digital technology			
	Internet of things (IoT)	Big data	Artificial intelligence	Blockchain
1. Monitoring, surveillance, detection and prevention of COVID-19 (directly related to COVID-19)	+++	+++	++	+
Examples	1. Real time tracking and live updates in various databases in US, UK and China	1. Modeling of disease activity, potential growth and spread	1. Detection of COVID-19 from chest imaging (X-ray) (Beijing Hospital)	1. Manufacturing and distribution of COVID-19 vaccines once they're available
	2. Live tracking of the at-risk vicinity in Korea (Coronamap.live; wuhanvirus.kr)	2. Modeling of the preparedness and vulnerability of countries in fighting a disease outbreak	2. Prognostication of disease progression via clinical data, imaging and AI	2. Insurance claims from COVID-related illness and death
2. Mitigation of impact (indirectly related to COVID-19)	+++	++	+++	++
Examples	1. Virtual clinics (Pingan, China)	1. Business modeling on pharmaceutical supplies for various medications	1. AI to automatically diagnose medical conditions unrelated to COVID-19 (Zhongshan Ophthalmic Eye Center, China)	1. Distribution of patients' regular medication to the local pharmacy or patients' doorstep
	2. Public information dissemination via WhatsApp in Singapore	2. Modeling of the utility of operating theatres and clinics with manpower projections	2. Medical 'chatbots' to address public inquiries on COVID-19	

Source: Ting et al (2020)

Note: + or low impact (no clear example yet in either official government website); ++ or moderate impact (one clear example); +++ or high impact (two or more examples).

102. While not all solutions may be available immediately in Uganda, equipping and training the CHW network offers a viable channel for integrating digital solutions into the widest national network. For example, equipping and training CHWs in digital data collection can generate close to real-time data for disease surveillance and monitoring. The existing digital inventory management solutions can be further scaled up for the public health sector. Public information campaigns and medical chat bots can be deployed relatively easily, leveraging the strong social media participation among the population. Some tele-health solutions are already available in the market and these can be scaled up via hospital networks to reduce in-person visits.

103. Scaling up commercially available digital solutions through public-private sector collaboration for pharmaceutical and inventory management, health records management and tele-health can allow for a more strategic approach towards COVID-19 mitigation. Figure 20 shows a select menu of digital health solutions available in Uganda, ranging from portable diagnostics (M-scan) to clinical and records management. These solutions can be scaled up through the public health system. At the same time this is an ideal opportunity for the private sector to step up innovation to respond to the crisis.

Figure 20: Selection of m-health apps and solutions in Uganda



104. Leveraging digital financial services (DFS) will allow for continued access to essential financial services even as physical access points face closure or restrictions. Incentivizing greater uptake of DFS in this context may require reduction in fees and increase in transaction limits for mobile wallets. Although these and other steps have been taken in the immediate response to COVID-19, there may be opportunities to consider whether these can remain in place after the crisis as well. The recently launched online Know Your Customer (KYC) project¹¹² also offers an important avenue to reduce transaction costs for financial institutions and expand the availability of financial services and access for consumers.

105. For firms, surviving the crisis and growing through the recovery depends on adequate finance, the ability to develop new capabilities and resilience. For example, liquidity support for firms can be delivered through digital platforms,

reducing the need and demand for extended paperwork and in-person interactions. Medium-to-long term investments in enhancing the innovation and technological capacity of firms (through innovation vouchers for example) can also be deployed. Simplified loan application processes for Micro, Small, and Medium Enterprises (MSMEs) and leveraging alternative credit scoring models can also reduce transaction costs and channel finance to the private sector. Last, productivity can be increased through firm-level support that incentivizes take-up of digital technologies such as smart manufacturing, where adoption in Uganda has generally lagged.

106. Expediting the implementation of digital authentication, mobile ID solutions and digital payments would allow for a more effective social protection response to the pandemic. Digital authentication mechanisms coupled with digital payments can increase the speed,

¹¹² <https://www.bou.or.ug/bou/bouwebsite/RelatedPages/Publications/article-v2/Launch-of-BoU-NIRA-e-KYC-project/>

efficiency and cost savings associated with timely distribution of safety nets in situations like the COVID-19 pandemic, where social distancing and limited physical interactions are required. A solution to facilitate secure identification and authentication of a person or entity, designed to bind the user of an online transaction with their “real world” identity, is essential. This will allow government officials to provide remote services when the only way to authenticate one’s identity is through digital means. Furthermore,

enabling digital payments will help improve the overall accountability of G2P payments. Going forward, a digital “warehouse” of beneficiary information (a single registry) or of potential beneficiaries (a social registry) will be required for the government to provide an effective shock-responsive system. Such a social registry would also allow government to better target, identify and verify beneficiaries, especially if they are linked to the National Identification Register.

