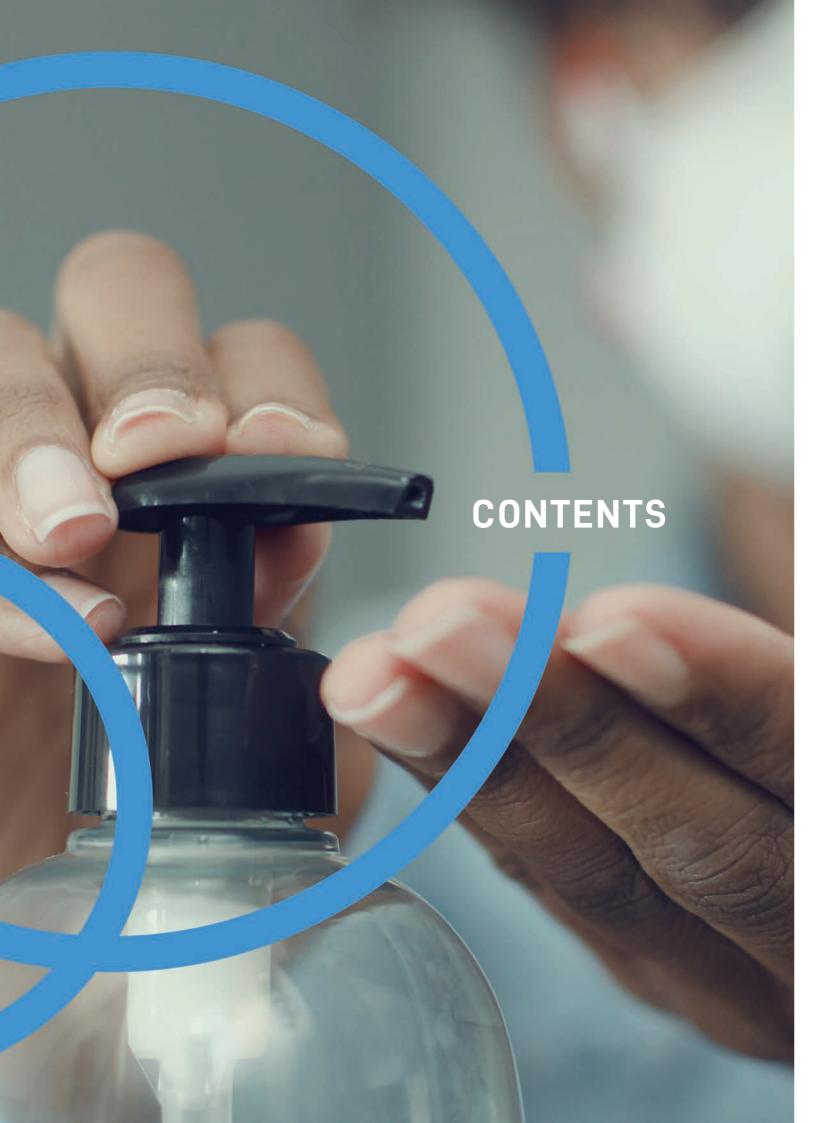


# **BUILDING RESILIENCE**

COVID-19 IMPACT & RESPONSE IN URBAN AREAS - CASE OF KENYA & UGANDA





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# I. INTRODUCTION

The COVID-19 (C19) pandemic is evolving rapidly, both globally and in Africa. Case numbers are increasing across the globe, and the outlook remains uncertain at the time of writing (November 2020). In Africa, many governments took decisive actions early-on to contain the spread of C19, while making concerted efforts to improve healthcare capacity and sustain the economy and livelihoods. Governments have had to adapt their responses as the disease situation continues to evolve.

To date, significant impacts on health systems and economy have been observed across African countries, including in densely-populated urban areas. This underscores the need to strengthen pandemic resilience in many African cities in order to mount a robust response against the evolving C19 pandemic, while also preparing for potential disease outbreaks and economic shocks in the future.

As a longstanding development partner of African governments, the Japan International Cooperation Agency (JICA) aimed to establish a fact base for Kenya and Uganda that is sufficiently granular and up-to-date for supporting data-informed decision-making by policymakers involved in the C19 response. Findings from this research will allow various stakeholders including governments, private sector players, non-profit organizations and development partners (including JICA itself), to understand the on-ground situation in Kenya and Uganda, thereby informing where attention may be well placed.

This paper shares those key findings across the following dimensions, based on a range of primary and secondary research conducted from September 2020 to November 2020 in Kenya and Uganda. Where relevant, dates are shown for when the data was collected or accessed, with the latest date being 23 November 2020.

- · C19 disease progression
- Government policies
- Healthcare capacity
- Economic impact including on the informal sector
- Trade and logistics impact
- · Impact on consumer sentiment and behaviour



# II. EXECUTIVE SUMMARY

The COVID-19 (C19) pandemic continues to evolve rapidly, and the outlook remains uncertain both globally and in Africa as of 23 November 2020

At the time of writing, the disease has spread to nearly every country in the world with approximately 60 million cases and 1.4 million deaths confirmed globally, of which approximately 2 million cases (~3% of total) and 50,000 deaths (~4% of total) have been reported in Africa (~17% of total global population).<sup>1,2</sup>

Testing levels vary significantly across African countries, but tend to be lower compared to other regions of the world, which obfuscates the true prevalence of C19

Limited testing capacity may have played a role in the relatively fewer cases per capita reported in Kenya and Uganda versus in other parts of the world. However, since October, the daily case count and case positivity rates have risen sharply in both Kenya and Uganda,<sup>3</sup> and have yet to flatten out at the time of writing.

# Encouragingly, mortality rates in both countries tend to be well below the global average

At this stage, no definitive research has been published on Africa's C19 mortality rates. However, demographics are a leading hypothesis, as ~75% of C19 deaths globally are of individuals over the age

of 65, and only ~2% of Kenyans and Ugandans are in this age range.<sup>4</sup>

While the disease outlook is indeterminate, C19 has unquestionably impacted urban areas in Kenya and Uganda, with regards to healthcare systems, economy, trade and logistics, as well as everyday consumer sentiment and behaviour.

#### Both the Kenyan and Ugandan governments took swift action shortly after the first case of C19 was confirmed in East Africa

After the first case was confirmed in the region on 12 March 2020, the governments of Kenya and Uganda announced a stringent set of Non-Pharmaceutical Interventions (NPIs) and healthcare policies to try to contain the virus, and delay its spread while preparing the healthcare system.<sup>5</sup>

Kenya's announced NPIs had a stringency index of approximately 76 (on a scale of 100) at 20 days after the first confirmed C19 case, while Uganda's was approximately 90 including a shelter-in-place lockdown and ban on public transport.<sup>6</sup> These measures appear to have played a key role in keeping cases relatively low for several months in the early stages of the pandemic, but restrictions have been eased since July 2020.

<sup>&</sup>lt;sup>1</sup>Johns Hopkins University. 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer; [Accessed 4 November 2020].

<sup>2</sup> Mwai, P. 2020. 'Coronavirus; What's happening to the numbers in Africa?'. BBC. Retrieved from https://www.bbc.com/news/world-africa-53181555 [Accessed 4 November 2020].

<sup>&</sup>lt;sup>3</sup> Roser, M., et al. 2020. 'Coronavirus Pandemic (COVID-19)'. Retrieved from https://ourworldindata.org/coronavirus#licence [Accessed 4 November 2020].

<sup>&</sup>lt;sup>4</sup> World Health Organization. 2020. 'WHO Coronavirus Disease (COVID-19) Dashboard.' Retrieved from https://covid19.who.int/; United Nations. 2020. '2019 Revision of World Population Prospects.' Retrieved from https://population.un.org/wpp/ [Accessed November 2020]. 
<sup>5</sup> Gubash, C. 2020. First cases reported in East Africa. NBC News. Retrieved from https://www.nbcnews.com/health/health-news/live-blog/coronavirus-updates-live-dow-plunges-white-house-grapples-spreading-crisis-n1157551/ncrd1157691#blogHeader [Accessed 13 March 2020]

<sup>&</sup>lt;sup>6</sup> Hale, T., et al. 2020. Oxford COVID-19 Government Response Tracker, Blavatnik School of Government. Retrieved from https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker [Accessed 4 November 2020].

Both countries announced healthcare policies aimed at optimising healthcare supply (i.e. Kenya mandated 300 ICU beds per county),<sup>7</sup> and demand (i.e. free testing in densely-populated areas in Nairobi at mobile testing stations).<sup>8</sup> However, new policies take time to implement, and the baseline health system is foundational to a country's ability to mount a robust pandemic response in a short period of time.

# The onset of C19 highlighted persistent challenges facing the Kenyan and Ugandan healthcare systems

In both countries, limitations in the healthcare workforce (i.e. 0.03 and 0.06 lab technicians per 1000 population in Kenya and Uganda respectively versus the world average of 0.28),<sup>9</sup> and healthcare infrastructure (21 and 9 laboratories capable of performing PCR testing along with 518 and 55 ICU beds in Kenya and Uganda respectively),<sup>10</sup> constrain the immediate C19 response. This is exacerbated by a reliance on imported medical supplies (i.e. local manufacturers produce only ~25–30% of pharmaceuticals and less than ~10% of medical supplies consumed)<sup>11</sup>, inconsistent public funding and ineffective health information systems.

Despite these pre-existing challenges, governments, private sector players and development partners have made concerted efforts to respond to C19, such as creating an accreditation process for laboratories to test for C19, and reducing turnaround time to approve local manufacturers of PPE. Although testing capacity has improved in both countries owing

to measures taken by the governments, at this stage it is unclear whether treatment capacity was increased sufficiently in the initial stages of the pandemic. Further research in the future will be needed to assess the relative success of initial measures taken in both countries.

Strengthening health systems requires a holistic, longer-term approach, particularly as these challenges impact not only the effective testing and management of C19 patients, but also other healthcare outcomes

HIV/AIDS, respiratory infections, maternal and child health-related conditions, and cardiovascular diseases are the main contributors to disease burden and mortality in both Kenya and Uganda.

Hard-earned gains for these diseases may be at risk, with countries allocating limited resources for a potential C19 outbreak scenario, and non-C19 patients changing health-seeking behaviour. The latter has already been observed. For example, ~62% of surveyed urban consumers in Kenya and Uganda who required regular or viral disease treatment reported reduced visits to health facilities since March 2020. Consumers reported that this was primarily due to fear of contracting C19 and improved health compared to the previous six months. In addition, policies that hinder access (i.e. no public transport to facilities, facilities encouraged to cancel or delay elective procedures), and reduced income (i.e. job loss from C19) have also contributed to this.

These findings are consistent with those from other reports, with the World Food Programme recording increased cases of child malnutrition in Kenya attributable to a reduction in health-seeking behaviour, and UNAIDS finding reduced testing for HIV/AIDS across sub-Saharan Africa between April and August 2020.<sup>12</sup>

C19 has already had significant impact on the Kenyan and Ugandan economies across various dimensions. While impact is felt across the board, its magnitude differs, with some sectors such as tourism and informal businesses getting relatively harder hit

Despite announcing emergency economic measures to cushion businesses and households (i.e. as of June 2020, announced stimulus packages are equivalent to ~0.6% and ~1.1% of GDP in Kenya and Uganda respectively), significant impact can be observed across several macroeconomic dimensions in both countries. For example, in October, the International Monetary Fund (IMF) revised its 2020 projection of real GDP growth rate from +6.0% down to +1.0% in Kenya, and from +6.2% to -0.3% in Uganda. Employment is severely affected too. In Kenya, the unemployment rate has doubled from ~5.2% to ~10.4% between the first and second quarters of 2020 with those aged 20-29 most affected. Greenfield FDI (Foreign Direct Investment) is much lower than in previous years, with a reported ~85% decrease in January - September 2020 compared to the average of the last five years for the same period in Kenya.

No Greenfield FDI was reported in Uganda in 2020 in January - September. The Kenyan shilling has seen record lows during 2020. Encouragingly, the Ugandan shilling has largely maintained its value at the time of writing. In addition, the informal sector which contributes ~34% and ~50% to Kenyan and Ugandan GDPs respectively, as well as the plurality of jobs, has been particularly hard hit with ~94% and ~86% of informal sector businesses in Nairobi and Kampala experiencing declines in revenue.<sup>13</sup>

While C19 negatively impacted exports of services in East Africa (e.g. tourism and transportation sectors), overall trade impact on goods has not been as significant as some models initially predicted<sup>14</sup>

Exports of services such as in the tourism and transportation sectors remain heavily impacted,15 while exports of some goods have been more resilient. For example, the Kenyan tea export volume has increased by approximately 12% yearon-year between September 2019 and September 2020, partially owing to increased global demand for tea (driven by home consumption), and supply chain disruptions caused by C19 in India, a leading exporter of the good. Ugandan gold exports have also increased in value year-on-year, partially owing to the higher global demand for gold with an approximate 26% increase in the price of gold between January and August 2020.16 These factors underscore the complexity of global supply chains, which continue to adapt to the evolving C19 situation and government policies.

<sup>&</sup>lt;sup>7</sup> Ratner, B. 2020. 'Kenya COVID-19 hospital gears up for surge in new infections.' Reuters. Retrieved from: https://www.reuters.com/article/us-health-coronavirus-kenya-hospital-idUSKCN24P0OM [24 July 2020].

<sup>&</sup>lt;sup>8</sup> Ombuor, R. 2020. 'Low turnout as Kenya offers free testing in feared Coronavirus hotspots'. Voice of America. Retrieved from https://www.voanews.com/covid-19-pandemic/low-turnout-kenya-offers-free-testing-feared-coronavirus-hotspots [4 May 2020].

<sup>9</sup> World Health Organization. 2020. World Health Data Platform. Retrieved from https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4549 [Accessed October 2020].

<sup>&</sup>lt;sup>11</sup> Banga, K., et al. 2020. 'Africa trade and COVID-19: the supply chain dimension.' African Trade Policy Centre working paper 586. Retrieved from https://www.odi.org/sites/odi.org.uk/files/resource-documents/africa\_trade-covid-19\_web\_1.pdf [August 2020].

<sup>&</sup>lt;sup>12</sup> World Food Programme. 2020. 'WFP Global Response to COVID-19: September 2020.' [Retrieved from https://docs.wfp.org/api/documents/WFP-0000119380/download/ [29 September 2020]; UNAIDS. 2020. 'COVID-19 impacting HIV testing in most countries'. Retrieved from https://www.unaids.org/en/resources/presscentre/featurestories/2020/october/20201013\_covid19-impacting-hivtesting-in-most-countries [13 October 2020].

<sup>&</sup>lt;sup>13</sup> JICA-BCG Nairobi (n=308) and Kampala (n=303), Informal Sector Survey, 19 October - 4 November 2020; Nairobi.

<sup>&</sup>lt;sup>14</sup> United Nations Trade Statistics. 2020. UN Comtrade database. Retrieved from https://comtrade.un.org/ [Accessed October 2020].

<sup>&</sup>lt;sup>15</sup> Ibid.; World Trade Organization. Retrieved from https://docs.wto.org/dol2fe/Pages/FE\_Search/FE\_S\_S005.aspx [Accessed October 2020].

<sup>&</sup>lt;sup>16</sup> Kenya Bureau of Statistics. 2020. Leading economic indicators. Retrieved from https://www.knbs.or.ke/?page\_id=1591 [Accessed October 2020]; The Economist Intelligence Unit. 2020. 'Africa July update: modest rebound with heavy baggage'. Retrieved from https://www.eiu.com/n/africa-july-update-modest-rebound-with-heavy-baggage/ [22 July 2020].

C19 has impacted the lives of urban consumers<sup>17</sup> across various dimensions in Kenya and Uganda; many have had to adapt to the 'new reality', catalysing shifts in consumer sentiment and behaviour that may outlast the immediate crisis

C19 has impacted the lives of urban consumers in Kenya and Uganda across various dimensions including household income, health and wellness, mobility and digital adoption and many have had to adapt to changing circumstances.

- Household financial strain: Most surveyed urban consumers reported experiencing a decline in household income (~70% in Kenya and ~84% in Uganda), with ~47% in Kenya and ~67% in Uganda experiencing a decline of more than 50% of their income. This was primarily driven by job losses (with ~45% in Kenya and ~48% in Uganda losing their jobs), and reduced salary for those employed
- Health and wellness: ~28% of Kenyans and ~27% of Ugandans are unwilling to be tested for C19. Unwillingness has largely been driven by credibility concerns in Kenya (~38%) and affordability constraints in Uganda (~30%). In both countries, adherence to preventive measures has begun to waver, driven by reduced fear of the virus. Also, access to water has deteriorated during the pandemic with ~33% of Kenyan and ~25% of Ugandan urban consumers reporting significant disruption in water supply or higher cost of water
- Mobility: In urban areas in both countries, significant reduction in overall movement of people was observed for the first few months due to C19. For example, in April,

- the movement from home to transit station declined by ~45% and ~82% in Kenya and Uganda respectively compared to pre-Cl9 baselines. Despite fears of contracting the virus, only ~33% of Kenyans and ~22% of Ugandans reported adopting new modes of transport, primarily due to affordability
- Digital adoption: Internet adoption across
  activities has increased in both countries with
  education (~66% in Kenya and ~52% in Uganda)
  and remote work (~62% in Kenya and ~55% in
  Uganda) driving increased use. However, lower
  income urban consumers are less likely to
  increase usage due to financial strain under C19

Encouragingly, many innovative solutions and multi-sectoral partnerships have emerged in response to C19 and may contribute to pandemic resilience in Kenya and Uganda going forward

One selected example in Kenya is Wheels for Life, a service launched for pregnant women to access free transport to health facilities during curfew hours. It was implemented as a joint effort between the Ministry of Health, private healthcare providers in Kenya, and technology companies such as TeleSky (digital call centre), Bolt (ride sharing), and Flare (emergency response dispatching), to ensure maternal health outcomes are not compromised.

In Uganda, an e-commerce platform to connect market vendors with consumers created by SafeBoda (motorbike ride sharing) and the United Nations Capital Development Fund was developed and implemented. Orders are placed on the SafeBoda app, paid using a mobile wallet feature, and then delivered to end-users.

Deliveries included groceries as well as medical goods after the National Drug Authority (NDA) joined this partnership.

Based on these findings and with the C19 situation continuing to evolve, four priorities emerge for policymakers and their partners in Kenya and Uganda to consider regarding response and recovery planning:

#### 1. Accelerate health system strengthening:

Apply a holistic approach to strengthen health systems, building on them as the foundation for pandemic resilience. This includes capacity development for healthcare workers, progress towards universal health coverage, optimisation of supply chains, improved information management, and other areas that are important for both the ongoing management of high-burden diseases, and immediate outbreak response

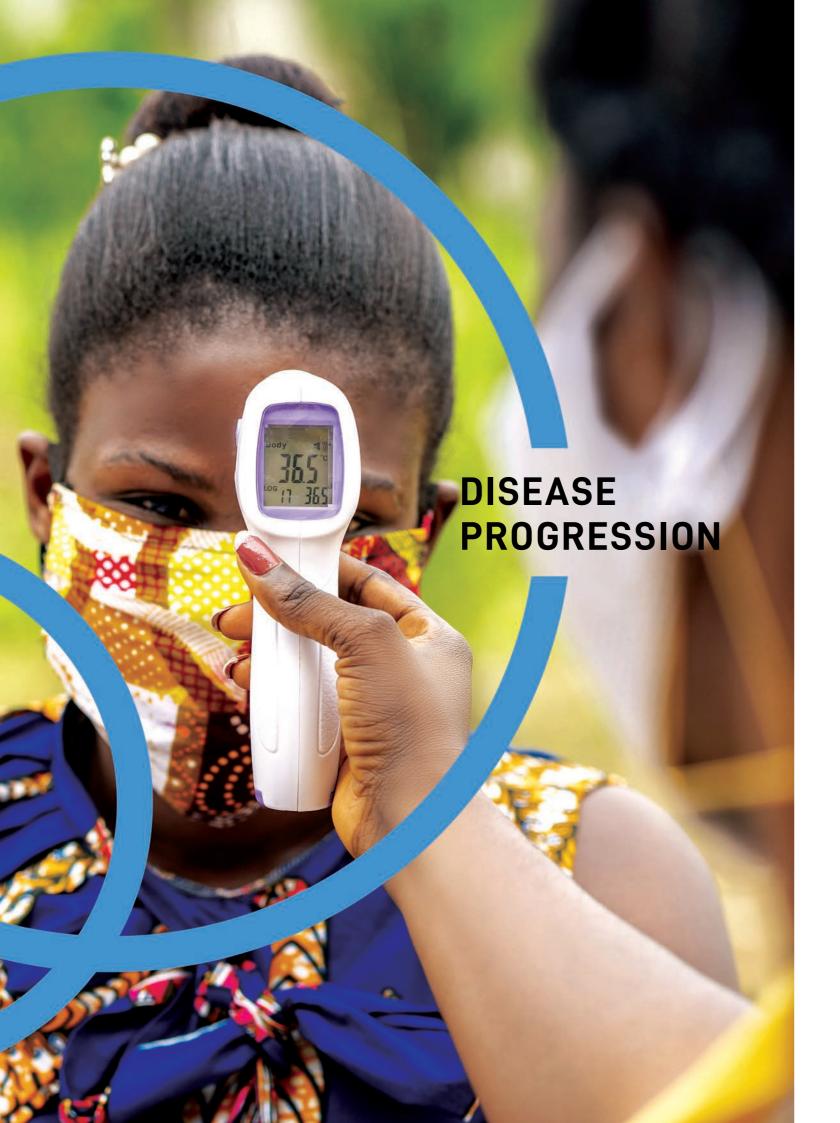
#### 2. Build resilience for vulnerable populations:

Make concerted efforts across various stakeholders to empower the most vulnerable populations by linking them with innovative solutions (e.g. onboarding to online marketplaces, improving financial access through data-driven risk assessment, improving access to safe water and sanitation, etc.)