Strengthen regulatory environment to allow for the continued expansion of the digital economy

107. Although the National Payments Bill has recently been passed by Parliament, the lack of an implementation timeline constrains further development and effective regulation of the rapidly growing fintech sector. Relatedly, a time-bound action plan with a monitoring mechanism should be put in place to implement the various recommendations and action points outlined under the National Payments Policy framework.

108. The adoption of the Data Protection and Privacy Bill in December of 2018 was a big step forward, but its operationalization has also been delayed. Uganda is yet to make the Law fully operational through the establishment of a Data Privacy office and by issuing regulations to make the Law effective.

109. While growth in digital consumer credit in Uganda is impressive, a regulatory framework is required to mitigate the risks of unregulated

digital lending, which includes high interest rates and predatory lending that could result in high default rates and systemic risk. The current framework for regulation of credit is under the BoU Financial Consumer Protection Guidelines, 2011, which do not apply to fintechs and other unregulated players. However, several entities not regulated by the BoU continue to extend credit. This makes consumer protection difficult to enforce among such institutions. There is a need to establish a robust regulatory ‘framework for orderly digital lending’ that would cover all credit service providers. This will address issues around market conduct (data management and privacy, product disclosure, customer redress, consumer over-indebtedness, rates and pricing) and systemic risk (licensing and reporting requirements, lending prohibitions, capital requirements, and governance requirements).

Review taxation of the digital economy

110. Taxing the digital economy may appear an attractive proposition to boost government revenues, but it may constrain market development over the medium-to-long-term. Although enhanced tax revenue mobilization and limited borrowing are sound strategies for the GoU

to provide additional services, there is a need to review how and where the digital economy should be taxed, balanced against the long-term benefits of market development, including the impact on financial inclusion and internet access. Thus, a short-term emphasis on harvesting revenues

from the digital economy, which remains in early stages of development, can stunt its future inclusive growth and revenue potential. Focusing on market development, including boosting affordability of devices and services, will allow for a broader range of digital products and services to thrive in the market and be accessible to more people, hence broadening the government's tax base in the medium-to-long-term. For example, mobile phones and similar devices could be re-categorized as computing devices so that taxes on these items can be eliminated. Kenya, for example, eliminated value-added tax on mobile phones which led to increased uptake.¹¹³ Such measures would improve the affordability of ICT services and could potentially yield more revenue for government over time. Even in the short-term, it is likely that government will see enhanced tax revenues through the increased volumes and revenues of operators as the subscriber base continues to grow.

111. The social media tax is likely reducing the proportion of internet users and widening digital and income inequality and should be re-evaluated. Social media services contribute to the reduction in information asymmetry, allow microentrepreneurs to reach consumers, and keep migrant populations socially connected. Moreover, the tax is difficult to collect and easy to bypass by more technically savvy users. In FY19, the Ugandan Revenue Authority collected only US\$ 49.5 billion against a projected US\$ 284 billion (which, as discussed in Box 2, was less than 0.3 percent of overall revenue in FY19). The levy is likely to continue to discourage internet use and widen digital inequality between the poor and the rich. Removing the social media tax would contribute positively to the COVID-19 crisis response and encourage the use of

internet and digital technology in Uganda. The availability of digital services such as online shopping, food delivery, social media, instant messaging, and online entertainment allows people in self-isolation to remain connected and socially and economically active while at home. Yet, this requires that barriers to internet use and online transactions are reduced, and that the use of these tools is affordable, especially in countries where internet penetration is still low such as Uganda. Governments can promote affordability by removing taxes and levies applied to specific digital platforms and services, thereby reducing transaction costs and supporting telecommunications companies in lowering prices for services that are needed during the crisis. In the long run, this is also likely to broaden the tax base.