- 3. Scale up high-potential homegrown solutions: Create a platform to accelerate the development and adoption of innovative homegrown solutions in Africa. Emerging in response to C19, some of these solutions have the potential to generate sustainable at-scale impact if sufficiently supported (e.g. provide technical and financial support, match to strategic partners, etc.)
- 4. Take East African Community (EAC) regional harmonization to the next level: Strengthen emergency response coordination mechanisms based on key learnings from C19 response, especially around cross-border movement of people and goods (e.g. early detection of potential disruption, data-driven collective decision-making, joint resource mobilisation, etc.)

 $<sup>^{17}</sup>$  JICA-BCG Kampala, Uganda Consumer Survey, 18 October - 7 November 2020; JICA-BCG Nairobi & Mombasa, Kenya Consumer Survey, 16 October - 5 November 2020.

<sup>&</sup>lt;sup>18</sup> Google Mobility



# **III. DISEASE PROGRESSION**

## **Key takeaways**

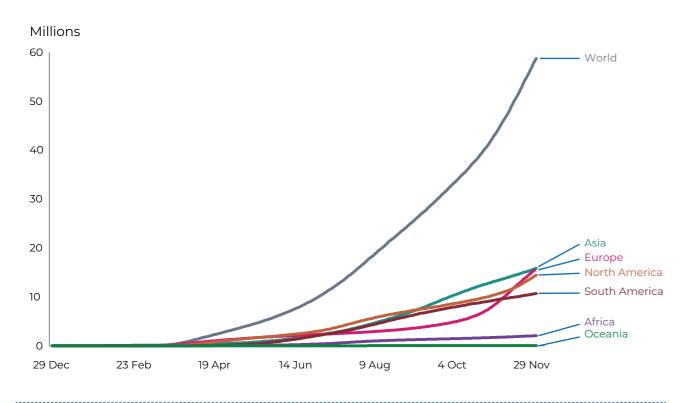
- Testing levels remain below each country's theoretical daily capacity and below global testing levels, which obfuscates the true prevalence of C19
- While Kenya and Uganda have reported fewer cases per capita versus other parts of the world, case positivity rates are on a sharp rise at the time of writing in both countries
- Mortality rates remain well below the global average; while definitive research is yet to be published on why, demographics continue to be a leading hypothesis
- Overall, disease progression remains highly dynamic, and close monitoring through consistent and high testing levels is important

## Methodology

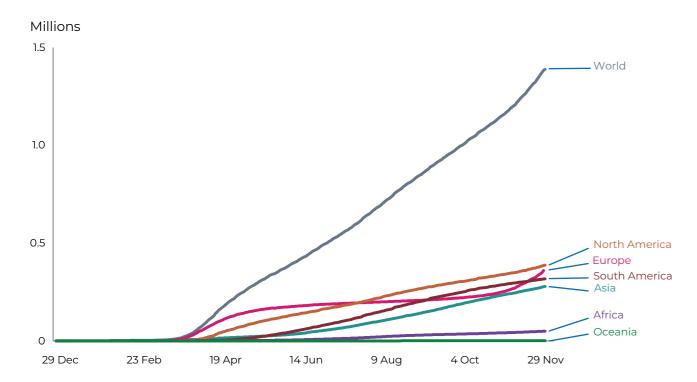
- Leveraged public databases on cases, testing, and mortality data from John Hopkins University, Our World in Data and Worldometer that are typically updated daily
- Triangulated with secondary research from government websites (i.e. press releases) and social media channels (typically updated daily)
- Supplemented with expert interviews with government officials, technical experts, healthcare providers and relevant private sector leaders

### **EXHIBIT 1: TOTAL C19 CASES AND DEATHS BY REGION**

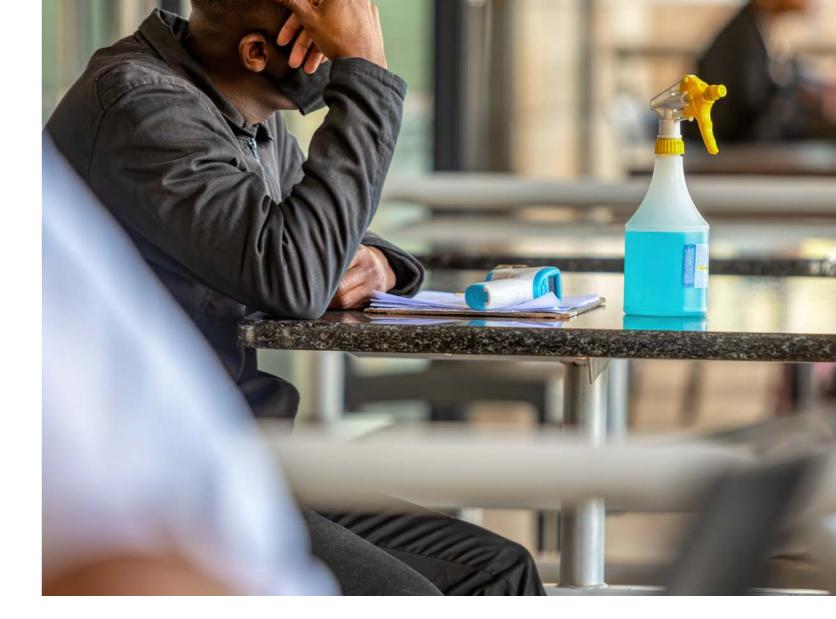
#### Cumulative confirmed C19 cases



#### Cumulative confirmed C19 deaths



**Source:** Johns Hopkins University 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 23 November 2020].



# Disease progression in Kenya and Uganda

The COVID-19 (C19) pandemic continues to evolve rapidly, and the outlook remains uncertain both globally and in Africa as of 23 November 2020

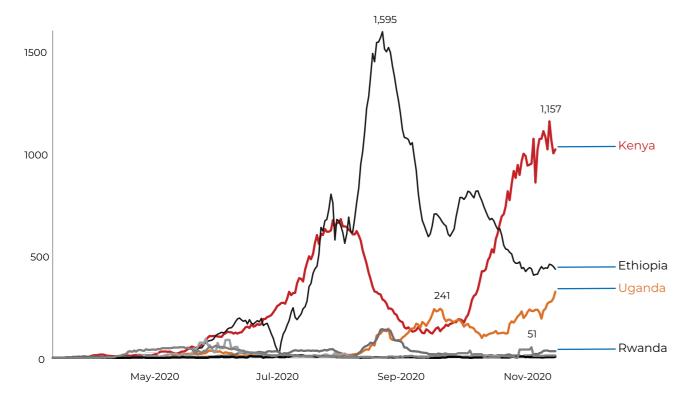
At the time of writing, the disease has spread to nearly every country in the world with approximately 60 million cases and 1.4 million deaths confirmed globally, of which approximately 2 million cases (~3% of total) and 50,000 deaths (~4% of total) have been reported in Africa (~17% of global population).<sup>19,20</sup>

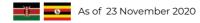
In East Africa specifically, the disease situation remains heterogeneous across countries and continues to evolve. For example, cases are increasing in Kenya and Uganda at the time of writing, while Rwanda remains relatively constant, and some countries in the region such as Tanzania do not publish C19 data publicly on a consistent basis.

<sup>&</sup>lt;sup>19</sup>Johns Hopkins University. 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer; [Accessed 4 November 2020]. <sup>20</sup>Mwai, P. 2020. 'Coronavirus; What's happening to the numbers in Africa?'. BBC. Retrieved from https://www.bbc.com/news/world-africa-53181555 [Accessed 4 November 2020].

# **EXHIBIT 2: DAILY CONFIRMED CASES BY EAST AFRICAN COUNTRY**

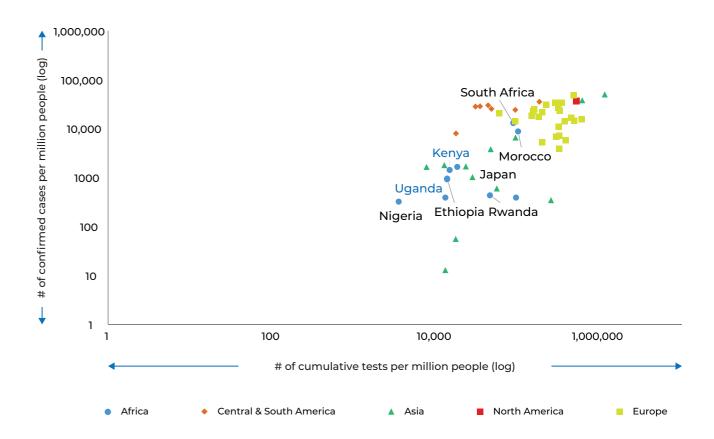
#### Daily reported cases by country in East Africa (7-day rolling average)





# EXHIBIT 3: CORRELATION BETWEEN NUMBER OF TESTS AND NUMBER OF CONFIRMED CASES IN DIFFERENT COUNTRIES

#### Tests per million vs. cases per million



Note: Not all countries consistently publish public data (i.e. those that appear with lower case numbers). 2. On 21 May, an Ugandan presidential directive reduced total from 264 to 145 after removing foreign truck drivers who had left the country from the count **Source:** Johns Hopkins University. 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 4 November 2020].

**Source:** Johns Hopkins University 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 4 November 2020].

17



Testing levels remain below each country's theoretical daily capacity and below global testing levels, which obfuscates the true prevalence of C19

The number of confirmed cases reported in a country is positively correlated with the number of tests being conducted, and thus countries with higher testing levels on a population basis tend to report higher C19 numbers (see Exhibit 3).<sup>21</sup>

Testing levels vary significantly across African countries, though tend to be lower compared to countries in other regions of the world. At the time of writing, Kenya has conducted 14.75 tests

per 1000 population and Uganda conducted 13.11 tests per 1000 population, compared to 45.86 tests per 1000 population in Rwanda, 87.91 tests per 1000 population in South Africa, 325.23 tests per 1000 population in Italy, and 27.89 tests per 1000 population in Japan.<sup>22</sup>

Kenya has a theoretical daily testing capacity of 7,300 tests, according to Kenya's Targeted Testing Strategy<sup>23</sup>, but has only achieved an average of ~4350 tests per day in the month of October; while Uganda achieved an average of ~2100 tests per day over the same time period (see Exhibit 4).<sup>24</sup>

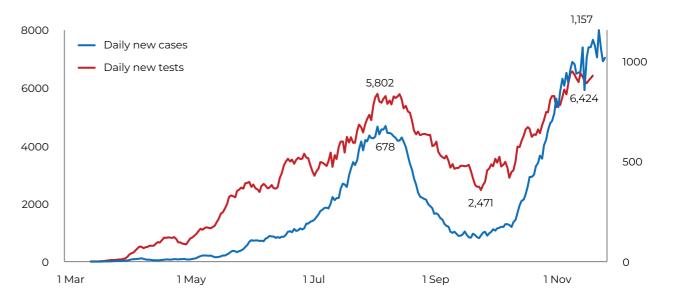
<sup>21</sup>Johns Hopkins University. 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 12 October 2020].

<sup>22</sup> Hasell, J., et al. 2020. A cross-country database of COVID-19 testing. Sci Data 7, 345. Retrieved from https://doi.org/10.1038/s41597-020-00688-8 [Accessed 4 November 2020].

# EXHIBIT 4: DAILY CONFIRMED CASES AND TESTS IN KENYA AND UGANDA

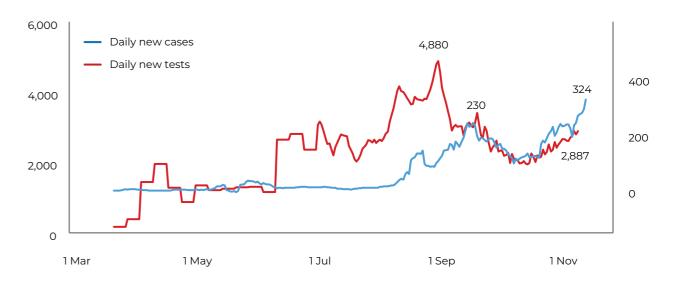
#### **KENYA**

Number of daily new cases (right Y-axis, 7-day rolling average) vs. daily new tests performed in Kenya (left Y-axis, 7-day rolling average)



### UGANDA

Number of daily new cases (right Y-axis, 7-day rolling average) vs. daily new tests performed in Uganda (left Y-axis, calculated from weekly data)



Note: Only weekly (no daily) statistics available until 7  $\operatorname{July}$ 

Source: Kenya Ministry of Health; Our World in Data; Uganda Ministry of Health COVID-19 Response Info Hub. Retrieved from https://covid19.gou.go.ug/statistics.html

<sup>&</sup>lt;sup>23</sup> Kenya Ministry of Health. 2020. 'Targeted Testing Strategy for Corona Virus Disease 2019 (COVID-19) In Kenya. Retrieved from https://www.health.go.ke/wp-content/uploads/2020/07/Targeted-Testing-Strategy-for-COVID-19-in-Kenya.pdf [Accessed July 2020].

<sup>24</sup> Johns Hopkins University 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 12 October 2020].

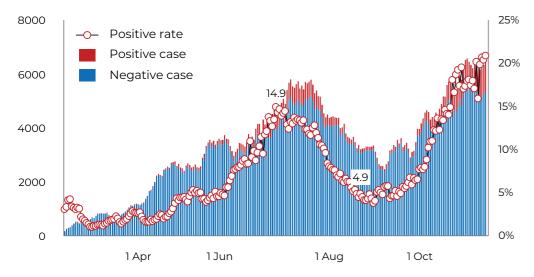
As of 23 November 2020 BUILDING RESILIENCE

# EXHIBIT 5: DAILY TESTS AND POSITIVITY RATE IN KENYA AND UGANDA

### **KENYA**

Daily positivity rate (%, right Y-axis) and number of positive and negative tests in Kenya (7-day rolling average, left Y-axis)

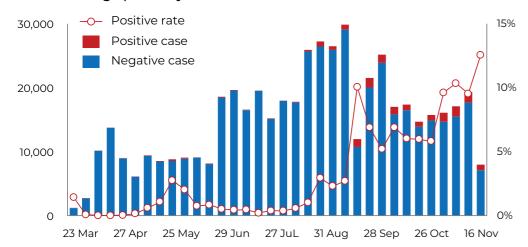
#### Overall positivity rate: 7.39%



### **UGANDA**

Daily positivity rate (%, right Y-axis) and the number of positive and negative tests in Uganda (weekly total, left Y-axis)

#### Overall average positivity rate: 2.76%



Note: Uganda reports weekly testing numbers

**Source:** Johns Hopkins University. 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 4 November 2020].

Acknowledging that limited testing obfuscates the true prevalence of C19, both Kenya and Uganda reported relatively low numbers of cases per capita compared to other parts of the world in the first few months after the first confirmed case in each country.<sup>25</sup> However, case positivity rates are on the rise at the time of writing in Kenya and Uganda, averaging more than ~15% since the end of September (see Exhibit 5).

According to the World Health Organization (WHO), a case positivity rate of below 5% is an indicator that the epidemic is under control. In Kenya, this changed from ~3.6% on 16 September to ~20.84% on 20 November. In Uganda, this changed from ~5.7% on 16 September to ~12.55% on 16 November.

In terms of heterogeneity within a country, at the onset of the pandemic, cases in Kenya were overwhelmingly concentrated in the urban centres of Nairobi and Mombasa, while cases in Uganda were concentrated along the Kenyan and the South Sudan border crossings, in addition to Kampala. This is partially attributed to initial sources of importation (i.e. travellers into Kenya, truck drivers into Uganda), and where testing was being conducted in the country (i.e. in urban centres where laboratories with PCR machines and trained personnel tend to be concentrated).

Community transmission increased over the following months, and C19 cases were found throughout both countries. Nairobi and the surrounding metro area still account for more than 60% of all confirmed cases in Kenya,<sup>28</sup> while Kampala and major border crossings account for 60% of new cases in Uganda.<sup>29</sup>

#### Mortality rates in both countries tend to be well below the global average

In Kenya, approximately 1,400 deaths due to C19 have been reported to date, while in Uganda the number sits at 170 deaths. The highest number of confirmed daily deaths is 14 in Kenya and 3 in Uganda.<sup>30</sup> Mortality rates remain significantly lower in many African countries, including Kenya and Uganda, than those in other parts of the world. At this stage, no definitive research has been published on Africa's C19 mortality rates. However, demographics are a leading hypothesis, as ~75% of C19 deaths globally are of individuals over the age of 65, and only ~2% of Kenyans and Ugandans are in this age range.<sup>31</sup>

Overall, disease progression remains highly dynamic at the time of writing, and the potential for a future outbreak scenario remains. Close monitoring through consistent and high testing levels is important given the uncertain outlook.

<sup>&</sup>lt;sup>25</sup> Johns Hopkins University 2020. Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 12 October 2020]. Dowdy, D., & D'Souza, G. 2020. COVID-19 Testing: Understanding the percent positive.' Johns Hopkins School of Public Health Expert Insights. Retrieved from https://www.jhsph.edu/covid-19/articles/covid-19-testing-understanding-the-percent-positive.html [Accessed 10 August 2020].

<sup>&</sup>lt;sup>27</sup> Johns Hopkins University. 2020. Coronavirus COVID-19 Global Cases by the Centre for Systems Science and Engineering (CSSE). Retrieved from https://coronavirus.jhu.edu/. Data validated by Our World in Data and Worldometer [Accessed 3 November 2020].

<sup>&</sup>lt;sup>28</sup> Regional Centre for Mapping of Resource for Development. 2020. 'Kenya counties coronavirus total cases, demographic and social profile'. Retrieved from https://opendata.rcmrd.org/search?owner=rcmrd\_online [Accessed 12 October 2020].

<sup>&</sup>lt;sup>29</sup>Uganda Ministry of Health COVID-19 Response Info Hub. Retrieved from https://covid19.gou.go.ug/statistics.html [Accessed 12 October 2020].

<sup>&</sup>lt;sup>30</sup> Roser, M., et al. 2020. 'Coronavirus Pandemic (COVID-19)'. Retrieved from https://ourworldindata.org/coronavirus#licence [Accessed 4 November 2020].

<sup>&</sup>lt;sup>31</sup> World Health Organization. 2020. 'WHO Coronavirus Disease (COVID-19) Dashboard.' Retrieved from https://covid19.who.int/; United Nations, 2019 Revision of World Population Prospects. Retrieved from https://population.un.org/wpp/ [Accessed November 2020].



# IV. GOVERNMENT POLICIES

### **Key takeaways**

- Both the Kenyan and Ugandan governments took swift action after the first C19 case was confirmed in East Africa, announcing a stringent set of Non-Pharmaceutical Interventions (NPIs) and healthcare policies to try to contain the virus, while buying time to strengthen healthcare capacity
- The stringency of the announced NPIs appear to have played a key role in keeping cases relatively low for several months, but restrictions have been eased since July 2020
- Both countries announced healthcare policies aimed at optimising supply and demand for the testing and treatment of C19
- Both countries also announced a range of fiscal and monetary policy measures to cushion negative impact on businesses and households, some of which remain in place at the time of writing

### Methodology

- Assessed NPIs according to Oxford Covid-19 Government Response Stringency Index, which
  includes policy measures such as social distancing, curfews, closure of public spaces, travel
  bans as well as fiscal and monetary measures
- Leveraged secondary research from government websites (i.e. press releases) and social media channels, as well as academic publications and news sources
- Supplemented with expert interviews with government officials, technical experts, healthcare providers and relevant private sector leaders

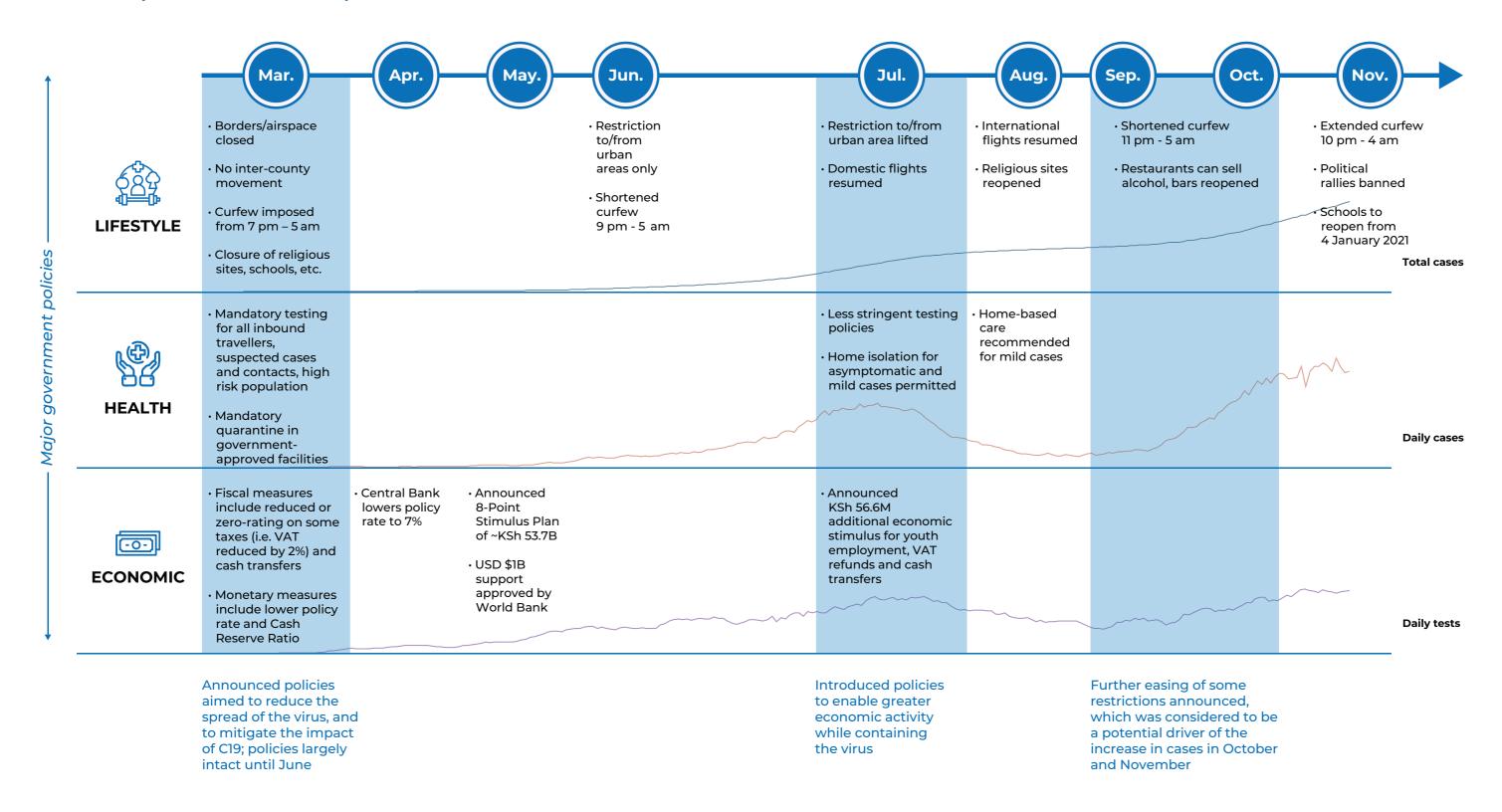
# Overview of NPIs, health and economic measures in Kenya and Uganda

Both the Kenyan and Ugandan governments took swift action shortly after the first case of C19 was confirmed in East Africa on 12 March 2020

The governments of Kenya and Uganda announced stringent sets of Non-Pharmaceutical

Interventions (NPIs) and healthcare policies to try to contain and delay the virus progression while preparing healthcare capacity at the outset of the pandemic. They followed this with a set of emergency economic measures to cushion the negative impact on businesses and households.

# **EXHIBIT 6: OVERVIEW OF C19 GOVERNMENT RESPONSES IN KENYA (NON-EXHAUSTIVE)**



GOVERNMENT POLICIES

BUILDING RESILIENCE

GOVERNMENT POLICIES

BUILDING RESILIENCE



Kenya's announced NPIs had a stringency index of 76.19 on day 20 after the first confirmed case in the country, while Uganda's was 89.81 on day 20 and included a shelter-in-place lockdown and ban on public transport.<sup>32</sup> For reference, China had a 66.67 index after 20 days and Italy had a 28.57 index after 20 days. These swift and stringent measures appear to have played a significant role in keeping cases relatively low for several months at the outset of the pandemic, but started to be eased around July 2020.

Kenya announced a set of NPIs in March that were largely sustained through June. These policies included the closure of commercial airspace, restrictions on inter-county movement, night-time curfews with bans on large-scale gatherings, and closures of schools and religious sites. While stringent, it is noteworthy that Kenya never instituted a full shelter-in-place lockdown and allowed for continued economic activity, albeit at more controlled and reduced levels. In Uganda, a full shelter-in-place order was in effect and stringently enforced.

Over the same period, Kenya announced healthcare policies aimed at optimising healthcare supply and demand. For testing, supply-side policies aimed to accredit more labs to test for C19, while demand-side policies allocated finite testing capacity to inbound travellers, confirmed and suspected cases as well as their contacts.<sup>33</sup> For disease management, supply-side policies aimed to increase workforce (i.e. recruitment of 6,000 additional healthcare workers was announced in April)<sup>34</sup> and infrastructure (i.e. mandating 300 ICU beds per county),<sup>35</sup> while demand-side policies allocated finite capacity to potential C19 patients

in an outbreak scenario (i.e. elective procedures were cancelled or postponed). Given the limited testing capacity, healthcare policies allowed for asymptomatic cases to self-isolate with no requirement for testing at the end of the 14-day self-quarantine period for themselves or for their contacts.<sup>36</sup>

At the same time, Kenya also announced an 8-Point Economic Stimulus Package of KSh 53.7 billion aimed at maintaining liquidity and preserving livelihoods. Fiscal and monetary policy measures included the reduction of VAT from 16% to 14%, reduction of the turnover tax rate from 3% to 1% for Micro, Small and Medium Enterprises (MSMEs), cash payments to vulnerable groups of individuals including the elderly and orphans, and lowering of the Central Bank Rate from 8.25% to 7.25%.<sup>37</sup>

A second stimulus package that was announced in July focused on youth unemployment, Value Added Tax (VAT) refunds, and continued cash transfers to vulnerable populations.<sup>38</sup>

As the worst outbreak scenario in terms of virus progression did not materialize and the economic toll worsened, the Kenyan government started easing some NPIs and healthcare policies like shortening curfew hours to between 9 pm and 5 am in June, permitting inter-county movement in July, permitting gatherings of 100 people by August, and allowing domestic flights from 15 July and international flights from 1 August.

NPIs were further eased in September, including shortening of curfew hours to between 11 pm and 5 am, reopening of bars and permitting restaurants to sell alcohol. This timing lines up with the recent sharp increase in the case positivity rate, as discussed in Section III.<sup>39</sup> In response, on 4 November, the Kenyan government extended the curfew for a further 60 days and changed the curfew to between 10 pm and 4 am and also banned political gatherings.

Uganda announced a set of stringent NPIs in March that were largely sustained through June. These policies included the closure of commercial airspace, closure of borders, suspension of public transport, nationwide curfews, and closures of schools, businesses and religious sites. Taken together, this significantly impacted day-to-day life for Ugandans. For example, some Kampala residents were observed to have left the urban centre as they were unable to work or move around the city. A leader in the public transport sector observed that "~40% of our drivers went back to their villages, because they could not survive in the city without any income."

Similar to Kenya, Uganda also announced healthcare policies aimed at optimising healthcare supply and demand. For testing, supply-side policies aimed to accredit more laboratories resulting in increased capacity at key border points. Demand-side policies mandated the testing of all individuals entering the country from all points of entry, paired with a 14-day quarantine in a government facility.<sup>40</sup>

Hale, T., et al. 2020. Oxford COVID-19 Government Response Tracker, Blavatnik School of Government. Retrieved from https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker [Accessed 4 November 2020].
 Alfa Shaban, AR. 2020. 'Kenya coronavirus: Updates from March - April 2020'. Africanews. Retrieved from https://www.africanews.com/2020/05/10/enforcement-of-coronavirus-lockdown-turns-violent-in-parts-of-africa/ [Accessed 4 November 2020].
 Kivuva, E. 2020. 'Covid-19: Kenya begins hiring of 6,000 more health workers'. Business Daily. Retrieved from https://www.businessdailyafrica.com/bd/news/covid-19-kenya-begins-hiring-of-6-000-more-health-workers-2285910 [Accessed 2 April 2020].
 Ratner, B. 2020. 'Kenya COVID-19 hospital gears up for surge in new infections'. Reuters. Retrieved from https://www.reuters.com/article/us-health-coronavirus-kenya-hospital-idUSKCN24P0OM

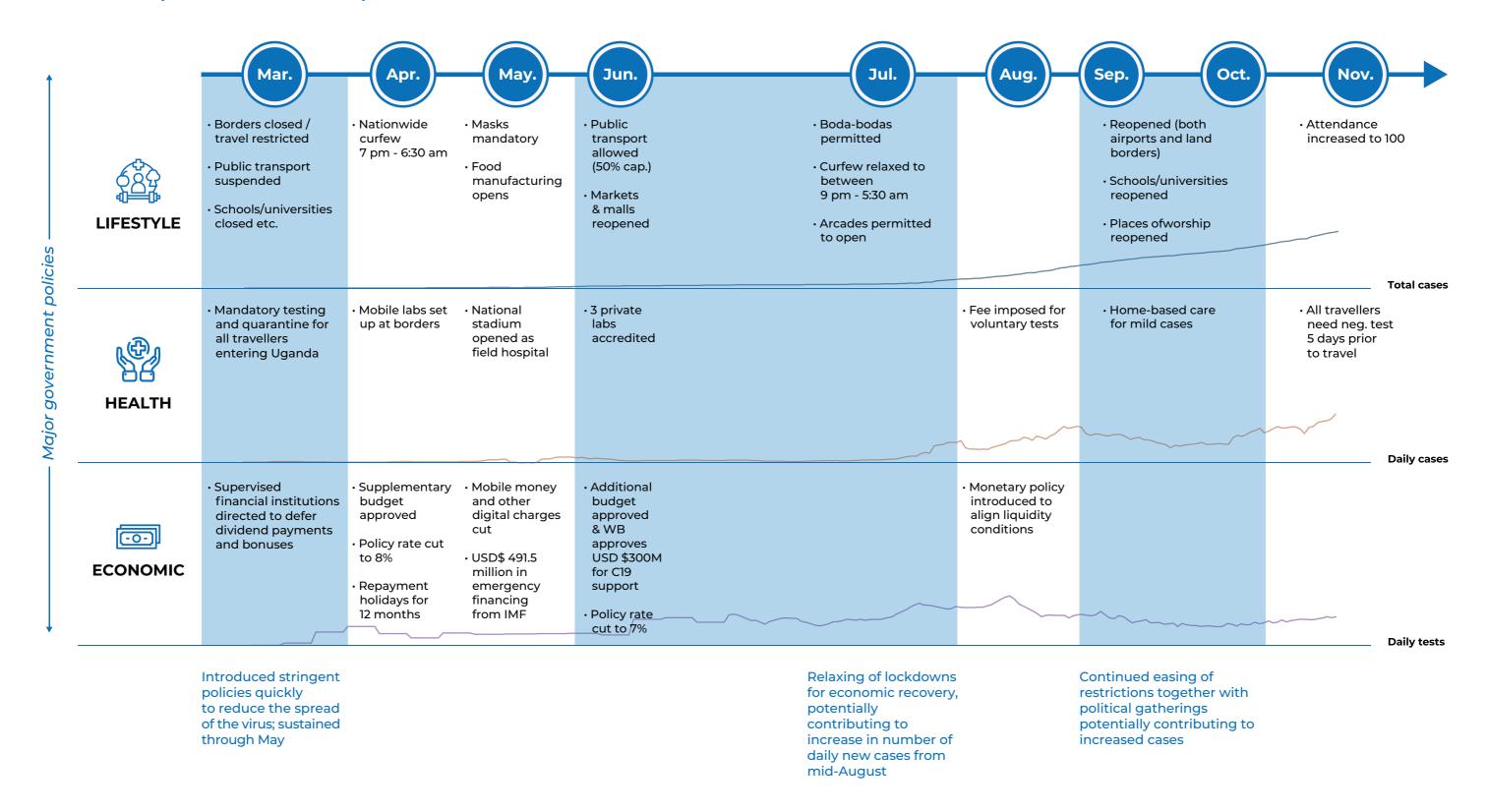
<sup>&</sup>lt;sup>36</sup> Kenya Ministry of Health. 2020. 'Targeted Testing Strategy for Corona Virus Disease 2019 (COVID-19) In Kenya'. Retrieved from https://www.health.go.ke/wp-content/uploads/2020/07/Targeted-Testing-Strategy-for-COVID-19-in-Kenya.pdf [Accessed July 2020].

<sup>37</sup> International Monetary Fund. 2020. Policy Responses to COVID-19. Retrieved from https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19 [Accessed 24 July 2020].

<sup>&</sup>lt;sup>38</sup> International Monetary Fund. 2020. Policy Responses to COVID-19. Retrieved from https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19 [Accessed 12 October 2020].

Yusuf, M. 2020. 'Kenya reimposes COVID-19 measures amid surging cases'. Voice of America. Retrieved from https://www.voanews.com/covid-19-pandemic/kenya-reimposes-covid-19-measures-amid-surging-cases [Accessed 4 November 2020].
 Akumu, P. 2020. 'We Ugandans are used to lockdowns and poor healthcare. But we're terrified'. The Guardian. Retrieved from https://www.theguardian.com/commentisfree/2020/mar/29/coronavirus-uganda-used-to-lockdowns-poor-healthcare-but-we-are-terrified [Accessed 29 March 2020].

# **EXHIBIT 7: OVERVIEW OF C19 GOVERNMENT RESPONSES IN UGANDA (NON-EXHAUSTIVE)**



28

For disease treatment, supply-side policies aimed to increase the number of beds available to isolate C19 patients (i.e. a national stadium was transformed into a field hospital), while demandside policies allocated finite capacity to potential C19 patients in an outbreak scenario (i.e. elective procedures were postponed).<sup>41</sup>

To address the economic impact of the virus, Uganda announced two supplementary budgets to increase the spending envelope for critical sectors and vulnerable groups by USD \$370 million. Fiscal and monetary policy measures were initiated such as deferring the payment of PAYE (Pay As You Earn) tax by affected sectors like tourism and floriculture in April, cash payments to 500,000 people through the cash-for-work labour intensive programmes in June, and measures to reduce the policy rate from 9% to 8% to maintain liquidity.<sup>42</sup>

The Ugandan government started easing some NPIs around June and July to foster greater economic activity as its population was feeling a stronger economic impact. In June, public transport began to be permitted in a limited capacity with malls and markets allowed to reopen and curfew hours shortened to between 9 pm and 5:30 am in July. Additional economic measures were also introduced, including further reduction of the policy rate from 8% to 7%, coupled with a USD \$300 million support programme from the World Bank.<sup>43</sup>

Government policies will continue to adapt to evolving realities on-ground, and in turn, these policies will shape both C19 disease progression and economic recovery. The only certainty is that governments will have to continue balancing health, social and economic considerations in these policy decisions.



<sup>&</sup>lt;sup>41</sup> Himbisibwe, PA. 2020. 'Covid-19: Medics urge government to suspend surgeries'. Daily Monitor. Retrieved from https://www.monitor.co.ug/uganda/news/national/covid-19-medics-urge-government-to-suspend-surgeries-1882396 [Accessed 25 March 2020].

<sup>&</sup>lt;sup>42</sup> International Monetary Fund. 2020. Policy Responses to COVID-19. Retrieved from https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19 [Accessed 12 October 2020].

<sup>&</sup>lt;sup>43</sup> International Monetary Fund. 2020. Policy Responses to COVID-19. Retrieved from https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19 [Accessed 12 October 2020].



# V. HEALTHCARE CAPACITY

### **Key takeaways**

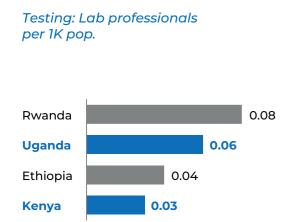
- A country's health system is foundational to its ability to mount a rapid and robust pandemic response
- C19 highlighted persistent challenges facing the Kenyan and Ugandan health systems, including constraints in healthcare workforce and infrastructure, high reliance on imports for essential medical supplies, inconsistent public funding, and data systems that may not enable timely decision-making
- Governments, private sector players and development partners made concerted efforts to address these challenges, such as creating an accreditation process for laboratories to test for C19, and by reducing turnaround time to approve local manufacturers of PPE
- Strengthening health systems requires a holistic, longer-term approach, particularly as these challenges impact not only C19 but other high-burden diseases such as HIV/AIDS, respiratory infections, maternal and child health-related conditions and cardiovascular diseases
- Hard-earned gains for these diseases may be at risk, as countries allocate limited resources for a potential C19 outbreak scenario, and patients reduce health-seeking behaviour

### Methodology

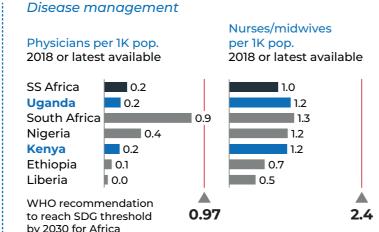
- Assessed baseline healthcare capacity through the lens of the WHO's building blocks for health systems: healthcare workforce, service delivery (i.e. infrastructure), access to essential supplies, healthcare financing, data/health information systems and overall leadership and governance
- Conducted primary qualitative and quantitative research on consumer sentiment and changes in behaviour caused by C19 and the effects on health-seeking behaviour
- Leveraged secondary research from government websites (i.e. press releases) and social media channels, as well as academic publications and news sources
- Supplemented with expert interviews with government officials, technical experts, healthcare providers, and relevant private sector leaders

**HEALTHCARE CAPACITY BUILDING RESILIENCE** As of 23 November 2020

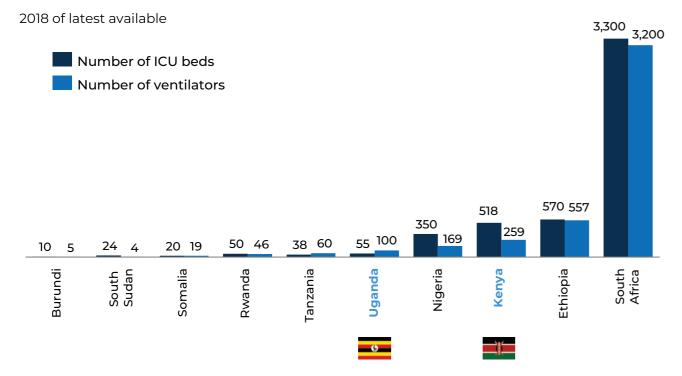
## **EXHIBIT 8: HEALTHCARE WORKFORCES AND** INFRASTRUCTURE IN KENYA, UGANDA AND OTHER **AFRICAN COUNTRIES**



World average for reference: 0.28



#### Disease management: number of ICU beds and ventilators in selected African countries



Note: Based on 11 October 2020 data, assuming 1%, 3% or 5% of all new confirmed cases of the previous 14 days require critical care; does not consider demand for ICU beds for other medical reasons (~85% of existing ICU capacity)

Source: WHO; Kenya Ministry of Health, Barasa., et al, Expert interviews, BCG analysis; The Centre for Disease Dynamics, Economics and Policy. Retrieved from https://cddep.org/publications/critical-care-capacity-africa/ [Accessed: October 2020].

## A country's health system is foundational to its ability to mount a rapid and robust pandemic response

#### C19 highlighted persistent challenges faced by Kenyan and Ugandan health systems prior to the first cases of the virus being reported

After the first cases of C19 in East Africa in March, both Kenya and Uganda announced healthcare policies aimed at optimising the supply and demand for the testing and management of C19, which was discussed in more detail in Section IV. However, policies take time to implement, and the baseline health system is foundational to a country's ability to mount a robust pandemic response.

Limitations in both healthcare workforce and infrastructure constrained the capacity to test and manage C19 in Kenya and Uganda. When one assesses the key human capital indicators for health in these countries, they not only fall below WHO's targets but are lower than the sub-Saharan average in many cases. In Kenya, there are 0.2 physicians per 1,000 people (WHO target is 0.97),44 1.2 nurses per 1,000 people (WHO target is 2.4),45 and 0.03 lab technicians per 1000 people (sub-Saharan Africa

average is 0.06).46 In Uganda, there are also 0.2 physicians per 1,000 people (WHO target is 0.97),<sup>47</sup> 1.2 nurses per 1,000 people (WHO target is 2.4),48 and 0.06 lab technicians per 1000 people (equivalant to the sub-Saharan Africa average).<sup>49</sup>

Major infrastructure required for C19 testing and treatment is limited to and concentrated in urban centres, posing challenges for pandemic management. In Kenya, approximately half the counties have at least one ICU unit, with only ~20% of Kenyans living within two hours of an ICU.50 In Uganda, resources are heavily concentrated in Kampala, which may exacerbate accessibility challenges considering the restriction of movement put in place for C19. For example, ~80% of ICU beds<sup>51</sup> and six of nine testing laboratories are found in Kampala. In response to C19, mobile laboratories were set up at major border posts. However, turnaround time could be delayed given the need to transport samples to laboratories in Kampala owing to shortages of testing supplies at these mobile laboratories.<sup>52</sup>

<sup>44</sup> World Health Organization. 2020. World Health Data Platform. Retrieved from https://www.who.int/data/gho/indicator-metadataregistry/imr-details/4549 [Accessed October 2020].