112. The tax on mobile money withdrawals should be revisited and re-examined. In the case of Uganda, the mobile money service is provided by a licensed institution (bank) in partnership with a MNO. While one product/service provided by the bank (agent withdrawals) is not taxed, another product/service provided through a technical solution (mobile phone) is taxed. Even if the tax were removed, mobile money services would still contribute to the tax base through the 10 percent excise duty on mobile money transaction fees introduced in the 2013/14 budget year, generating on average 6 percent of total excise duty revenues. In addition, Value Added Tax is also applied to mobile money transaction fees. The continued imposition of the mobile money withdrawal tax could slow the achievement of key priorities including greater financial inclusion, promotion and adoption of digital payments, and reducing the use of cash during the pandemic.

¹¹³ Mobile Telephony and Taxation in Kenya, 2011, GSMA

Develop coherent strategy of ecosystem support, including skills development

113. Despite the high-level support for digital entrepreneurship in Uganda, practical support for entrepreneurs is ad-hoc and fragmented. Hubs that offer workspace and select advisory support are concentrated in Kampala and do not have a sustainable strategy for graduating enterprises from incubation and acceleration programs. The more established digital entrepreneurs do not interact with the wider ecosystem reflecting silos in an already limited landscape. A more coherent, ecosystem-wide approach that combines support services for entrepreneurs, stimulates private sector investments in venture finance, and features greater policy commitment and coordination can enhance the value of the public investments driving Uganda's digital transformation. For example, new government-run hubs can be run by private sector operators for a fee, which would allow for the continued scaling up of successful private sector approaches to support the digital economy.

114. The gaps in basic and advanced digital skills require a combination of education policy interventions and private sector collaboration. Development of advanced digital skills and professional ICT skills training can be achieved through the adaptation and customization of existing international frameworks such as

EU Digcomp 2.1¹¹⁴ UNESCO ICT Competency Framework,¹¹⁵ or Skills Framework for the Information Age (SFIA).¹¹⁶ An ICT in Education policy would be needed to set standards and guide the integration of digital technologies across the entire curriculum. Furthermore, involving the private sector in defining a national framework and curriculum for digital skills across all levels would ensure alignment between demand and supply.

115. Investments in enhancing the capabilities of firms are key for catalyzing technology adoption and market development in Uganda. Market demand for digital solutions can spur innovation in the digital economy, with startups seeking to respond to real sector needs and firms reaping productivity dividends in the private sector. Business advisory services can support firms in identifying applicable technology solutions, while entrepreneurship hubs can connect firms with digital solutions' providers. Funding for reskilling employees to allow them to effectively deploy digital technologies and for businesses to subsidize purchase of technology solutions could help create a virtuous circle of supply and demand for digital goods, services and skills. This would also be an important aspect of building private sector resilience to survive crises and recover post-crisis.

114 <https://ec.europa.eu/jrc/en/digcompedu>

115 <https://unesdoc.unesco.org/ark:/48223/pf0000213475>

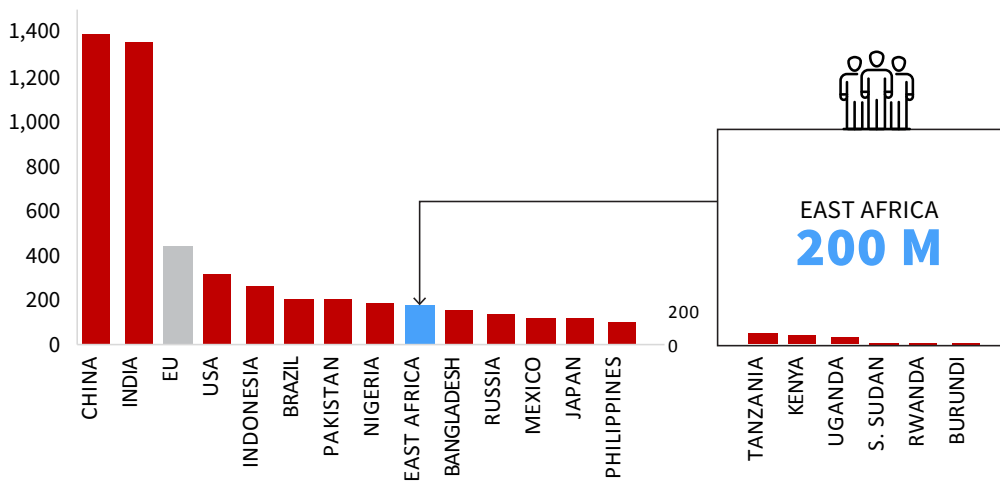
116 <https://www.sfia-online.org/en/tools-and-resources/sfia-views/sfia-7-for-digital-transformation>