<sup>&</sup>lt;sup>47</sup> World Health Organization. 2020. World Health Data Platform. Retrieved from https://www.who.int/data/gho/indicator-metadataregistry/imr-details/4549 [Accessed October 2020].

<sup>49</sup> Ibid.

<sup>&</sup>lt;sup>50</sup> Barasa, et al. 2018. 'Measuring progress towards Sustainable Development Goal 3.8 on universal health coverage in Kenya'. BMJ Global Health 3(3). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6035501/pdf/bmjgh-2018-000904.pdf [Accessed 2 June 2018]

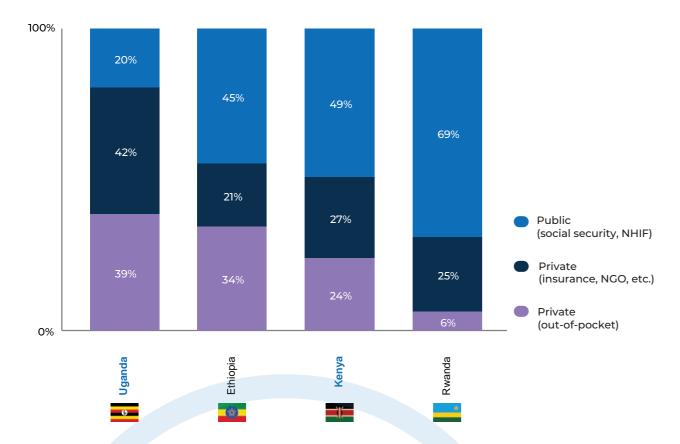
<sup>&</sup>lt;sup>51</sup> Atumanya, et al. 2020. 'Assessment of the current capacity of intensive care units in Uganda; A descriptive study'. Journal of Critical Care, 55, 95-99. Retrieved from https://pubmed.ncbi.nlm.nih.gov/31715537/ [Accessed February 2020].

<sup>52</sup> Nalwadda, H. 2020. 'Uganda launches mobile laboratories for COVID-19 testing.' New Vision. Retrieved from https://www.newvision. co.ug/news/1522327/uganda-launches-mobile-laboratories-covid19-testing [Accessed 9 July 2020].

# **EXHIBIT 9: HEALTH EXPENDITURE BY SOURCE IN EAST AFRICAN COUNTRIES**

#### Source of health expenditure (2017)

36



Note: Estimates of current health expenditures include healthcare goods and services consumed each year; total health expenditure includes external funding

**Source:** World Health Organization. 2020. Global Health Expenditure Database. Retrieved from https://apps.who.int/nha/database [Accessed October 2020].

High import dependency for essential medical supplies has posed another challenge in both countries. Disruptions to the global supply chains for medical supplies, and the global demand for finite resources needed for pandemic response has constrained testing and disease management capacity in both countries (67 countries placed restrictions on exports of PPE, ventilators, and certain pharmaceutical products in reaction to their own pandemic response).<sup>53</sup> In particular, the procurement of testing kits and reagents was a particular bottleneck and severe supply limitations hampered the testing capacity of both countries.<sup>54</sup>

Furthermore, healthcare financing presents challenges, particularly in Uganda. Kenya has been increasing its total health expenditure. Per capita health expenditure has increased steadily from approximately USD \$20 in 2000 to an estimated USD \$76 in 2017, whereas Uganda has seen a steady decline from approximately USD \$63 in 2010 to USD \$38 in 2017, partially owing to high population growth. However, only about half of total health expenditure is publicly financed in Kenya, and this is only an estimated 20% in Uganda, where there is greater reliance on donor funding (growing at ~8% from 2007-2017 compared to only ~1% in sub-Saharan Africa).55 Both Kenya and Uganda have relatively high outof-pocket spending at 24% and 39% respectively, which presents a risk with household finances already strained from the economic impact of C19.

Moreover, going into the pandemic, the health information systems in place in both countries

did not support timely decision-making for onground operations. Data collection provides the critical input required to make key decisions during a pandemic, but proved challenging in both countries. In Kenya, for example, there was no standard process or template through which national and county governments collected critical data from public and private facilities, including the availability of ICU beds and ventilators. Data quality was not consistent as many facilities in both countries still rely on paper-based forms. This was particularly evident in Uganda where infrastructure limitations including the lack of internet connectivity and unreliable electricity supply hampered the use of any electronic data management system.<sup>56</sup> Data sharing mechanisms were not in place to consolidate the data and communicate a 'single source of truth' to disparate policymakers and healthcare providers (i.e. between counties and between public and private providers). Thus, key decision makers had to rely on different, incomplete or outdated information.57

Governments, private sector players and development partners have made concerted efforts to address many of these challenges in the context of C19, such as creating an accreditation process for more laboratories to be able to test for C19 in Uganda, and reducing turnaround time to approve local manufacturers of PPE in Kenya. Disease fatigue is a risk at this stage of the pandemic, and all parties involved in pandemic response need to continue their efforts to build capacity, and improve health outcomes.

<sup>&</sup>lt;sup>53</sup> Banga, K., et al. 2020. 'Africa trade and COVID-19: the supply chain dimension'. African Trade Policy Centre working paper 586. Retrieved from https://www.odi.org/sites/odi.org.uk/files/resource-documents/africa\_trade-covid-19\_web\_1.pdf [Accessed August 2020].

<sup>&</sup>lt;sup>54</sup> Mwai, P., Giles, C. 2020. 'Coronavirus: are African countries struggling to increase testing'. BBC. Retrieved from https://www.bbc.com/news/world-africa-52478344 [Accessed 15 May 2020].

<sup>&</sup>lt;sup>55</sup> World Health Organization. 2020. Global Health Expenditure Database. Retrieved from https://apps.who.int/nha/database [Accessed October 2020].

<sup>&</sup>lt;sup>56</sup> Expert interviews conducted September 2020

 $<sup>^{57}</sup>$  Expert interviews conducted September 2020

## **Case study: Mobile** laboratories in Uganda

Effective C19 management at border posts are critical both for controlling the disease progression, as well as maintaining cross-border logistics flow

In Uganda, mobile laboratories were installed at key border posts to test long-haul truck drivers and to closely monitor the C19 situation to ensure that the disease can be contained, while maintaining the movement of cargo across East Africa. Two mobile laboratories were donated to and deployed at the Adjumani and Malaba border posts. These laboratories can test 94 samples in 2 hours, totalling 800 samples per day, with results that can be made available in 6 hours.<sup>58</sup> This helped save time and cost both for cross-border transport, and on the delivery of test results. In the absence of the mobile laboratories, samples would have to be delivered to the Uganda Virus Research Institute (UVRI).59 However, shortages of reagents have affected the potential full testing capacity.

## Impact of C19 on other health outcomes in Kenya and Uganda

Despite these concerted efforts. strengthening health systems requires a holistic, longer-term approach, particularly as these challenges impact not only C19 but also other health outcomes

HIV/AIDS, respiratory infections, maternal and child health-related conditions and cardiovascular diseases contribute to disease burden and mortality in both Kenya and Uganda. Many of these diseases are managed through routine care that may have been disrupted due to C19.60 These conditions also tend to affect populations that are vulnerable to C19, including immunocompromised persons, pregnant women, infants, and diseases co-morbid with severe C19 cases.61

With countries allocating limited resources for a potential C19 outbreak scenario, hard-earned gains for these diseases may be at risk, combined with the change in health-seeking behaviour by non-C19 patients.

In Kenya, some primary health facilities saw a ~30% drop in patient numbers between April and June, while larger hospitals saw up to ~80% declines, leaving healthcare providers concerned about high-risk chronic patients.62

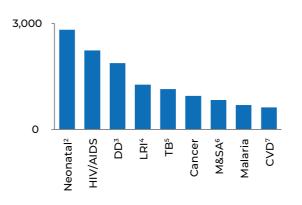
#### **KENYA**

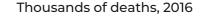
#### Disease burden and leading causes of death

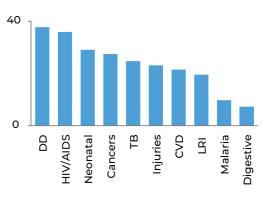
**EXHIBIT 10: MAJOR CAUSES OF DISEASE BURDEN** 

AND MORTALITY IN KENYA AND UGANDA

Thousands of estimated DALYs<sup>1</sup>, 2016



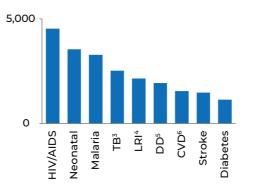




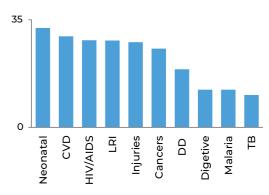
## **UGANDA**

#### Disease burden and leading causes of death

Thousands of estimated DALYs<sup>1</sup>, 2016







\*Non-communicable diseases; 1. Disability Adjusted Life Years, aged standardised per 100,000 2. Neonatal disorders refers to preterm birth complications, birth asphyxia and birth trauma, neonatal sepsis, and infections and other conditions 3. Diarrheal diseases 4. Lower Respiratory Infections 5. Tuberculosis 6. Mental health and Substance Abuse 7. Cardiovascular disease Source: WHO Disease Burden and Mortality estimates 2000-2016; Our World in Data; BCG analysis

<sup>58</sup> The Independent. 2020. 'Mobile Covid-19 testing laboratory in Adjumani runs out of reagents'. Retrieved from https://www.independent.co.ug/mobile-covid-19-testing-laboratory-in-adjumani-runs-out-of-reagents/ [Accessed 28

<sup>59</sup> The East African. 2020. 'EAC agrees to deploy mobile lab test kits at borders'. Retrieved from https://www.theeastafrican.co.ke/tea/ news/east-africa/eac-agrees-to-deploy-mobile-lab-test-kits-at-borders-1440622 [Accessed April 2020].

<sup>60</sup> UNICEF. 2020. 'As Covid-19 devastates fragile health systems, over 6,000 additional children under five could die each day globally'. Retrieved from https://www.unicef.org/kenya/press-releases/covid-19-devastates-fragile-health-systems-over-6000-additionalchildren-under-five [Accessed 14 May 2020].

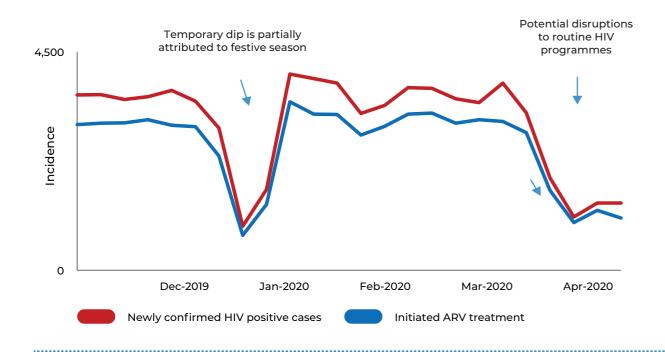
<sup>61</sup> World Health Organization. 2020. Covid-19: Vulnerable and high-risk groups. Retrieved from https://www.who.int/westernpacific/ emergencies/covid-19/information/high-risk-groups [Accessed 4 November 2020].

<sup>&</sup>lt;sup>62</sup> Expert interviews conducted September 2020; Kenya JICA Focus Groups and in-depth interviews conducted September 2020

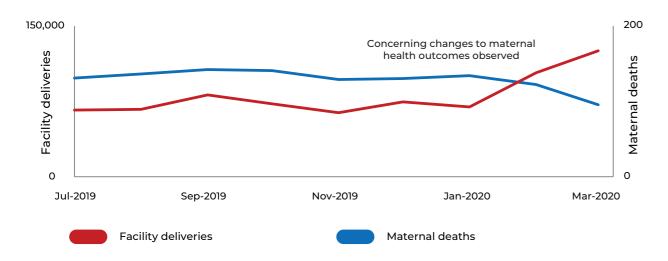
# EXHIBIT 11: INITIAL RESEARCH SHOWING WORSENED HEALTH OUTCOMES IN UGANDA



#### Number of newly confirmed HIV positive cases and initiated ARV treatments



#### Number of facility deliveries and maternal deaths



Note: Based on 11 Oct 2020 data, assuming 1%, 3% or 5% of all new confirmed cases of the previous 14 days require critical care; does not consider demand for ICU beds for other medical reasons (~85% of existing ICU capacity)

**Source:** WHO; Kenya Ministry of Health, Barasa., et al, Expert interviews, BCG analysis; The Centre for Disease Dynamics, Economics and Policy. Retrieved from https://cddep.org/publications/critical-care-capacity-africa/ [Accessed: October 2020].



A study in Uganda showed a ~75% decrease in individuals seeking testing and treatment for HIV/AIDS in the first two weeks of April, and an ~82% increase in maternal mortality in March as compared to January (Exhibit 11).63

This is highlighted by our consumer survey conducted in October - November 2020 in urban areas of Kenya and Uganda (discussed in further detail in Section VII), where ~62% of surveyed consumers requiring regular or viral treatment have reduced visits to health facilities since March.

Encouragingly, improved health during the previous six months was the key reason for this behavioural change in Uganda. However, in Kenya, almost half the consumers cited the fear of contracting C19 as their primary reason for reducing visits to health facilities.<sup>64</sup>

With countries allocating limited resources for a potential C19 outbreak scenario, hard-earned gains for these diseases may be at risk with non-C19 patients changing health-seeking behaviour.

<sup>&</sup>lt;sup>63</sup> Bell, et al. 2020. 'Predicting the impact of Covid-19 and the potential impact of the public health response on disease burden in Uganda'. The American Journal of Tropical Medicine and Hygiene. Retrieved from https://www.ajtmh.org/content/journals/10.4269/ajtmh.20-0546?crawler=true [Accessed 2 September 2020].

<sup>&</sup>lt;sup>64</sup> JICA-BCG Nairobi & Mombasa, Kenya Consumer Survey, 16 October - 5 November 2020

HEALTHCARE CAPACITY

BUILDING RESILIENCE

HEALTHCARE CAPACITY

BUILDING RESILIENCE



# Case study: Wheels for Life initiative in Kenya

Encouragingly, innovative solutions have emerged in response to C19 in the form of public-private partnerships

One selected example in Kenya is Wheels for Life, a service launched for pregnant women to access free transport to health facilities during curfew hours. At the beginning of the pandemic, no public or private transport was available during curfew hours, which forced pregnant women to deliver at home. As one woman noted, "I had many concerns about the health of the baby if she was delivered by the traditional caregiver. How hygienic is her place? Does she have personal protection gear to prevent the spread of C19? What if I need surgery?" 65

The platform was launched on 28 April 2020 and allows pregnant women to call a toll free number to obtain medical advice from doctors. In the event that an emergency is

detected during the screening call, a free ride to the hospital is arranged irrespective of whether the curfew is in place or not.

The initiative was implemented as a joint endeavour between the Ministry of Health, private healthcare providers in Kenya, and technology companies such as TeleSky (digital call centre), Bolt (ride sharing), and Flare (emergency response dispatching). Initially available in Nairobi, the initiative was successfully expanded to five more counties in September.<sup>66</sup> With the support of the African Medical and Research Foundation (AMREF) and the European Union, the initiative is expanding to Machakos, Nyeri, Nakuru, Kiambu and Uasin Gishu counties. The programme is expected to assist with the transportation of 3,500 pregnant women to health facilities and offer telemedicine support for a further 36,000 women across five counties.

<sup>&</sup>lt;sup>65</sup> Odula, T. 2020. 'Pregnant women at risk of death in Kenya's COVID-19 curfew'. Washington Post. Retrieved from https://www.washingtonpost.com/world/africa/pregnant-women-at-risk-of-death-in-kenyas-covid-19-curfew/2020/07/25/4eb02416-ce43-1lea-99b0-8426e26d203b\_story.html [Accessed July 2020].

<sup>&</sup>lt;sup>66</sup> AMREF Health Africa. 2020. 'EU Supports Wheels for Life Expansion to Five Counties for Pregnant Women to Access Emergency Medical Care During COVID-19 Curfew Hours'. Retrieved from https://newsroom.amref.org/coronavirus/2020/09/eu-supports-wheels-for-life-expansion-to-five-counties-for-pregnant-women-to-access-emergency-medical-care-during-covid-19-curfew-hours/ [Accessed August 2020].



# VI. ECONOMIC IMPACT

### **Key takeaways**

- Despite announcing emergency economic measures to cushion businesses and households, significant impact can be observed across several macroeconomic dimensions in both Kenya and Uganda
- For example, in October, the IMF revised its 2020 projection of real GDP growth rate down from +6.0% to +1.0% in Kenya, and from +6.2% to -0.3% in Uganda
- Employment is severely affected; in Kenya, the unemployment rate has doubled from ~5.2% to ~10.4% between the first and second quarters of 2020, with those aged 20-29 most affected
- Greenfield FDI is much lower than in previous years, with a reported ~85% decrease in January September 2020, compared to the average of previous five years for the same period in Kenya, and no Greenfield FDI reported in Uganda in January September 2020
- The Kenyan shilling has seen record lows during the C19 pandemic; the Ugandan shilling has largely maintained its value until the time of writing
- The informal sector is estimated to contribute ~34% and ~50% to Kenyan and Ugandan GDPs respectively, as well as the majority of jobs; and it has been disproportionally impacted by C19

### Methodology

- Leveraged data from government websites (i.e. press releases, reports), as well as sources from news outlets, nongovernmental organisations, UN agencies, and internationally recognised databases of economic data
- Supplemented with expert interviews with government officials, technical experts, economists, and relevant private sector leaders including recruitment companies, mobility services providers, agricultural exporters and retailers
- For the informal sector, we conducted both qualitative and quantitative primary research in Nairobi and Kampala. Qualitative research included 10 focus group interviews and 20 individual interviews with informal business owners (between 14 September and 9 October 2020). The quantitative survey was conducted with 611 informal business owners between 19 October and 4 November 2020. Informal business owners across a range of activities were interviewed including hairdressers, tailors, mechanics and construction, retail and domestic workers

ECONOMIC IMPACT

BUILDING RESILIENCE

As of 23 November 2020



## **Macroeconomic impact**

C19 has caused a severe economic impact, globally and in Africa. In October, the IMF revised its 2020 projection for global real GDP growth rate down from a positive +3.4% pre-C19 to a negative -4.4%. This prognosis may change further, depending on the disease outlook.<sup>67</sup> Kenya and Uganda have both been impacted, with economic effects being felt at the time of writing.

In October, the IMF revised its 2020 projection for Kenya's GDP growth rate from positive +6.0% to about +1.0%, and Uganda's from positive +6.2% to negative -0.3%; as a reference, the sub-Saharan African average is negative -3.0%<sup>68</sup>

To cushion businesses and households from negative impact, the Kenyan and Ugandan governments announced fiscal and monetary policy measures, some of which remain in place at the time of writing (see Section IV). The announced stimulus packages as of June are equivalent to 0.6% and 1.1% of GDP in Kenya and Uganda respectively. For reference, countries with different fiscal contexts, such as South Africa and Japan, had announced stimulus packages of 8.6% and 21% of GDP respectively by May 2020.<sup>69</sup>

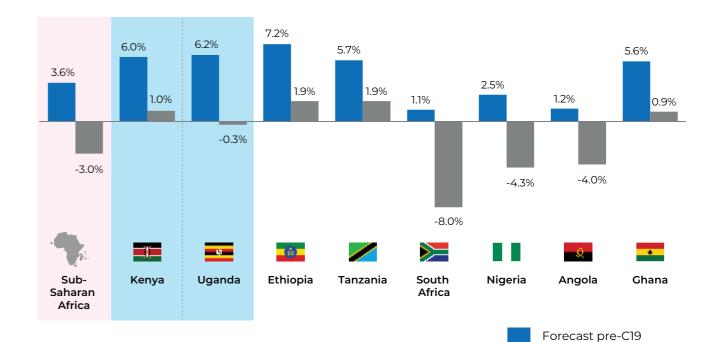
This study assessed to what extent the overall economy has grown or contracted, how different sectors in the economy have been impacted, and how employment has been affected.

Additional indicators such as levels of Greenfield FDI, the exchange rate and inflation have also been considered.

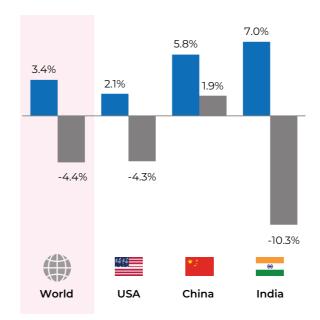
# **EXHIBIT 12: 2020 GDP GROWTH FORECAST WITH SELECTED COUNTRY EXAMPLES**

Evolution of 2020 Real GDP growth forecasts

% YoY growth







**Source**: International Monetary Fund. 2020. 'World Economic Outlook, October 2020: A Long and Difficult Ascent.' Retrieved from https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020 [Accessed 6 November 2020].