Catalyze regional and global integration of Uganda’s digital economy

116. An integrated East African Digital Market would be the 9th largest in the world by population – with significant benefits for Uganda’s digital firms and consumers. A more deeply integrated and competitive regional market would provide a ‘friendly’ space for Uganda’s digital firms to scale and mature before launching into the continental and global markets. It would attract significant new investment in digital infrastructure, expand domestic and cross-

border digitally enabled services and goods trade, stimulate development of locally relevant digital content, and inject greater competition across the region. Digital market integration would also help to close the digital divide, with the biggest benefits accruing to those at the bottom of the pyramid who are able to participate in the digital economy for the first time due to falling costs of telecoms services and availability of more locally relevant content and services in the larger market.

Figure 21: Population size of the largest global markets



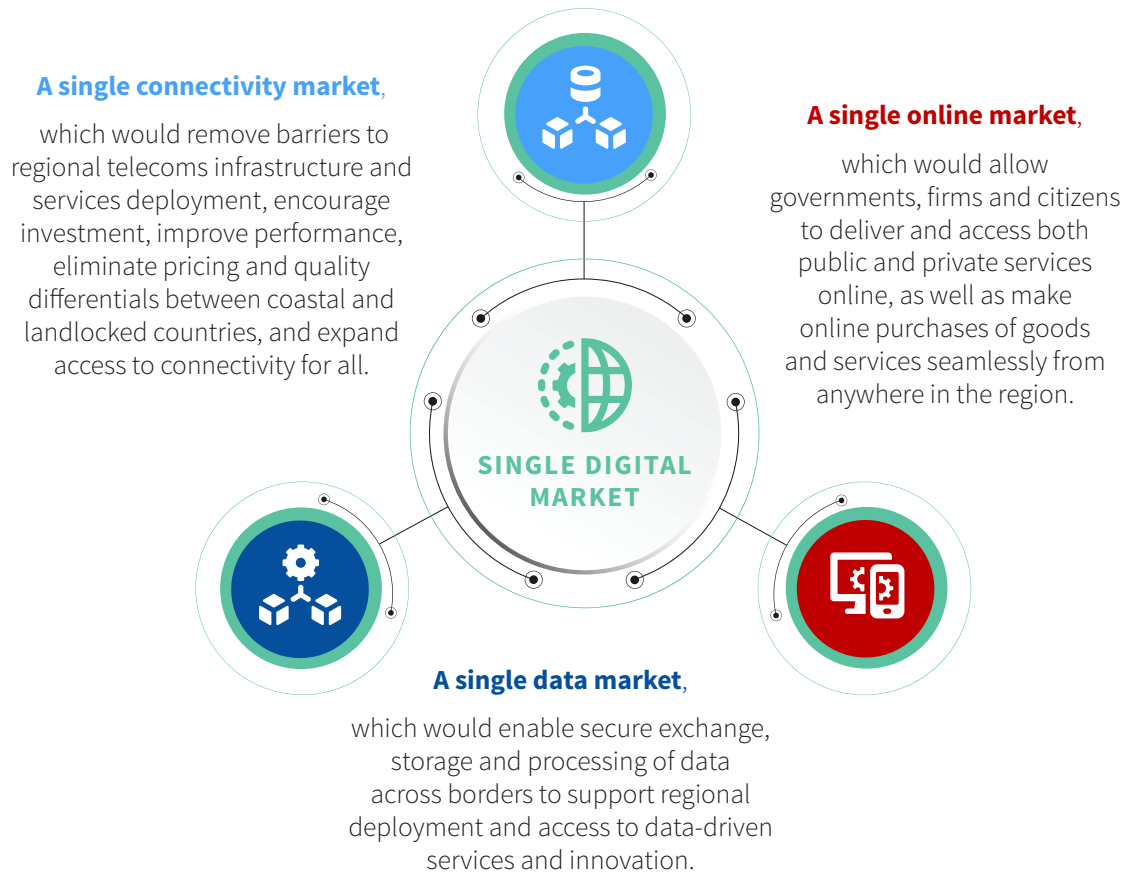
Source: World Bank, *A Single Digital Market for East Africa: Presenting Vision, Strategic Framework, Implementation Roadmap and Impact Assessment*

117. Implementing a SDM in East Africa would create an additional US\$1 to US\$2.6 billion boost in GDP and add between 1.6 to 4.5 million new jobs across the region.¹¹⁷ Benefits of about US\$ 632 million would accrue to existing mobile broadband subscribers in Uganda through lower prices and increased network effects. Ugandan

digital businesses are already making strides in sub-regional and continental level expansion, demonstrating the potential of greater market access. SafeBoda launched in Kenya in 2017 and in Nigeria in March 2020, and fintechs like True African and platforms such as M-farmer also run operations in neighboring countries.

117 World Bank. (2019a, May)

118. Creating a Single Digital Market will require efforts to develop three interrelated sub-markets:



3.4 Conclusion

119. Although Uganda has made significant strides in expanding digital infrastructure and the digital economy, gaps remain. Uganda is now an emerging hub of activity in the region, attracting new businesses and initial investments in the digital economy. However, some segments of the population remain underserved and the potential of the digital transformation to power Uganda's transition to middle income status remains untapped. Linkages between the real sectors, like agriculture and manufacturing,

and the digital economy are limited, though growing as more digital businesses enter the market. Scaling up the nascent linkages through further digitization of agriculture input markets and extension services (similar to the e-voucher program), strengthening the SDM to support regional linkages, and creating a program of innovation vouchers for firms to adopt digital technologies offers opportunities to further advance Uganda's digital transformation.

120. The digital transformation of Uganda can be achieved through a combination of ambitious public-and-private-sector-led efforts.

Continued investment in expanding access to digital technologies and in basic and advanced digital skills, facilitating the adoption of digital technologies and supporting entry of digital and digitally enabled businesses into the market are key priorities for Uganda to advance on its digital economy agenda. A concerted and coordinated push is needed to realize the tremendous gains from the digital economy, including opportunities for informal workers and businesses to connect with the formal economy, for traditional business models to leverage data and technologies for

greater productivity and for labor market entrants to be ready for the jobs of the future. This will require the public sector and regulators to be responsive to changing market conditions and maintain an enabling environment conducive to private sector investments, bring in regional and global experience, and manage associated risks of consumer and privacy protection. The GoU is on the right path, highlighted in the Digital Uganda Vision, the Data Protection and Privacy Bill, and in various ICT initiatives seeded across MDAs. There is a need to consolidate these efforts, capitalize on private sector momentum and leverage partnerships to support Uganda's development journey towards middle-income status.