<sup>67</sup> International Monetary Fund. 2020. 'World Economic Outlook, October 2020: A Long and Difficult Ascent'. Retrieved from https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020 [Accessed 6 November, 2020].
68 International Monetary Fund. 2020. 'World Economic Outlook, October 2020: A Long and Difficult Ascent.' Retrieved from https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020 [Accessed 6 November, 2020].
69 Faria, J. 2020. 'Fiscal Responses to Covid-19 as a percentage of GDP in East Africa. Statista. Retrieved from https://www.statista.com/statistics/1175681/fiscal-response-to-covid-19-as-a-percentage-of-gdp-in-east-africa/] [Accessed 4 November 2020].

The drivers of this impact are two-fold:
(i) global shocks that impact aggregate
demand for Kenyan and Ugandan
exports and disrupt supply chains
(i.e. for imports), and (ii) local restrictions
for containing C19 that further depress
demand and disrupt business operations

According to a leader in the business community, "The top echelon of businesses may have managed to transition to new ways of working or temporarily reconfigured to manufacture essential goods, but overall, businesses are struggling across the board."

C19's impact on GDP varies by sector in both countries. In both Kenya and Uganda, agriculture is the largest contributor to GDP and it tends to be less hard hit by C19. Other sectors such as hospitality and transportation are more heavily impacted by both global shocks and the local NPIs discussed in Section IV (see Exhibit 13).

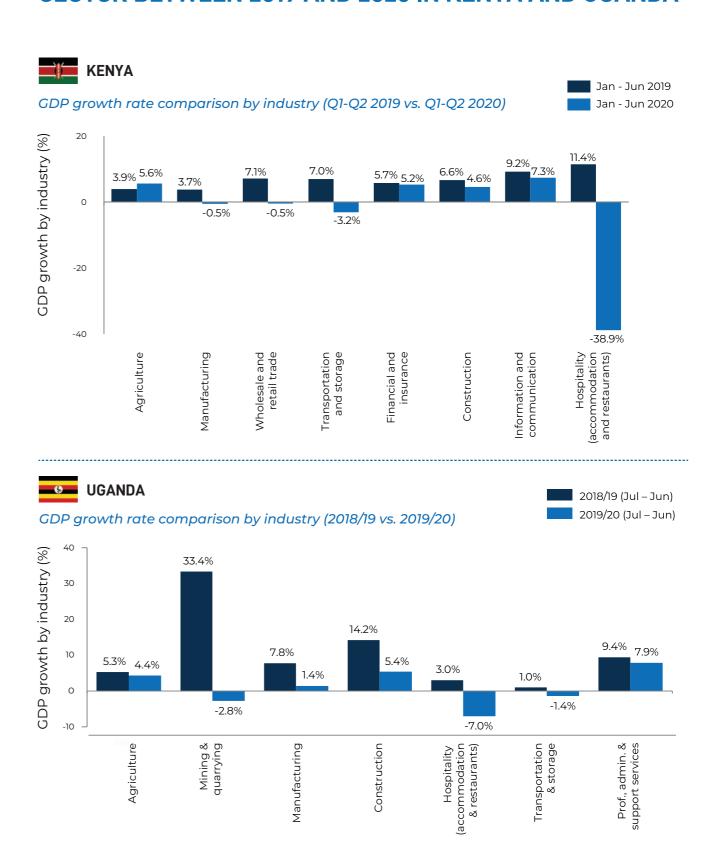
In terms of employment, the unemployment rate in Kenya nearly doubled from ~5.2% to ~10.4% between the first and second quarters of 2020, particularly in the 20-29 age group. The youth may be more vulnerable to economic shocks as many have limited job experience and vocational skills. For instance, ~50% of 14 to 17-year-olds in Kenya do not finish high school. According to Fuzu, a career development start-up based in Kenya, new job listings in the formal sector dipped by ~65% and ~73% in Kenya and Uganda respectively from January to May.

Some signs of recovery are being observed since July/August.<sup>72</sup> Greenfield FDI coming into a country is an indicator of new investment flows. In Kenya, Greenfield FDI has fallen by approximately 85% between January and September 2020, compared with the average Greenfield FDI for the period of January through September between 2015 and 2019. In Uganda, the effect has been even worse with no Greenfield FDI being reported thus far in 2020 according to publicly available sources.<sup>73</sup>





# EXHIBIT 13: COMPARISON OF REAL GDP GROWTH RATE BY SECTOR BETWEEN 2019 AND 2020 IN KENYA AND UGANDA



Note: Fiscal year is from 1 July to 30 June

Source: Kenya National Bureau of Statistics; Uganda Bureau of Statistics

<sup>&</sup>lt;sup>70</sup>Kenya Bureau of Statistics. 2020. Leading economic indicators. Retrieved from https://www.knbs.or.ke/?page\_id=1591 [Accessed September 2020].

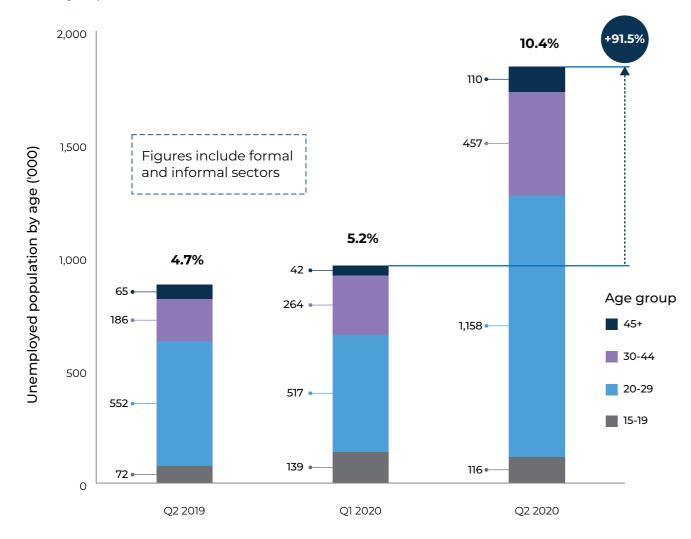
<sup>&</sup>lt;sup>71</sup> Generation Unlimited. 2020. 'Government of Kenya & the United Nations to step up efforts to advance education, training and jobs'. Retrieved from https://www.generationunlimited.org/news-and-stories/GenU-Kenya [Accessed 5 August 2020].

<sup>72</sup> Expert interview conducted with Fuzu, September 2020

<sup>73</sup> FDI Markets. 2020. FDI markets database. Retrieved from https://www.fdimarkets.com/explore/ [Accessed September 2020].

## **EXHIBIT 14: KENYAN UNEMPLOYMENT RATE BY AGE**

#### Unemployment doubled in 2020 from Q1 to Q2 with the age group of 20-29 being heavily impacted



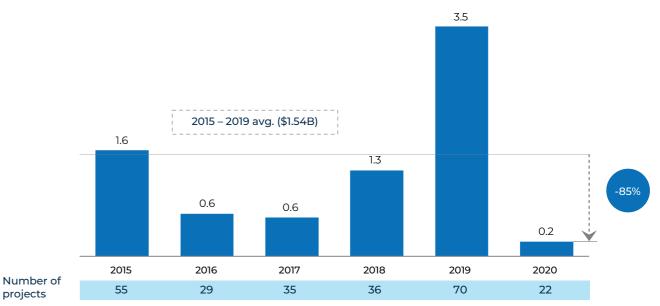
Note: Unemployed people are defined as people without a job who have actively looked for one in the past 4 weeks and are currently

Source: Kenya National Bureau of Statistics; International Labour Organization

## **EXHIBIT 15: GREENFIELD FDI FLOWS IN KENYA AND UGANDA**



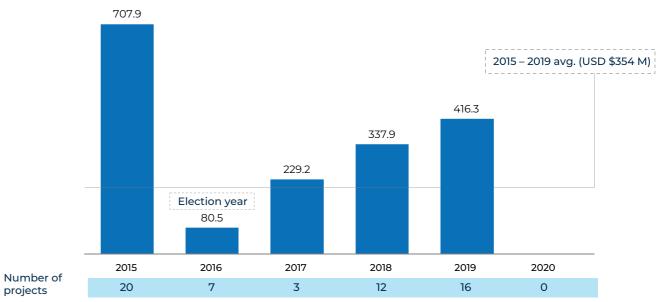
Total Greenfield FDI inflow into Kenya from January to September (USD \$B)





projects

#### Total Greenfield FDI inflow into Uganda from January to September (USD \$M)



Note: FDI Markets data is collected from media sources, industry organisations, investment agencies etc. and is inclusive of "announced" FDIs - although the database is considered to capture majority of investments, some investments may thus not be known, may be tracked and recorded at a later stage, or may have been cancelled. Data from FDI Markets may also differ substantially from official data provided by UNCTAD/OECD who receive data from national authorities

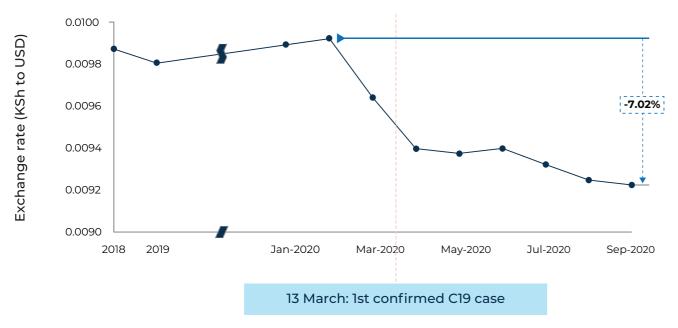
Source: FDI Markets. 2020. FDI markets database. Retrieved from https://www.fdimarkets.com/explore/ [Accessed September 2020]; BCG Analysis

## **EXHIBIT 16: FLUCTUATION OF KENYAN AND UGANDAN SHILLINGS**



KENYA

The KSh felt the global impact of C19 before Kenya's first confirmed case



**UGANDA** 

The USh has been largely stable, fluctuating by only 3% despite C19's impacts



Note: Currency valuation is the period average

Note: Annual averages have been considered for 2018 and 2019

Source: International Monetary Fund. 2020. International Financial Statistics. Retrieved from https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b [Accessed 23 November 2020]

On the exchange rate impact, the Kenyan shilling depreciated by ~7.2% between January and

September 2020.74

The Ugandan shilling depreciated by ~3% between February and May, but has since recovered to pre-C19 levels by August 2020.75 In May, the Ugandan government received USD \$491.5 million in emergency funding from the IMF, of which 70% was used to boost foreign exchange reserves which supported the stability of the currency.76

In Kenya, the overall inflation rate has been maintained within target during the course of 2020. However, there have been notable movements in certain categories like transportation, which saw a 13.5% increase in September 2020 compared to the same month in the previous year.<sup>77</sup> The Central Bank of Kenya (CBK) aims to maintain inflation between ~2.5% and 7.5%. Stability within this window played a role in allowing the government to reduce the Central Bank Rate from 8.5% in January to 7% in March, and to reduce the Cash Reserve Ratio to 4.25%. 78,79

In Uganda, overall inflation has risen towards the ~5% target set by the Bank of Uganda (BoU) between March and September, driven in part by sharp increases in transport costs (~29.6% increase in September 2020 relative to September 2019).80 The BoU aims to hold annual core inflation at ~5%, which increased in September to ~6.2%.81 BoU reduced the Central Bank Rate from 9% to 7% with reductions in April and June 2020.

<sup>&</sup>lt;sup>74</sup> Bloomberg. 2020. Retrieved from https://www.bloomberg.com/quote/KES:CUR [Accessed 12 October 2020]

<sup>&</sup>lt;sup>75</sup> Bloomberg, 2020. Retrieved from https://www.bloomberg.com/quote/UGX:CUR [Accessed 12 October 2020].

<sup>16</sup> International Monetary Fund. 2020. Policy Responses to COVID-19. Retrieved from https://www.imf.org/en/Topics/imf-and-covid19/ Policy-Responses-to-COVID-19 [Accessed September 2020].

TKenya Bureau of Statistics. 2020. Retrieved from https://www.knbs.or.ke/ [Accessed September 2020].

<sup>&</sup>lt;sup>78</sup> International Monetary Fund. 2020. Policy Responses to COVID-19. Retrieved from https://www.imf.org/en/Topics/imf-and-covid19/ Policy-Responses-to-COVID-19 [Accessed September 2020].

<sup>79</sup> Indeje, D. 2020. 'Central Bank of Kenya Cuts Lending Rates to 7.25pct and Reserve Ratios for Banks.' Khusko. Retrieved from https:// khusoko.com/2020/03/23/central-bank-of-kenya-cuts-lending-rates-to-7-25pct-and-reserve-ratios-for-banks/ [Accessed September 2020].

<sup>80</sup> Uganda Bureau of Statistics. 2020. Key Economic Indicators. Retrieved from https://www.ubos.org/explore-statistics/30/ [Accessed September 2020].

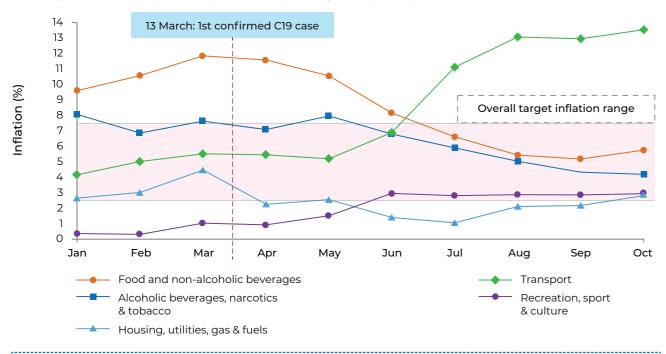
<sup>81</sup> Ibid.

As of 23 November 2020 BUILDING RESILIENCE

# EXHIBIT 17: MONTHLY INFLATION VS. PREVIOUS YEAR FOR KEY CATEGORIES IN KENYA AND UGANDA



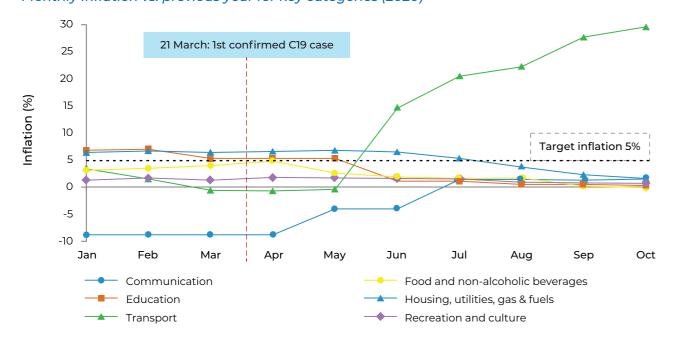
Monthly Inflation vs. previous year for key categories (2020)



## **(**

#### **UGANDA**

#### Monthly Inflation vs. previous year for key categories (2020)



Note: This includes personal care such as salons, personal effects such as watches and insurance, passport fees & other services **Source:** Uganda Bureau of Statistics. 2020. Key Economic Indicators. Retrieved from https://www.ubos.org/explore-statistics/30/[Accessed 23 November 2020]; Central Bank of Kenya; Kenya Bureau of Statistics. 2020. Retrieved from https://www.knbs.or.ke/[Accessed 23 November 2020].

#### Informal sector

It is important to consider the informal sector when assessing C19's economic impact. The informal sector contributes significantly to the GDP and employment rates in both countries. In Kenya, the informal sector contributes approximately ~34% of GDP and ~70% of employment. In Uganda it makes up approximately ~50% of GDP and over ~87% of employment.<sup>82</sup>

The informal sector is often less equipped to respond to shocks, owing in part to limited access to financial resources, technical know-how and information; consequently, many businesses have been disproportionally impacted by C19

Of the informal business owners surveyed, ~94% in Nairobi and ~86% in Kampala experienced declines in revenue between March and September. Around 70% of business owners in both countries faced additional costs of operations resulting from C19 health requirements.83 Of the businesses that experienced a revenue decline, approximately one-third in Kenya and half in Uganda experienced a decline of more than half their revenue. In Kenya, one retail owner noted, "I would earn KSh 40,000 from each of the 3 shops per month but now, I earn KSh 20,000 from the 3 shops combined." Another said, "I am a street vendor, and my clients are mainly those who leave work in the evening, but because of the curfew we are time constrained." In Uganda, where the government lockdown was more stringent than in Kenya, one restaurant owner stated, "I used to earn USh 2-2.5 million at the beginning of the year but when we

were on lockdown, I made nothing."

On the cost side, informal traders were aware of government health and safety requirements and many introduced the use of face masks and made hand sanitisers available. <sup>84</sup> One Kenyan mechanic said, "I followed the government directives to the letter. You could not enter the business premises without a mask, and I provided sanitisers and a hand washing station."

The impact on revenue has not been uniform across sectors, education levels or age of businesses. Non-essential and high-contact services were more impacted as were business owners with lower levels of education.

More educated traders were more resilient in the face of C19.

Many employers in the informal sector responded to these revenue losses by reducing their overheads and headcount, or by adjusting salaries. An estimated ~74% of surveyed informal businesses with employees in Nairobi and ~83% in Kampala reduced salaries or retrenched employees.<sup>85</sup>

Most employers tended to adjust compensation models, rather than immediately retrench employees. As one cybercafé owner in Nairobi noted, "To keep all my employees, I stopped paying them a salary and started compensating them on a commission basis, based on how much we make per day." A mechanic in Kampala noted, "For my employees, I had to send half of them home on unpaid leave until further notice and the ones I kept, I gave them a 60% pay cut."

<sup>82</sup> World Bank. 2016. 'Informal Enterprises in Kenya'. Retrieved from http://documentsl.worldbank.org/curated/en/262361468914023771/pdf/106986-WP-P151793-PUBLIC-Box.pdf [Accessed 8 November 2020]; Uganda Bureau of Statistics. 2015. Urban Labour Force Survey. Retrieved from https://www.ubos.org/wp-content/uploads/publications/03\_2018ULFS\_2015\_Fact\_Sheet.pdf [Accessed 8 November 2020].

<sup>83</sup> Ibid

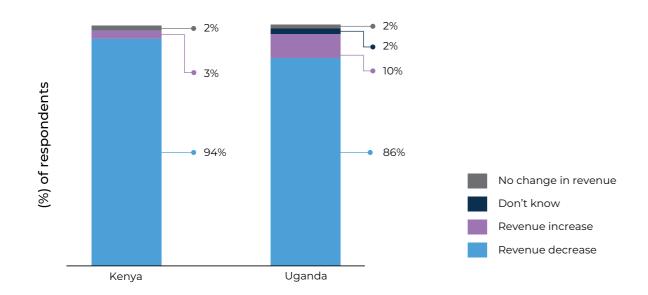
 $<sup>^{84}\,\</sup>text{Percentages}$  add up to more than 100% as multiple responses were accepted

<sup>85</sup> Ibid

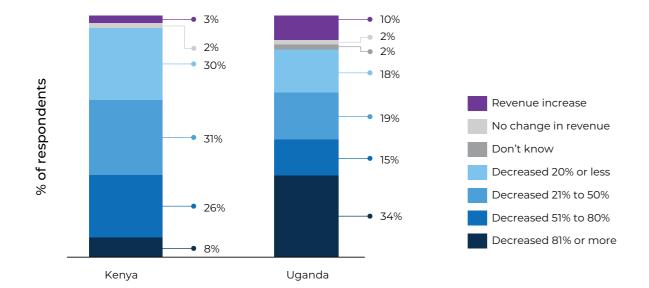
#### As of 23 November 2020

# **EXHIBIT 18: DECLINE IN REVENUE EXPERIENCED BY INFORMAL TRADERS**

Majority impacted in both countries with ~94% in Kenya and ~86% in Uganda experiencing declines in revenue



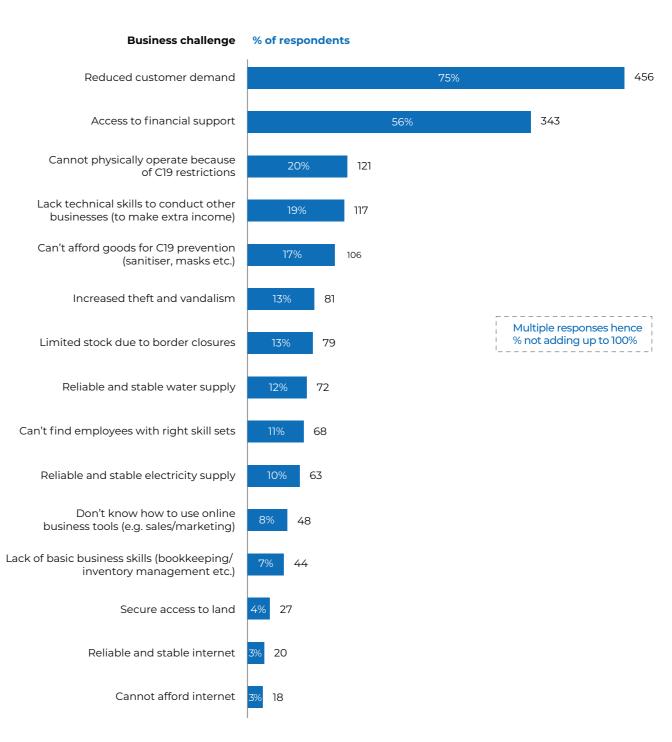
Deeper impact observed in Uganda with ~34% reporting >80% revenue decrease



Question: By how much have your average monthly sales been impacted since the C19 pandemic hit Kenya? **Source:** JICA-BCG Nairobi and Kampala Informal Sector Survey, September - November 2020

# EXHIBIT 19: REDUCED DEMAND AND LACK OF ACCESS TO FINANCIAL SUPPORT ARE THE BIGGEST CHALLENGES FACED BY INFORMAL TRADERS

Biggest challenges faced by informal sector business owners



Question: What are the biggest challenges facing your business during this time? Please select top 3. **Source:** JICA-BCG Nairobi (n=308) and Kampala (n-303) Informal Sector Survey, 19 October - 4 November 2020; Nairobi, and Kampala informal Focus Group Interviews & in-depth interviews, 14 September - 7 October 2020

Reduced demand and limited access to financial support are frequently cited as the most pressing challenges of informal sector traders. Both factors constrain liquidity for businesses.<sup>86</sup>

Approximately ~65% of surveyed traders in Kenya and ~85% in Uganda identified reduced demand as their biggest challenge, followed by access to financial support (~45% in Kenya and ~68% in Uganda). In Kenya, obtaining C19 prevention tools posed a significant challenge (~24%). Increased theft and vandalism were a concern in Uganda (~19%).87

Despite the financial strain, only ~23% of surveyed traders in Kenya and ~16% in Uganda turned to credit to support their businesses. Of these, in Kenya, mobile money (~39%) and friends and family (~31%) are the most popular sources, while in Uganda friends and family (~29%) and money lenders (~27%) are most favoured. This is largely because they tend to be more accessible, with simpler repayment terms and without collateral requirements.

owing to uncertainty about the timeline of full recovery. As one tailor in Kampala noted, "The reason I did not ask for financial support from anywhere is because I did not know how I will pay back the loan."

Business owners are hesitant to borrow, partially

Since restrictions were eased around July in both countries, approximately one-third of surveyed traders in Nairobi and Kampala have reported some degree of recovery. However, only ~7% in Nairobi and ~14% in Kampala have recovered ~50% or more compared to their pre-C19 levels.

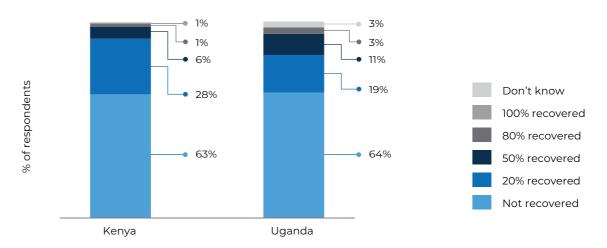
Many informal traders are tentative about the effect of the coming months on their business as the disease outlook remains uncertain globally and locally. Only ~9% of Kenyan and ~25% of surveyed Ugandan traders believe that a recovery will be evident in the next three months. Moreover, up to ~43% in Nairobi and ~29% in Kampala believe that it will take at least one year for recovery to reach pre-C19 levels. This tentative attitude is driven by global and local economic uncertainty. As one shop owner in Nairobi reported, "Things are getting back to normal but there might be a second wave like in Western countries, so it is still uncertain." A spare parts retailer in Kampala shared a similar view, "The virus is not bad in Kampala, but I see other countries experiencing a second wave and this will affect our imports again."

#### As of 23 November 2020

# EXHIBIT 20: SOME INFORMAL BUSINESSES SEE EARLY SIGNS OF RECOVERY BUT ~43% IN KENYA AND ~29% IN UGANDA EXPECT MORE THAN 1 YEAR FOR FULL RECOVERY

#### Recovery experienced

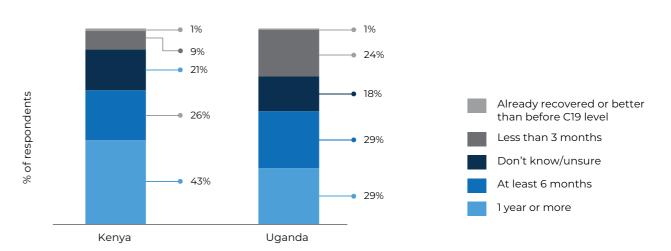
~37% in Kenya and ~36% in Uganda reported recovery in revenue following relaxation of restrictions, but most are still in early recovery phases (<50% recovery for most)



"My business is slowly starting to recover, I would make KSh 20,000 a month before C19 and currently as of September, I am making KSh 12,000 a month. The number of events is increasing gradually." - caterer, Nairobi

#### Recovery expectations

Overall, businesses are pessimistic with ~43% of Kenyans and ~29% of Ugandans expecting recovery in 1 year or more



"The virus is not bad in Kampala, but I see other countries experiencing a second wave and this will affect our imports again." - spare parts retailer, Kampala

Question: Has your income recovered since the government eased some of the C19 restrictions? **Source:** JICA-BCG Nairobi (n=308) and Kampala (n-303) Informal Sector Survey, 19 October - 4 November 2020; Nairobi and Kampala informal Focus Group Interviews and in-depth interviews, 14 September - 7 October 2020

<sup>&</sup>lt;sup>86</sup> JICA-BCG Informal Sector Survey, October 2020

<sup>87</sup> Percentages add up to more than 100% as multiple responses were accepted

# Deep dive on how the informal sector is adapting

Many informal traders tend to operate in dynamic environments and responded to C19 by adapting; the most observed adaptations being increased prices, supply chain changes, new product and service offerings, and location changes

Approximately ~32% of surveyed traders in

Approximately ~32% of surveyed traders in Kenya and ~11% in Uganda increased prices in response to C19.88 In both countries, essential businesses were most likely to increase prices (i.e. ~39% and ~10% of grocery stores, ~44% and ~29% of agricultural traders, in Kenya and Uganda respectively).

Some traders increased prices to compensate for increased costs. As one mechanic in Nairobi said, "Suppliers have doubled prices of spare parts as the supply has reduced, resulting in increased charges for the final consumer." However, it is notable that most traders did not increase prices, with some even reducing prices to retain customers.

Supply chain disruptions, particularly on imports, have proven challenging for informal traders with ~61% of surveyed traders in Kenya and ~39% in Uganda paying more for raw materials. As one vehicle mechanic noted, "Prices for supplies increased due to the shortage of supply, especially for the imported ones."

Despite increase in raw material costs, only ~32% of traders in Kenya and ~18% in Uganda

managed to change suppliers to offset the increased cost. In both countries, businesses earning higher revenues were more likely to change suppliers in response to increased supply costs. Of the traders who managed to change suppliers, ~25% in Kenya and ~27% in Uganda started using suppliers more local to their area. As one grocery vendor said, "I started getting my fruits and vegetables from a local supplier at Kangemi instead of going to the market in Muthurwa."

Another adaptation favoured by informal traders was changing their product or service offerings. An estimated ~10% of surveyed traders in Kenya and ~14% in Uganda changed their product offerings in response to C19's impacts.<sup>89</sup> An example being a grocery vendor in Kenya who noted, "I started selling vegetables to diversify my businesses as most people were now buying them often."

A notable ~27% of surveyed hairdressers in Kenya diversified their offerings.

One hairdresser reported, "I had to start selling foodstuffs like samosa, chicken wings and chapatis to supplement my income as my salon had fewer client visits." In Uganda, ~23% of agriculture traders and grocery store owners added new products. As one poultry farmer said, "I have started farming vegetables to boost income and I plan to venture more into it."

A further adaptation was changing or consolidating operating locations with ~9% of Kenyans and ~6% of Ugandans doing the former. Of those that changed operating locations, ~57% in Kenya and ~33% in Uganda changed locations to operate within their neighbourhoods. Some started by visiting clients in their own neighbourhoods, while others served clients out of their homes.

One shop owner in Nairobi explained,

"We started doing home deliveries, so if you cannot come to us, we send someone to you."
In addition, ~29% of traders in Kenya and ~28% in Uganda closed their low performing locations or consolidated their operations.

A pharmacy owner in Kampala noted, "I have closed one of my pharmacy outlets as there are few customers now and focused on the most profitable one."

C19's economic impact has been undeniable and continues to present a challenge as the global and local disease outlook remains uncertain. Despite significant challenges coupled with limited resources and support, some informal businesses have demonstrated the adaptability and resilience needed to survive and thrive under the evolving conditions of C19.

<sup>88</sup> Percentages add up to more than 100% as multiple responses were accepted

<sup>89</sup> JICA-BCG Informal Sector Survey, October 2020



# **VII. TRADE AND LOGISTICS**

### **Key takeaways**

- C19 has negatively impacted exports of services in Kenya and Uganda, notably in tourism and transportation
- However, the total volume and value of goods exported has not been as significantly impacted as predicted by some initial models. For instance, tea exports in Kenya and gold exports in Uganda have been performing strongly in 2020, compared to 2019
- Imports faced a sharp decline in April and May due to global supply chain disruptions, but have recovered to 2019 levels by August
- Kenyan and Ugandan trade is partially dependent on the coordination of cross-border logistics in the East African region, notably along the Northern Corridor which witnessed significant disruption due to C19

### Methodology

- Leveraged data from government websites (i.e. press releases, reports), as well as sources from news outlets, nongovernmental organisations, UN agencies and internationally recognised databases of economic data
- Supplemented with expert interviews with government officials, technical experts,
   economists, and relevant private sector leaders including recruitment companies, mobility
   services providers, agricultural exporters and retailers

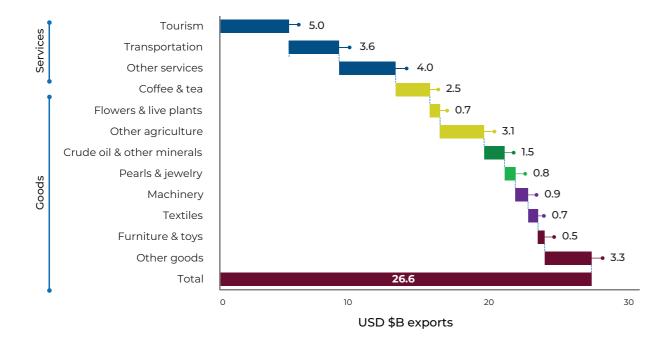
## **Exports**

C19 has negatively impacted exports of services in Kenya and Uganda, however the overall value and volume of the export of goods has not been as significantly impacted as some models predicted Exports materially drive GDP in the East African region. In 2018, exports from East African Community member states were approximately valued at USD \$26.6B, of which transport, tourism, and agriculture comprise over ~50% of the total value of exports.<sup>90</sup>

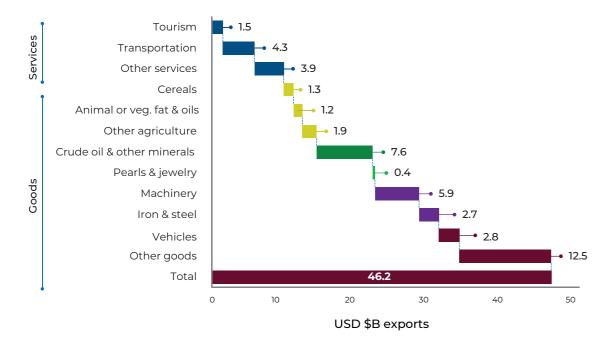
## **EXHIBIT 21: EAST AFRICAN EXPORTS AND IMPORTS**



#### EAC exports in 2018 (USD \$B)



#### EAC imports in 2018 (USD \$B)



**Source:** World Trade Organization. Retrieved from https://docs.wto.org/dol2fe/Pages/FE\_Search/FE\_S\_S005.aspx [Accessed October 2020];UN Comtrade database. Retrieved from https://comtrade.un.org/data/ [Accessed September 2020].

In 2018, refined petroleum and machinery accounted for nearly one-quarter of the region's USD \$46 billion import value.<sup>91,92</sup> Between 2016 and 2019, trade deficits were growing at a compounded annual growth rate of +12%.<sup>93</sup>

Zooming in on Kenya, the key exports are tourism, transportation and agriculture. In 2018, tourism and transportation accounted for an estimated 27% of the total USD value of exports. Owing to local and global C19 restrictions, these services exports have been severely impacted. Some recovery has been observed after restrictions were eased in July, spurred by shorter curfew hours, more inter-county movement and the resumption of domestic and later, international flights.<sup>94</sup>

The impact on goods exports is less severe than initially predicted, though this does differ according to the specific good in question.

For example, between January and August 2020, total exported goods from Kenya were ~5% higher in USD value compared to the same period in 2019. This is partially owing to the strong performance of tea and the recovery of cut flower exports in June, as well as the depreciation of the Kenyan shilling.95,96

On examining Kenya's largest export which is tea, export volumes in 2020 surpassed 2019 levels due to factors of both demand and supply. Net global demand for tea has appeared to rise, partially owing to the increase in home consumption due to C19, while global supply is expected to fall by approximately 2.3%. This is partially driven by a fall in supplies from the largest tea exporter, India, because of flooding in June and July, as well as local restrictions to contain C19.97 Taken together, these factors may appear to result in greater demand for Kenyan tea.98

When we zoom in on Uganda, its key exports have historically been tourism and agriculture, notably coffee. However, gold became the nation's largest export in 2018, accounting for over ~30% of total export value. Like in Kenya, exports of services such as tourism have been severely impacted by C19. By easing restrictions in July like shortening curfew hours and allowing more inter-provincial travel, some recovery has been observed in the tourism industry. But global restrictions on movement continue to impact overall tourism demand.99 Encouragingly, the overall impact on exported goods has been less severe, decreasing by ~4% in USD value in 2020 compared to the same time period in 2019. This has been partially driven by the strong performance of gold.<sup>100</sup>

<sup>&</sup>lt;sup>91</sup> World Trade Organization. 2018. Retrieved from https://docs.wto.org/dol2fe/Pages/FE\_Search/FE\_S\_S005.aspx [Accessed October 2020]; UN Comtrade database. 2018. Retrieved from https://comtrade.un.org/data/ [Accessed September 2020].

<sup>92</sup> United Nations Trade Statistics. 2020. UN Comtrade database. Retrieved from https://comtrade.un.org/ [Accessed October 2020].

<sup>93</sup> World Trade Organization. Retrieved from https://docs.wto.org/dol2fe/Pages/FE\_Search/FE\_S\_S005.aspx [Accessed October 2020].

<sup>94</sup> World Trade Organization. Retrieved from https://docs.wto.org/dol2fe/Pages/FE\_Search/FE\_S\_S005.aspx [Accessed October 2020]; UN Comtrade database. Retrieved from https://comtrade.un.org/data/ [Accessed September 2020].

<sup>95</sup> Kenya Bureau of Statistics. 2020. Leading economic indicators. Retrieved from https://www.knbs.or.ke/?page\_id=1591 [Accessed 12 October 2020].

<sup>&</sup>lt;sup>96</sup> When adjusted for the depreciation of the currency, total goods value has increased by USD \$70 (1.6%) due to a strong first quarter <sup>97</sup> Ibid.

<sup>&</sup>lt;sup>98</sup> Kenya Bureau of Statistics. 2020. Leading economic indicators. Retrieved from https://www.knbs.or.ke/?page\_id=1591 [Accessed 12 October 2020]; World Trade Organization. Retrieved from https://docs.wto.org/dol2fe/Pages/FE\_Search/FE\_S\_S005.aspx [Accessed October 2020].

<sup>&</sup>lt;sup>99</sup> Bank of Uganda Statistical database. 2020. Retrieved from https://bou.or.ug/bou/bouwebsite/Statistics/Statistics.html [Accessed October 2020]; United Nations. 2020. UN Comtrade database. Retrieved from https://comtrade.un.org/data/ [Accessed September 2020].

<sup>&</sup>lt;sup>100</sup> Bank of Uganda Statistical database. 2020. Retrieved from https://bou.or.ug/bou/bouwebsite/Statistics/Statistics.html [Accessed October 2020].

## **EXHIBIT 22: VALUE OF EXPORTED GOODS IN 2019 AND 2020**

## KENYA

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Kenyan exports in 2019 and 2020 (Jan – Sep)

Export value (KSh billion)



## UGANDA

#### Ugandan exports in 2019 and 2020 (Jan – Sep)

Export value (USD \$ million)



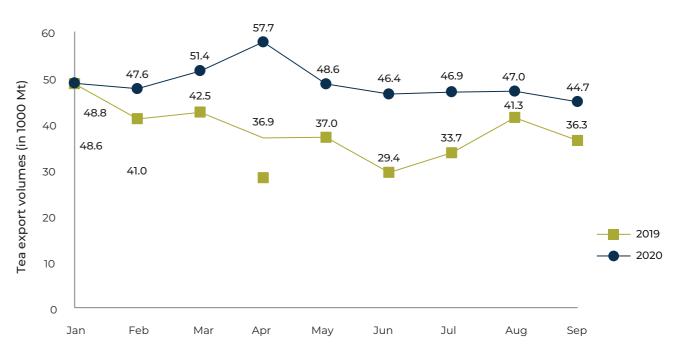
Note: Kenya Bureau of Statistics reports trade statistics in local currency (KSh) while Bank of Uganda reports all trade data in USD **Source:** Bank of Uganda; Kenya National Bureau of Statistics

# EXHIBIT 23: TEA EXPORT VOLUMES IN KENYA (2019 VS. 2020) AND GOLD EXPORT VOLUMES IN UGANDA (2020)



**KENYA** 

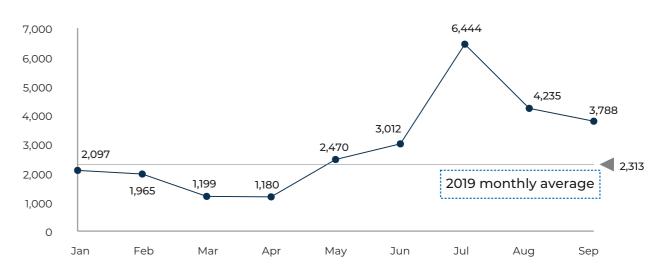
Tea export volume in 2019 and 2020 in Kenya



## •

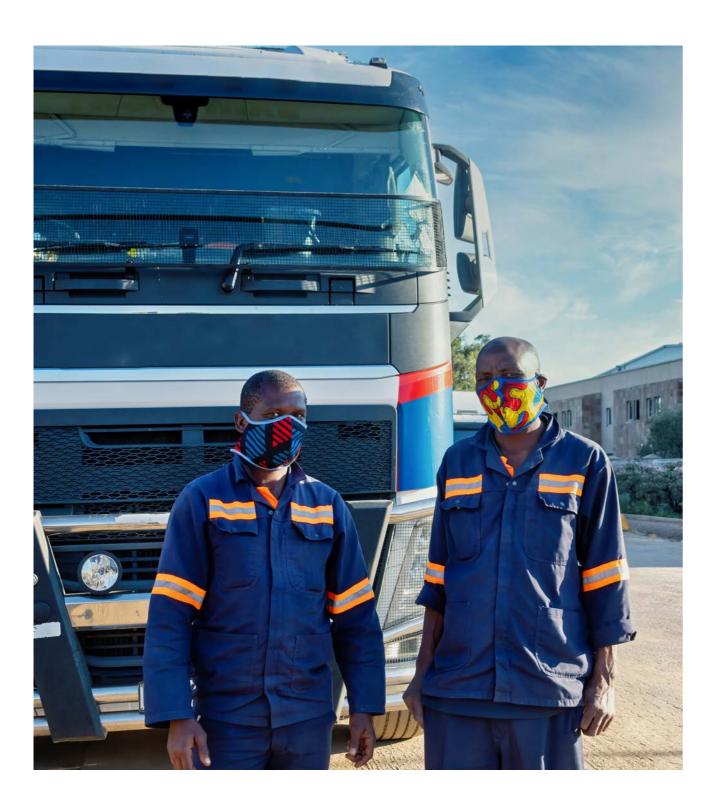
**UGANDA** 

#### Gold export volumes (kg) in 2020



**Source:** Kenya Bureau of Statistics. 2020. Leading economic indicators. Retrieved from https://www.knbs.or.ke/?page\_id=1591 [Accessed 23 November 2020]; Bank of Uganda Statistical database. 2020. Retrieved from https://bou.or.ug/bou/bouwebsite/Statistics/Statistics.html [Accessed 23 November 2020].

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Since 2018, gold has been Uganda's largest export and its export value in 2020 has surpassed 2019 levels, driven primarily by an increased global demand. The economic uncertainty due to C19 has caused significant demand increase globally,

raising gold prices by ~26% between January and August 2020. In Uganda, monthly export volumes since May have consistently outperformed average monthly levels of 2019, reaching a peak in July 2020.<sup>101</sup>

## <sup>101</sup>Bank of Uganda Statistical database. 2020. Retrieved from https://bou.or.ug/bou/bouwebsite/Statistics/Statistics.html [Accessed October 2020].