REFERENCES

REFERENCES

- Acs, Z., Szerb, L., & Lafuente, E. (2019). *The Global Entrepreneurship Index*. TCdata360
- Collon, L. and T. Dème (2018). “2018 was a monumental year for African tech start-ups, with US\$ 1.163 Billion raised in equity funding, a 108% YoY Growth” Partech. Retrieved June 18, 2020 at <https://partechpartners.com/news/2018-was-monumental-year-african-tech-start-ups-us1163b-raised-equity/>
- Downer, Matthew (2019). “*The digital lives of refugees: How displaced populations use mobile phones and what gets in the way.*” GSM Association, London. Retrieved June 18, 2020 at <https://reliefweb.int/sites/reliefweb.int/files/resources/m4hgendergaprefugeecontexts.pdf>
- Efobi, U., Tanankem, B., & Asongu, S. (2018). “Female Economic Participation with Information and Communication Technology (ICT) Advancement: Evidence From Sub-Saharan Africa” (January 3, 2018). *South African Journal of Economics*, 86(2), pp. 231-246
- FinScope Uganda (2018). *Topline Findings Report*. Retrieved June 18, 2020 from <https://fsduganda.org/wp-content/uploads/2018/10/FinScope-Uganda-Survey-Report-2018.pdf>
- Global Entrepreneurship and Development Institute (GEDi) (2018). *2018 Global Entrepreneurship Index rankings*. Retrieved June 18, 2020 at <https://thegedi.org/global-entrepreneurship-and-development-index/>
- GSMA 2012. *What is the impact of mobile telephony on economic growth?* GSM Association, London. Retrieved June 18, 2020 <http://www.gsma.com/publicpolicy/wp-content/uploads/2012/11/gsma-deloitte-impact-mobile-telephony-economicgrowth.pdf>.
- GSMA (2018). *State of the industry report on Mobile Money*. GSM Association, London. Retrieved June 18, 2020 at <https://www.gsma.com/sotir/wp-content/uploads/2020/03/GSMA-State-of-the-Industry-Report-on-Mobile-Money-2019-Full-Report.pdf>
- GSMA (2019). *The Mobile Economy Sub-Saharan Africa*. GSM Association, London. Retrieved June 18, 2020 at <https://www.gsma.com/subsaharanafrica/>
- GSMA(2019, March). *Bridging the Mobile Gender Gap for Refugees*. GSM Association, London Retrieved June 18, 2020 at <https://reliefweb.int/sites/reliefweb.int/files/resources/m4hgendergaprefugeecontexts.pdf>
- GSMA (2020). *Network Coverage Map – Uganda*. GSM Association, London. Retrieved June 18, 2020 at <https://www.gsma.com/coverage/#322>
- Hjort, J., & Poulsen, J. (2019). The Arrival of Fast Internet and Employment in Africa. *American Economic Review*, 109 (3): 1032-79
- IMF (2011). “ICT, Financial Inclusion, and Growth; Evidence from African Countries,” IMF Working Papers 11/73, International Monetary Fund.
- IMF (2018). *Measuring the Digital Economy*.
- IMF (April 2020). World Economic Outlook, April 2020: *The Great Lockdown*

IMF (May 2020). *Uganda—Request for Disbursement Under the Rapid Credit Facility*. Press Release; Staff Report; and Statement by the Executive Director for Uganda.

IMF and World Bank (April 2020). *Uganda Debt Sustainability Analysis*.

Insight2impact (2019). *Africa's Digital Platforms and Financial Services: An Eight-Country Overview*. Johannesburg.

International Telecommunications Union (ITU) database. Retrieved June 18, 2020 at <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>

International Telecommunications Union (ITU) (2019). Measuring digital development ICT Price Trends. Retrieved June 18, 2020 https://www.itu.int/en/mediacentre/Documents/Documents/ITU-Measuring_Digital_Development_ICT_Price_Trends_2019.pdf

Jackson, Tom (March 2020). *Ugandan on-demand motorcycle taxi app SafeBoda has made Nigeria its third market with a launch in Ibadan, the country's third city*. Retrieved June 18, 2020 at: <https://disrupt-africa.com/2020/03/ugandan-moto-taxi-startup-safeboda-expands-to-nigeria-with-ibadan-launch/>

Kampala Angel Investment Network <https://kain.co.ug/>

Kemp, Simon (2019). *Digital 2019: Uganda (January 2019) v01* Retrieved June 18, 2020 at <https://datereportal.com/reports/digital-2019-uganda>

Kemp, Simon (2020). “*Ugandan moto-taxi startup SafeBoda expands to Nigeria with Ibadan launch*” Retrieved June 18, 2020 at <https://disrupt-africa.com/2020/03/ugandan-moto-taxi-startup-safeboda-expands-to-nigeria-with-ibadan-launch/>

KPMG and EAVCA (June 2019). *Private Equity Sector Survey of East Africa for the period 2017 to 2018*. Retrieved June 18, 2020 at <http://eavca.org/wp-content/uploads/2019/07/2019-PE-in-East-Africa-Survey-Report-FINAL.pdf>

Lloyd-Jones, T. and Redin, F. (2017). “*Uganda: The Role of the Informal Economy in City Growth – Policy Brief for Decision Makers*”. Brussels Cities Alliance Retrieved June 18, 2020 from https://www.citiesalliance.org/sites/default/files/PB_Uganda_WEB.pdf

Makerere University (2017). *Bringing the future to the Present*. The Report of the Visitation Committee on Makerere University, 2016 Retrieved June 18, 2020 <http://www.education.go.ug/wp-content/uploads/2020/01/The-Report-of-the-Visitation-Committee-on-Makererere-University-2016-compressed.pdf>

Makerere University (August 2019). *Makerere Council Approves STEM Affirmative Action Policy*. Public Relations Office. Retrieved June 18th 2020 from <https://news.mak.ac.ug/2019/08/mak-council-approves-stem-affirmative-action-policy>

Merotto, Dino Leonardo (January 2020). *Uganda: Jobs Strategy for Inclusive Growth* Washington, D.C. : World Bank Group.