#### **Imports**

# Imports are experiencing a sharp recovery despite the initial significant decline in April and May

Kenya's total import value in 2020 at the time of writing is KSh 1.1 trillion compared to KSh 1.2 trillion during the same period in 2019 (a net ~11% decrease in value), while Uganda's total value in 2020 to date is USD \$4.2 billion compared to USD \$4.7 billion during the same period in 2019 (a net ~10% decrease in value). Oil is the biggest contributor to both countries' imports, and oil volumes passing through the Port of Mombasa between May and September are down ~14%, compared to the same period in 2019.

Import volumes decreased at the outset of the C19 crisis with the Port of Mombasa experiencing an ~18% reduction in throughput volumes between April and May. 102 In April 2020, there was a ~30% decrease in import volume in Kenya and a ~49% decline in Uganda compared to April 2019. This decrease was chiefly driven by supply chain disruptions in India and China which reduced the availability of certain imports. 103 Imports were further impacted when local restrictions reduced the demand for petroleum products. As restrictions have eased, both supply and demand are recovering, and overall import volumes have recovered to near 2019 levels in Kenya. In Uganda, import volumes have surpassed 2019 levels since July 2020.



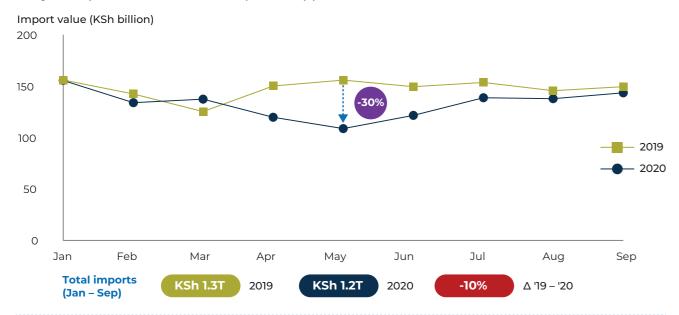
<sup>&</sup>lt;sup>102</sup> Kenya Bureau of Statistics. 2020. Leading economic indicators. Retrieved from https://www.knbs.or.ke/?page\_id=1591 [Accessed 12 October 2020]

<sup>&</sup>lt;sup>103</sup> Kenya Bureau of Statistics. 2020. Leading economic indicators. Retrieved from https://www.knbs.or.ke/?page\_id=1591 [Accessed 12 October 2020]; Bank of Uganda Statistical database. 2020. Retrieved from https://bou.or.ug/bou/bouwebsite/Statistics/Statistics.html [Accessed October 2020].

# EXHIBIT 24: KENYAN AND UGANDAN IMPORTS DIPPED TEMPORARILY IN APRIL AND MAY MOSTLY DUE TO GLOBAL SUPPLY CHAIN DISRUPTIONS, BUT HAVE RECOVERED

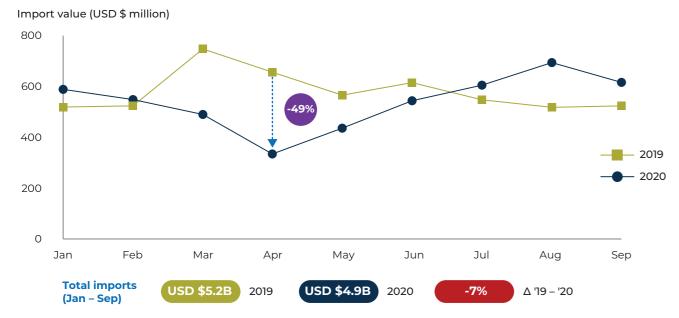
## KENYA

#### Kenyan imports in 2019 and 2020 (Jan – Sep)



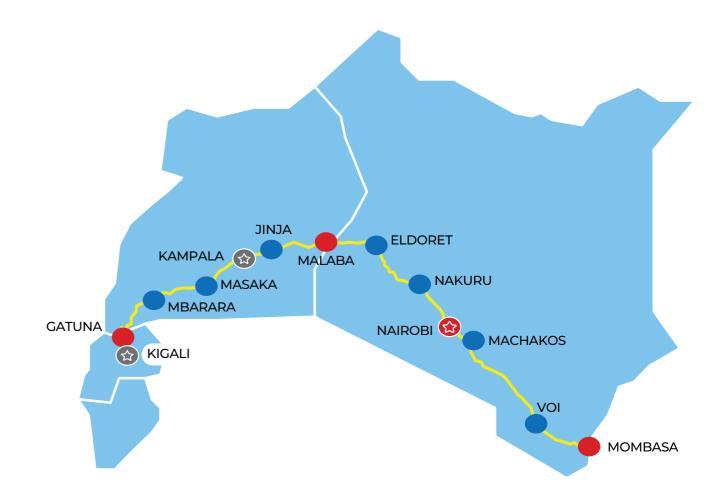
# UGANDA

#### Ugandan imports in 2019 and 2020 (Jan – Sep)



Note: Kenya Bureau of Statistics reports trade statistics in local currency (KSh) while Bank of Uganda reports all trade data in USD **Source:** Bank of Uganda; Kenya National Bureau of Statistics

# EXHIBIT 25: MAJOR NORTHERN CORRIDOR ROUTE FROM MOMBASA TO KIGALI THROUGH KAMPALA



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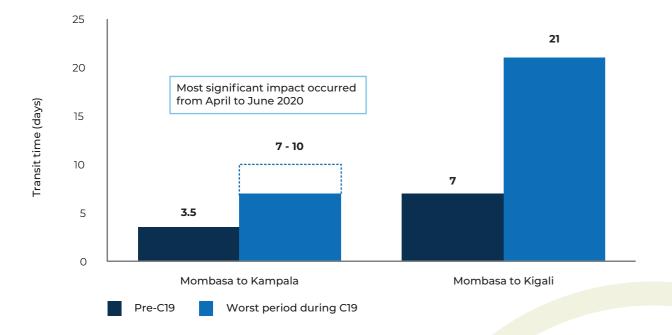
TRADE AND LOGISTICS **BUILDING RESILIENCE** Analysis as of September 2020

# **EXHIBIT 26: TRANSIT TIMES AND COST INCREASES ACROSS** THE NORTHERN CORRIDOR



**EAST AFRICA** 

Transit time increases have been driven by disruptions at major border crossings



## Case study: **Northern Corridor**

Kenyan and Ugandan trade is dependent on the coordination of cross-border logistics in the East African region, notably along the Northern Corridor which witnessed significant disruption due to C19

The Northern Corridor is the key transport link and a crucial trade route in the East African region. It connects the Port of Mombasa in Kenya through Uganda and into Rwanda as well as South Sudan. C19 disruptions affected both the Port of Mombasa and the land borders, with the latter facing major logistical challenges to date.

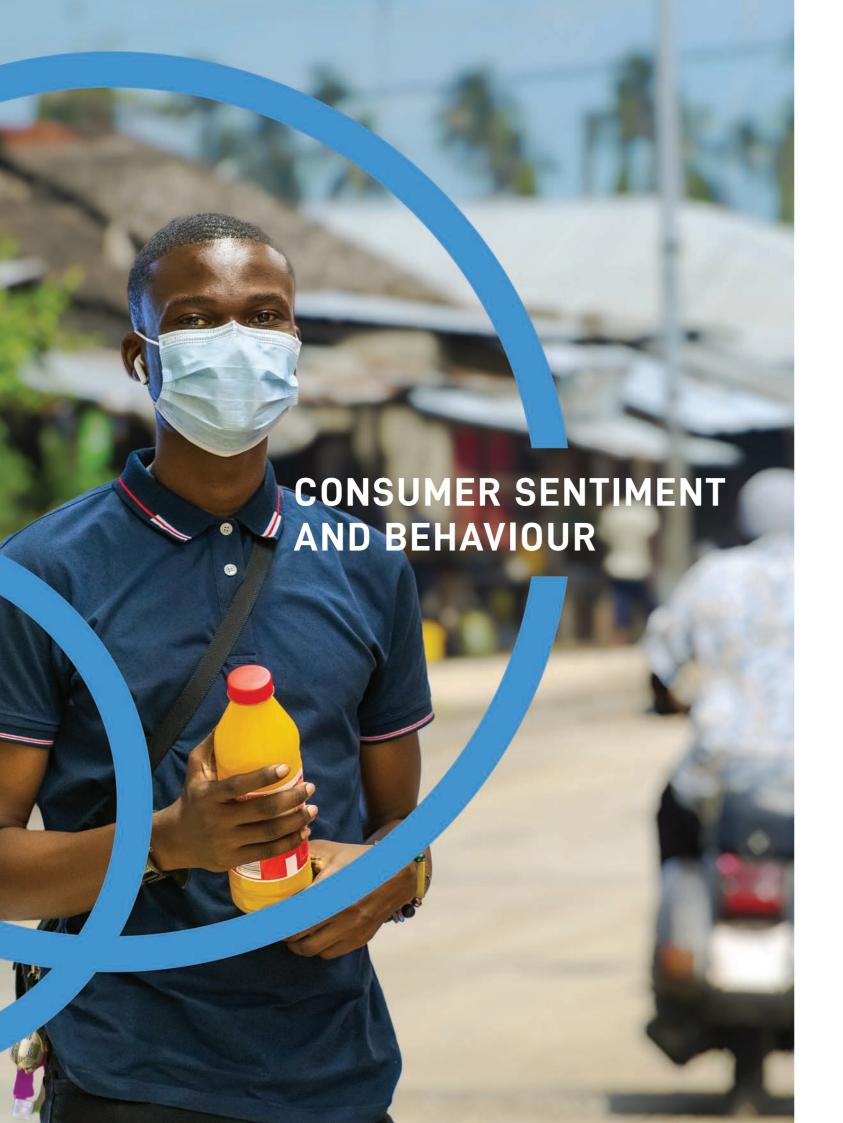
Busia and Malaba are the two busiest border posts between Kenya and Uganda. Busia is primarily an entry point for fuel with more than 300 trucks entering daily while Malaba sees a high volume of cargo trucks. These border posts together have been the largest source of inefficiency for regional trade during C19, increasing both costs and transit times across the Northern Corridor. 104

The initial disruption was triggered by duplicated C19 testing requirements of the two countries. This led to a ~50,000-person queue at times. This was alleviated after an agreement between the two governments was reached on 29 May 2020 to recognise each other's test certificates.

The congestion reduced significantly postagreement. But in September, challenges in C19 testing in Kenya impelled many truck drivers to get tested at the Ugandan border instead. These challenges included the shortage of C19 testing supplies and long processing times. In response, the Ugandan government introduced a USD \$65 fee to recoup the testing costs, which contributed to further disruptions and delays at the borders.<sup>105</sup> Overall, these challenges have significantly reduced the efficiency of the Northern Corridor, slowing down trade across the East African region.<sup>106</sup>

<sup>&</sup>lt;sup>104</sup> Expert interviews conducted September 2020

<sup>106</sup> Ibid.



# VIII. CONSUMER SENTIMENT AND BEHAVIOUR

## **Key takeaways**

- Household financial strain: Most surveyed urban consumers reported experiencing a decline in household income (~70% in Kenya and ~84% in Uganda), with ~47% in Kenya and ~67% in Uganda experiencing a decline of more than 50% of their income. This was primarily driven by job losses and reduced salary for those employed
- Health and wellness: ~28% of Kenyans and ~27% of Ugandans are unwilling to be tested for C19. Unwillingness has largely been driven by credibility concerns in Kenya (~38%) and affordability constraints in Uganda (~30%). In both countries adherence to preventive measures has begun to waver driven by reduced fear of the virus.
- Mobility: In urban areas in both countries, significant reduction in overall movement of people
  was observed for the first few months under C19. For example, in April, the movement from
  home to transit station declined by 45% and 82% in Kenya and Uganda respectively, compared
  to pre-C19 baselines.<sup>107</sup> Only ~33% of Kenyans and ~22% of Ugandans reported adopting new
  modes of transport, primarily due to affordability concerns
- Digital adoption: Internet adoption across activities has increased in both countries with education (~66% in Kenya and ~52% in Uganda), and remote work (~62% in Kenya and ~55% in Uganda) driving increased use. However, lower income urban consumers are less likely to increase usage due to financial strain under C19

## Methodology

- Local data research partners led ~2 to 3-hour long discussions with ~5-6 people each, focusing on specific demographics across sectors to develop a foundational understanding of issues, trends and sentiments and develop an initial hypothesis for validation by a quantitative survey
- Further 1-hour detailed interviews were conducted with carefully selected individuals chosen from the group discussions to provide additional details on their end-to-end experience
- Conducted 25 focus group discussion (~2-3-hour) with ~5-6 people each, covering key demographic segments and sectors to develop a foundational understanding of issues, trends and sentiments between 14 September and 9 October
- Conducted fifty ~1-hour detailed 1:1 interviews with selected individuals to provide additional details on their end-to-end experience between 14 September and 9 October
- Conducted a quantitative survey (n=2500) of consumers in Nairobi, Mombasa and Kampala between 9 October and 4 November

<sup>107</sup> Google Mobility

### **Findings**

C19 has impacted the lives of urban consumers across Kenya and Uganda in various dimensions including household income, health & wellness, mobility and digital adoption; many have had to adapt to changing circumstances, catalysing shifts in consumer sentiment and behaviours, some of which are likely to outlast the immediate crisis

#### **General sentiment**

Only ~27% of consumers in Kenya and ~29% in Uganda reported feeling financially secure with ~37% Kenyans and ~62% of Ugandans expressing concern about food security. Almost half the surveyed consumers in Kenya (~48%) and Uganda (~50%) still believe that the virus poses a serious danger in their countries, with ~51% in Kenya and ~44% in Uganda concerned about contracting the virus.

Most consumers in Kenya (~65%) and Uganda (~68%) reported the belief that measures taken by their governments were largely effective. In Kenya, mandatory wearing of masks (~73%) and closure of public spaces (~70%) were viewed as the two most successful measures and curfew (~49%) was viewed as the least effective measure. Consumers in Uganda felt that the closure of public spaces (~80%), quarantine (~79%), and closures of borders (~79%) were the most effective measures to curb the spread of C19, with curfew (~52%) deemed the least effective measure, like in Kenya. 109

#### Household financial strain

Consumers' finances have been severely affected by C19; faced with reduced income or unemployment, some adapted by starting side businesses, changing spending habits, or utilising credit

A reduction in income is consistent across all income brackets with ~70% of surveyed consumers in Kenya and ~84% in Uganda reporting a decline in household income. Of those who faced a reduction, ~47% in Kenya and ~67% in Uganda saw reductions of more than half their income. In both countries, non-essential products and services like hairdressing were more unduly affected, when compared to essential goods and services such as groceries and pharmacies.

Job loss was the primary driver of reduced income in both countries, with ~45% of respondents reporting layoffs in Kenya and ~48% in Uganda, with reduced hours prevalent in ~36% and ~50% of respondents in Kenya and Uganda respectively. One Ugandan consumer reported that, "Previously, I worked 2-3 shifts at the supermarket but currently, I only work 1 shift to none on some days, hence I am paid less."

The effect of C19 on the timing of recovery appears to be more severe in Uganda than in Kenya, with ~39% of consumers in Uganda unsure when they will recover to pre-C19 levels compared to ~19% in Kenya. But a similar level of income recovery has been reported in both countries with ~41% of Kenyans and ~43% of Ugandans reporting some level of recovery.

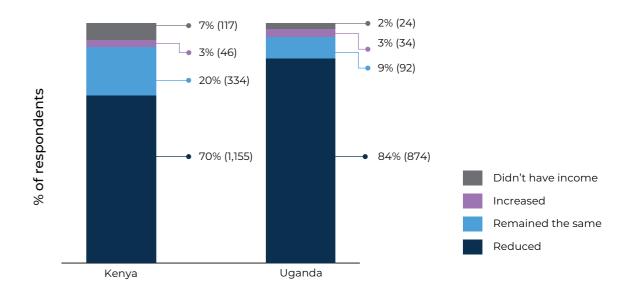
#### <sup>108</sup> Percentages add up to more than 100% as multiple responses were accepted

# EXHIBIT 27: FINANCIAL IMPACT ON CONSUMERS AND MAGNITUDE OF THE IMPACT



Impact on income

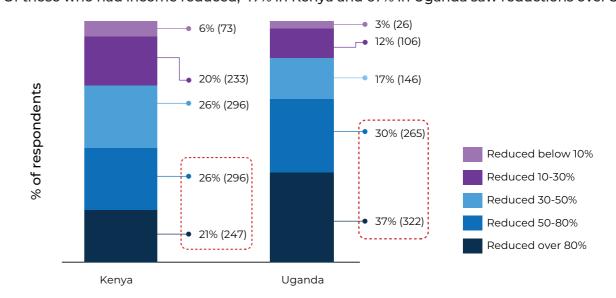
70% of Kenyan consumers experienced reduced income, this rose to 84% in Uganda





Magnitude of income reduction

Of those who had income reduced, 47% in Kenya and 67% in Uganda saw reductions over 50%



Question: Has your personal income changed due to the C19 pandemic?; How much has your personal income reduced compared to before C19?

 $<sup>^{109}</sup>$  Percentages add up to more than 100% as multiple responses were accepted

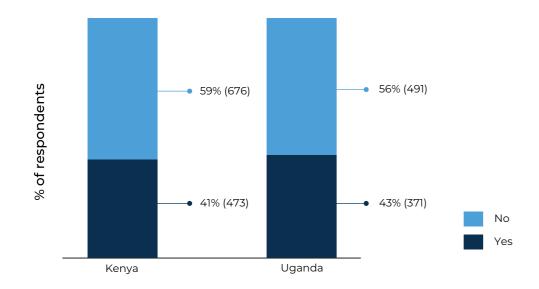
JICA-BCG Kampala, Uganda Consumer Survey, 18 October - 7 November 2020

# EXHIBIT 28: RECOVERY EXPERIENCED AND CONSUMERS' EXPECTATIONS FOR THE FUTURE



Recovery experienced vs. C19 low

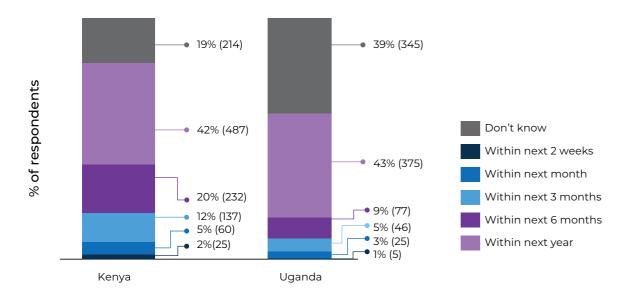
Kenyan and Ugandan consumers have seen a similar frequency of income recovery at ~41% and ~43% respectively



# <u>L</u>

#### Timeline to return to pre-C19 income

However, uncertainty is higher in Uganda where ~39% don't know when they will recover to pre-C19 levels (~19% in Kenya)



Note: Sample is respondents who experienced income reduction due to C19
Question: Has your income started recovering from the worst time during C19?; When do you expect to return to your income level before C19?
JICA-BCG Kampala, Uganda Consumer Survey, 18 October - 7 November 2020

Consumers have reported adapting to reduced income by starting side businesses, changing their spending habits and utilising credit. Of the surveyed consumers, ~37% in Kenya and ~29% in Uganda reported starting side businesses with ~43% of consumers aged between 18 to 25 in Kenya likely to start a business.

Consumers have also adjusted their spending behaviour to focus on meeting their basic needs and de-prioritising non-essential items as noted by one consumer in Kampala, "We stopped eating meals like meat, milk and started eating more cereals which were affordable so I can afford other bills such as rent."

Consumers have also reduced their shopping frequency by ~21% in Kenya and ~22% in Uganda, beginning to favour cheaper outlets such as kiosks and wholesalers which also sell smaller quantities. In Kenya, consumers expressed the sentiment that in the coming six months, they will visit kiosks on an average of ~10% more. While in Uganda, consumers indicated increased visits to both kiosks (~42%) and wholesalers (~7%).

Surprisingly, credit and savings were only used by a minority of consumers to offset the financial effects of C19. In Kenya, ~12% of surveyed consumers reported taking out loans compared to only ~5% in Uganda. In Kenya, ~1% of consumers reported relying on their savings while in Uganda, ~3% did.<sup>110</sup> It is likely that consumers avoided taking out loans owing to concerns about their ability to repay. Others have been blacklisted and cannot access credit. As a consumer reported, "I would like to borrow, but I was blacklisted at the beginning of the pandemic, hence I cannot borrow."

However, of those who did report taking out loans, mobile money was the most popular source (~48%), followed by friends and family (~36%) in Kenya. In Uganda, friends and family is the most favoured (~48%), followed by commercial banks (~36%). The popularity of friends and family along with mobile money as sources of credit can be explained by their accessibility and no requirement of collateral.