Ministry of Finance, Planning and Economic Development. *Report on public debt, guarantees, other financial liabilities and grants for FY19/20*, March 2020

Ministry of ICT and National Guidance: *Digital Uganda Vision*. Retrieved June 18, 2020 at <https://ict.go.ug/initiatives/digital-uganda-vision/#:~:text=The%20Vision,combining%20initiatives%20across%20multiple%20sectors.>

National Information Technology Survey March 2018.

Otage, Stephen (2020). “*Four OPM officials arrested over procurement prices for beans, maize flour*” Daily Monitor. Thursday, April 29, 2020. Available at <https://www.monitor.co.ug/News/National/OPM-officials-arrested-inflated-prices-for-COVID-19-relief-food/688334-5519020-rxgb2tz/index.html>

Patey, L. (2015). Oil in Uganda: Hard bargaining and complex politics in East Africa. The Oxford Institute for Energy Studies, University of Oxford. Retrieved June 18th 2020 at <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2015/10/WPM-601.pdf>

Pathways for Prosperity Commission (2018). *Charting pathways for inclusive growth: From paralysis to preparation*. Oxford: Blavatnik School of Government, University of Oxford. Retrieved June 18, 2020, from https://pathwayscommission.bsg.ox.ac.uk/sites/default/files/2019-11/charting_pathways_executive_summary.pdf

Pollicy.org (2019). “*Offline and Out of Pocket: The Impact of the Social Media Tax in Uganda on Access, Usage, Income and Productivity*” Retrieved June 18th 2020 at <https://www.genderit.org/resources/offline-and-out-pocket-impact-social-media-tax-uganda>

Rehm, M., Saldien, J., & Manca, S. (Eds.) (2019). Project and Design Literacy as Cornerstones of Smart Education: proceedings of the 4th international conference on smart Learning Ecosystems and Regional Development. Presented at the 4th International Conference on Smart Learning Ecosystems and Regional Development (SLERD 2019)., Singapore.

Ting, D. S. W., Carin, L., Dzau, V., & Wong, T. Y. (2020). Digital technology and COVID-19. *Nature Medicine*, 26(4), 459–461 Retrieved June 18th 2020 at <https://www.nature.com/articles/s41591-020-0824-5>

United Nations Conference on Trade and Development (UNCTAD) (2019). B2C E-Commerce Index; *Technical Notes on ICT for Development No. 14*. Retrieved June 18, 2020 at https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d14_en.pdf

UNCDF (2020). “*Impact of COVID-19 on Ugandan MSMEs: Informal sector.*” Uganda Business Impact Survey 2020

UNICEF and EPRI (2020). COVID-19 Technical Note No. 2: “*Micro-simulating the socio-economic impact of a one-off relief cash transfer to households with informal workers in Uganda*”

Wieser, C., Bruhn, M., Kinzinger, J.P., Ruckteschler, C.S., & Heitmann, S. (2019). The Impact of Mobile Money on Poor Rural Households : Experimental Evidence from Uganda (English). Policy Research working paper; no. WPS 8913. Washington, D.C. : World Bank Group.

World Bank Development Indicators, 2016

World Bank (2016, April). Uganda Economic Update, 7th Edition. *From smart budgets to smart returns: Unleashing the power of public investment management*. Washington, D.C.: World Bank Group.

World Bank (2018). *Closing the Potential-Performance Divide in Ugandan Agriculture*.

World Bank. (2019a, May). *A Single Digital Market for East Africa: Presenting Vision, Strategic Framework, Implementation Roadmap, and Impact Assessment*. Washington, D.C.: World Bank Group.

World Bank (2019b, May). Policy Note: *Unlocking agriculture finance and insurance in Uganda – The Financial Sector’s role in agricultural transformation*.

World Bank (2019c, May). *Uganda Economic Update, 13th Edition: Economic Development & Human Capital in Uganda: A Case for Investing More in Education*. Washington, D.C.: World Bank.

World Bank, (2019a, June). *Digital Economy for Africa Initiative*

World Bank (2019b, June). Uganda Social Protection Public Expenditure Review. Washington, D.C.: World Bank.

World Bank (2020, January). *Uganda Economic Update, 14th Edition: Strengthening social protection to reduce vulnerability and promote inclusive growth*. Washington, D.C.: World Bank.

World Bank (2020, February). *Uganda: Jobs Strategy for Inclusive Growth*. Factsheet. Available at <https://www.worldbank.org/en/news/factsheet/2020/02/25/uganda-jobs-strategy-for-inclusive-growth>

World Bank (2020). *Digital Economy for Africa Initiative*

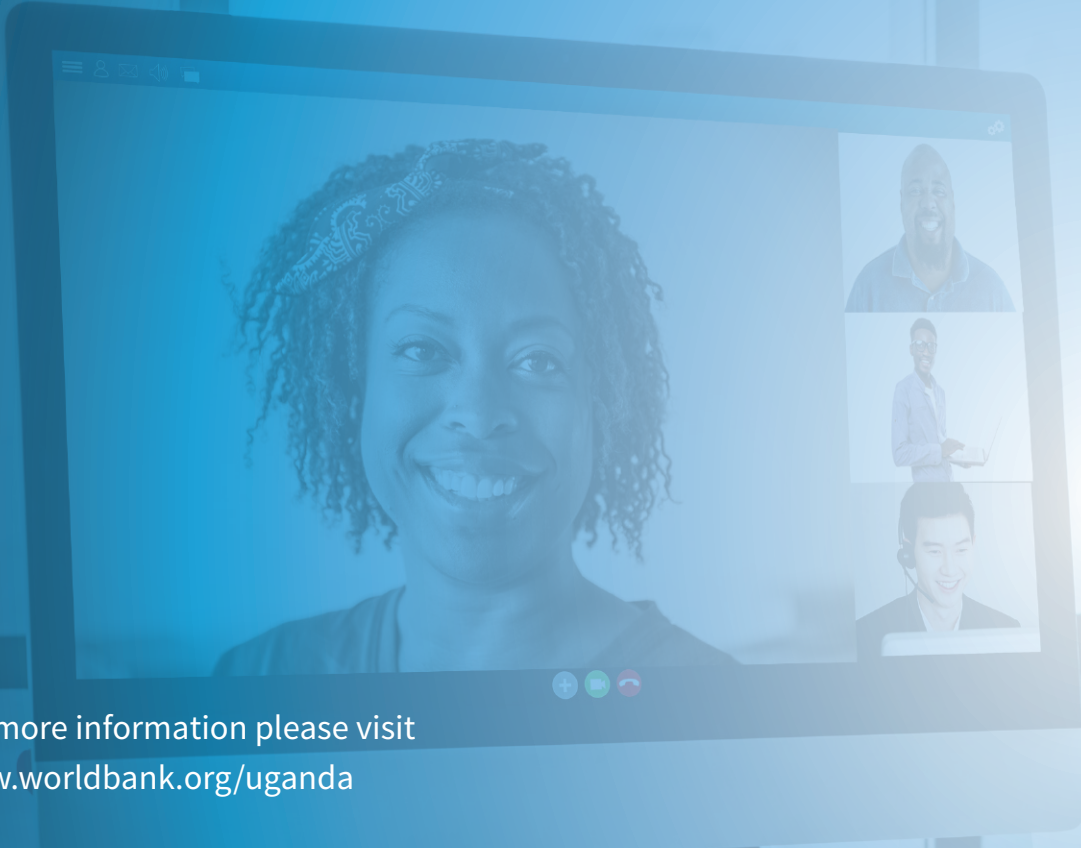
World Bank, (2020, January). Global Economic Prospects, January 2020: *Slow Growth, Policy Challenges*. World Bank Enterprise Survey.

World Bank-IMF (March 2020). *Debt Sustainability Framework for Low-Income Countries*

World Bank (April 2020a). Commodities Price Forecast,

World Bank, (April 2020b). Africa's Pulse

World Bank, (April 2020c) Commodity Markets Outlook, April 2020: *Implications of COVID-19 for Commodity Markets*



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