#### **Health and wellness**

Around ~28% of Kenyans and ~27% of Ugandans are unwilling to be tested for C19. In Kenya, mistrust towards test results is the main driver reported with ~38% of consumers reporting this as their primary concern. Interestingly, quarantine centre placement is the second most reported concern with ~28% largely driven by the lack of space to quarantine on testing positive. Only ~58% of consumers reported having the space to isolate. Contrastingly, in Uganda, affordability (~30%) is the primary reason for not being tested. Low income consumers earning less than USh 450K per month (~USD \$121)<sup>111</sup> were the most likely at (~54%) to cite affordability as the key factor behind unwillingness to test. In both Kenya and Uganda, ~64% of consumers would prefer to be tested at public hospitals, their decision driven by affordability and credibility concerns in both countries, with mid and high-income earners being more concerned with credibility than with affordability.

Consumers reported being well-informed about the virus, and initially observed preventive measures driven by fear of contracting the virus.

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<sup>&</sup>lt;sup>110</sup> Sample is respondents who experienced reduced income during C19. Question: What are you doing/ did you do to make up for your temporary loss of income?

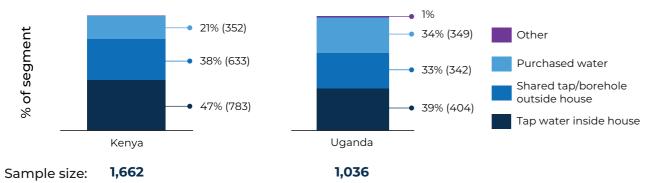
**Source:** JICA-BCG Nairobi and Kampala Informal Sector Survey, September-November 2020  $^{11}$ As of 13 November 2020

# EXHIBIT 29: WATER AVAILABILITY AND SUPPLY DISRUPTIONS IN KENYA AND UGANDA



Water accessibility<sup>1</sup>

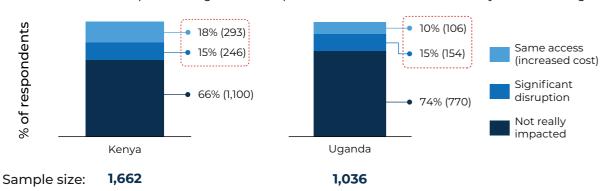
~47% of Kenyan and ~39% of Ugandan consumers have indoor taps





#### Water supply

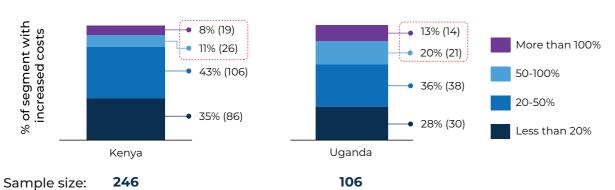
~15% in both countries experienced significant disruptions while costs rose for ~18% in Kenya and ~10% in Uganda





#### Cost

Water costs rose more severely in Uganda with ~33% reporting rises over 50% vs. ~19% in Kenya



1. Answers add up to over 100% because multiple responses were accepted

Question: How does your household get the water that you use in your home?; How has your access to water been impacted since March this year?; How much has the cost of water increased?

**Source:** JICA-BCG Kampala, Uganda Consumer Survey, 18 October - 7 November 2020; JICA-BCG Nairobi & Mombasa, Kenya Consumer Survey, 16 October - 5 November 2020

As the pandemic progressed and government restrictions were eased, adherence to preventative measures has become more lax in both countries with one Ugandan observing, "Honestly, I stopped wearing my mask, I just social distance and sanitise... when I leave the house the mask is in my pocket."

Consumers in Kenya and Uganda reported that they continue with hygiene measures such as washing hands (~54% in Kenya and ~79% in Uganda), and wearing a mask (~82% in Kenya and ~71% in Uganda), but adherence to social distancing measures has dropped significantly. Only ~8% of consumers in Kenya and ~14% in Uganda are avoiding public transport compared to ~21% and ~36% at the outset of the pandemic.112 In Kenya, only ~16% of consumers are still staying home compared to ~40% at the outset whereas in Uganda, only ~26% of consumers are still staying home compared to ~67% at the outset of the pandemic. This shift in adherence can be attributed to disease fatigue and economic needs outweighing safety concerns.

Consumers in both countries have experienced significant disruptions to their water supply since March. Only ~47% of consumers in Kenya and ~39% in Uganda have indoor taps, with ~21% of surveyed Kenyans and ~34% of Ugandans relying on purchased water to meet their needs.

Since the onset of the pandemic in March, ~15% of consumers in both countries have faced significant disruptions to their water supply, with costs rising for ~18% in Kenya and ~10% in Uganda.

Of those who faced increased prices, ~19% of Kenyans and ~33% of Ugandans reported a price increase of more than 50%.

#### Mobility

Matatu (minibus) is the primary public transport in urban Kenya while bodabodas (motorcycle taxis) are equally popular in urban Uganda

Among daily adult commuters in Kenya, ~48% ride a matatu (minibus), ~42% walk, ~5% commute by private car and ~5% use other modes of transport. Matatus service approximately 1 million adult commuters each day and ~79% of surveyed consumers reported matatus as their primary mode of transport. In Uganda, matatus and boda-bodas (motorcycle taxis) are the primary modes of public transport and account for ~40% of all transport in the Greater Kampala Metropolitan Area. Over 100,000 boda-bodas operating in Kampala provide more than 800,000 daily trips.

# Transport demand has significantly dropped across the board in Kenya and Uganda

In April 2020, movement from home to transit station declined by ~45% and ~82% in Kenya and Uganda respectively, compared to pre-C19 baselines.

Despite the significant decrease in use, the median weekly transport spend for consumers has increased marginally by ~3% in Kenya, and only decreased ~5% in Uganda.

<sup>&</sup>lt;sup>112</sup> Percentages add up to more than 100% as multiple responses were accepted

<sup>&</sup>lt;sup>113</sup> Salon, D., Gulyani, S. 2019. 'Commuting in Urban Kenya: Unpacking Travel Demand in Large and Small Kenyan Cities'. Sustainability. Retrieved from https://www.researchgate.net/publication/334439119\_Commuting\_in\_Urban\_Kenya\_Unpacking\_Travel\_Demand\_in\_Large\_and\_Small\_Kenyan\_Cities [Accessed July 2019].

<sup>&</sup>lt;sup>114</sup> Bajpai, JN., Haas, ARN. 2017. 'A framework for initiating public transport reform in the Greater Kampala Metropolitan Area'. International Growth Centre. Retrieved from https://www.theigc.org/wp-content/uploads/2017/09/20170819GKMAPublicTransportPolicyBrief\_Final.pdf [Accessed August 2017].

Increased public transport fares for some modes of transport such as matatus (which doubled in many cases) may account for the low decrease in Ugandan spends, and the marginal increase witnessed in Kenya.

Despite the potential risk of C19 infection, ~67% of consumers in Kenya and ~78% in Uganda have not started using new modes of transport which are viewed as being safer. This is primarily due to economic reasons. In both countries, 'cost' is the most important driver for choosing transport modes during C19 (~63% of Kenyan and ~57% of Ugandan urban consumers chose cost as an important factor in their choice of transport).

Public transport operators have adapted to maintain business continuity during the pandemic. When public transport was banned in Kampala, matatu operators leased their vehicles out to essential service providers and many ride sharing companies pivoted to offer delivery services. In Kenya, Uber launched Uber Connect and saw increased usage of its Uber Eats business. Similarly, Bolt launched Bolt Business Delivery. In both countries, capacity limits on public transport remain in place, though non-adherence to these limits has been frequently observed. Many matatu operators have doubled costs to try

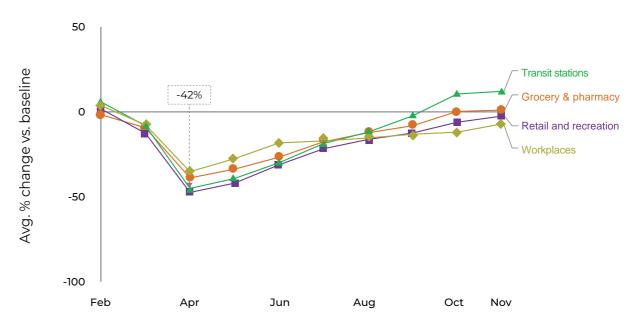
to recoup revenue losses from earlier in the year and from the capacity limits in place. Trends in consumer mobility are gradually returning to pre-C19 levels as government imposed NPIs are relaxed, but overall mobility is still below baseline levels. Nairobi witnessed a ~48% drop in retail and recreation visits in April, compared to a baseline time period between 3 January and 6 February. The number of visits to other locations has also decreased significantly. The recovery witnessed since April differs by category, with grocery shops and pharmacies recovering to baselines, while workplace, retail and recreation levels remain below baselines.<sup>116</sup> In Kampala in April, transit stations saw an ~82% decrease in visits compared to a baseline time period between 3 January and 6 February.

A return to baseline levels is being observed since the ban on public transport was lifted on 2 June, but all categories in Kampala remain below baselines at the time of writing. To Some of the shifts observed in mobility trends may persist longer-term. Consumers expect to travel less overall in in the next six months in both Kenya and Uganda. This may be attributed to lower demand caused by job losses and continued work from home.

## **EXHIBIT 30: MOBILITY TRENDS IN KENYA AND UGANDA**

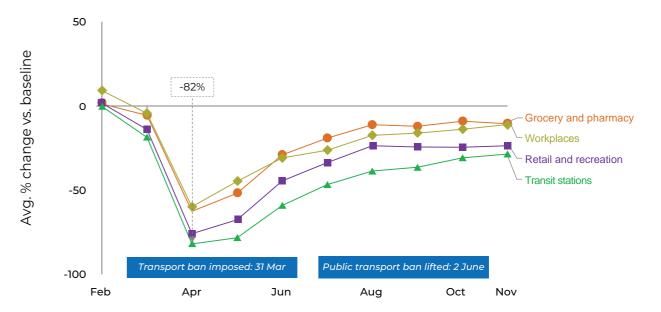
## **KENYA**

Mobility trends in Nairobi and Mombasa in 2020



## UGANDA

#### Mobility trends in Kampala in 2020



<sup>1.</sup> Residential figures are time spent at home and not number of visits; each day of the week has a unique baseline: the median on that day of the week for the 5 week period from 3 January to 6 February 2020

Note: Data collected from 15 February to 9 October 2020

<sup>115</sup> Expert interviews conducted with Kenya Bureau of Statistics, JICA, Uber, UNCDF and UNFPA

<sup>&</sup>lt;sup>116</sup> Google Mobility reports define retail and recreation as places including restaurants, cafes, shopping centres, theme parks, museums, libraries and cinemas; Google Mobility. 2020. 'Covid-19 Community Mobility Reports'. Retrieved from https://www.google.com/covid19/mobility/ [Accessed October 2020].

<sup>117</sup> Ibid

 $<sup>^{18}</sup>$  JICA-BCG Kampala, Uganda Consumer Survey,  $^{18}$  October - 7 November 2020; JICA-BCG Nairobi, Kenya Consumer Survey,  $^{18}$  October - 7 November 2020

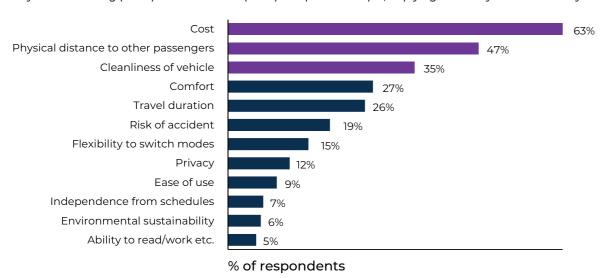
**Source:** Google Mobility. 2020. 'Covid-19 Community Mobility Reports.' Retrieved from https://www.google.com/covid19/mobility/ [Accessed October 2020].

# EXHIBIT 31: MOBILITY DECISION DRIVERS: COST IS THE PRIMARY DRIVER BEHIND TRANSPORT DECISIONS IN BOTH KENYA AND UGANDA AT ~60%

## KENYA

#### Mobility decision drivers

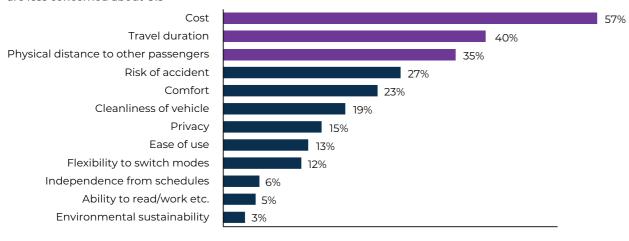
Physical distancing (~47%) and cleanliness (~35%) complete the top 3, implying that Kenyans are still wary of C19



# • UGANDA

#### Mobility decision drivers

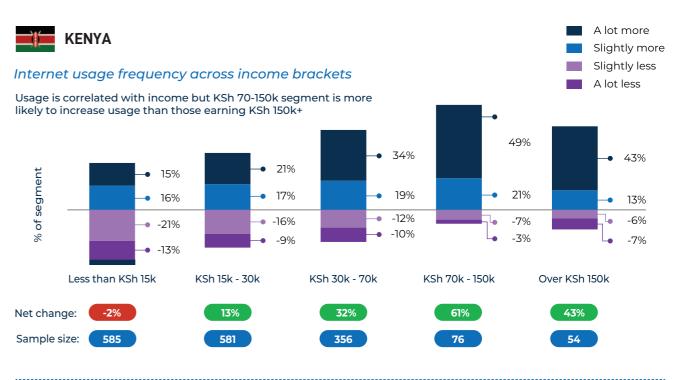
Physical distancing ranks  $3^{rd}$  at ~35% after cost (~57%) and duration (~40%), implying that Ugandan consumers are less concerned about C19

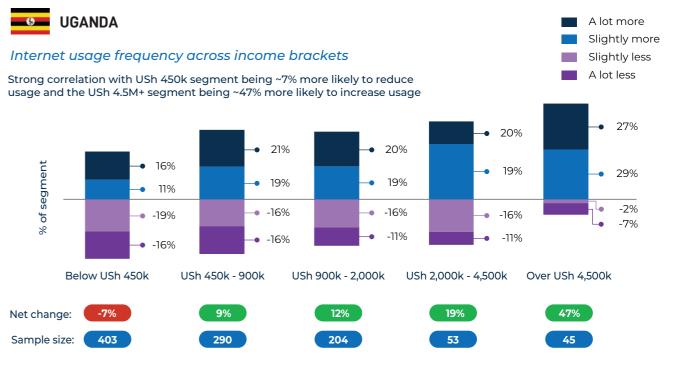


#### % of respondents

Question: Which of the following are the 3 most important factors for you when considering which mode of transport to use today? **Source:** JICA-BCG Kampala, Uganda Consumer Survey, 18 October - 7 November 2020; JICA-BCG Nairobi & Mombasa, Kenya Consumer Survey, 16 October - 5 November 2020

# EXHIBIT 32: INTERNET USAGE INCREASES WITH INCOME DRIVEN BY ACCESSIBILITY AND ABILITY TO WORK FROM HOME, HOWEVER THE CORRELATION IS STRONGER IN UGANDA





Note: Income is monthly household income

Question: How would you describe your internet usage compared with pre-C19 times?

Source: JICA-BCG Kampala, Uganda Consumer Survey, 18 October - 7 November 2020; JICA-BCG Nairobi & Mombasa, Kenya Consumer Survey, 16 October - 5 November 2020



While significant increase in internet usage is reported in higher income groups, lower income groups are more likely to reduce usage due to economic constraints

Internet usage is strongly correlated with income level. While higher income urban consumers in Kenya and Uganda are likely to increase internet usage during the pandemic, we see a divergence in the lower income segments. For example, in the lowest income bracket for both countries (i.e. monthly household income below KSh 15,000 or USh 450,000), the percentage of consumers who reduced internet usage exceeds the percentage of those who increased their usage (~33% vs. ~31% in Kenya, ~35% versus ~27% in Uganda).

Digital adoption across activities has been witnessed in Kenya and Uganda. Initially driven by government imposed NPIs,<sup>119</sup> this trend may persist with growing smartphone penetration. Unsurprisingly, internet use for school and work displayed the highest increases, with work increasing ~55% and ~62%, and school by ~52% and ~66% in Uganda and Kenya respectively. Daily internet usage is high in both countries,

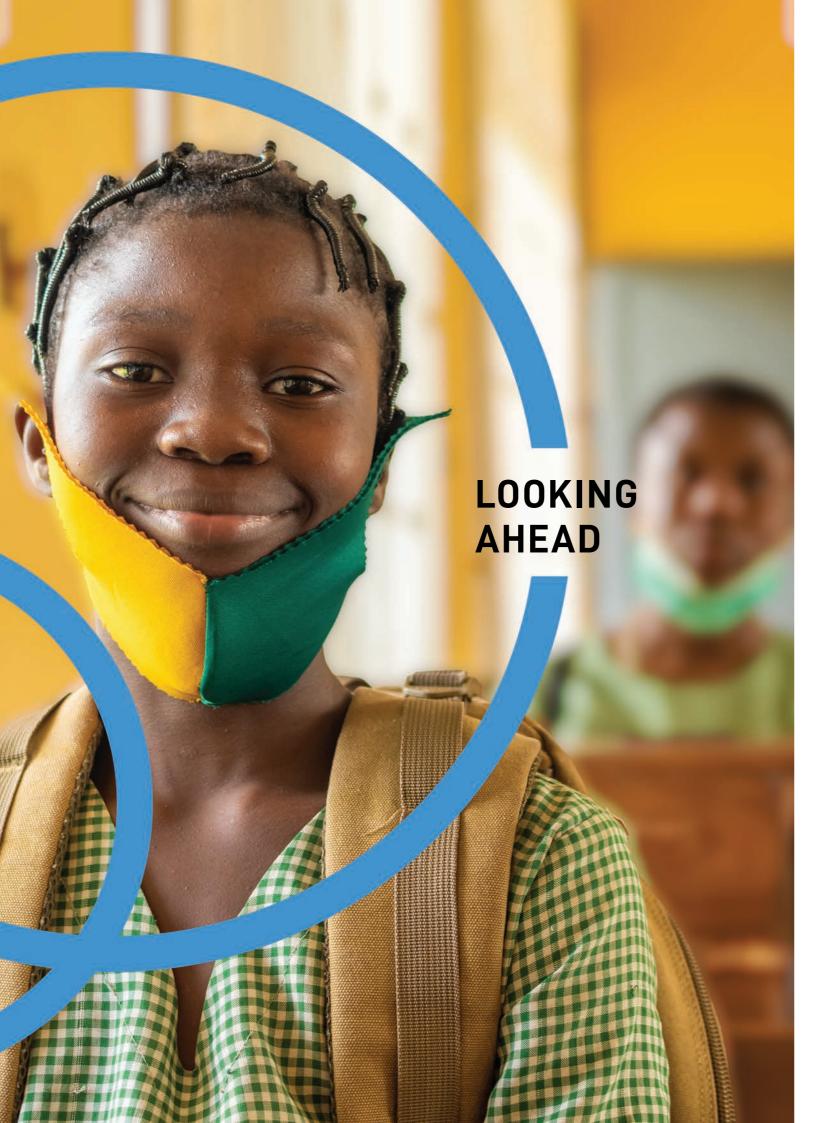
with ~87% of consumers in Kenya and ~72% in Uganda reporting the use of internet at least once a day, with ~45% in Kenya and ~41% in Uganda spending more than 4 hours online daily.

In both countries, the primary mode of internet access is via smartphone. Around ~89% of surveyed consumers in Kenya and ~76% in Uganda reported using a smartphone to access the internet. The high use of smartphones is likely driven by accessibility, convenience and relative affordability. It is perhaps the case that some respondents are using the smartphones of family and friends and do not own personal devices yet.

Urban consumers in Kenya and Uganda have been significantly impacted by C19, and have adapted their behaviours in various ways. Some of these changes in urban consumer behaviour may persist into the future as new norms of urban life.



<sup>&</sup>lt;sup>119</sup> NPI stands for Non-Pharmaceutical Intervention



# IX. LOOKING AHEAD

JICA initiated this research study with the intention of establishing a robust fact base that can support decision-making by policymakers involved in the C19 response in Kenya and Uganda. As the outlook for disease progression remains uncertain globally and locally, further adjustments to government policies may take place and the impact on healthcare capacity, economy, trade, logistics and consumer behaviour may evolve further.

In the light of this, there are several imperatives for key stakeholders across public, private and social sectors to consider for Kenya and Uganda. These imperatives can strengthen pandemic resilience of their urban areas, and beyond.

1. Accelerate health system strengthening:

Apply a holistic approach to strengthen health systems, building on them as the foundation for pandemic resilience. This includes capacity development for healthcare workers, progress towards universal health coverage, optimisation of supply chains, improved information management, and other areas that are important for both the ongoing management of high-burden diseases, and immediate outbreak response

2. Build resilience for vulnerable populations:

Make concerted efforts across various
stakeholders to empower the most
vulnerable populations by linking them with
innovative solutions (e.g. onboarding to online
marketplaces, improving financial access

through data-driven risk assessment, improving

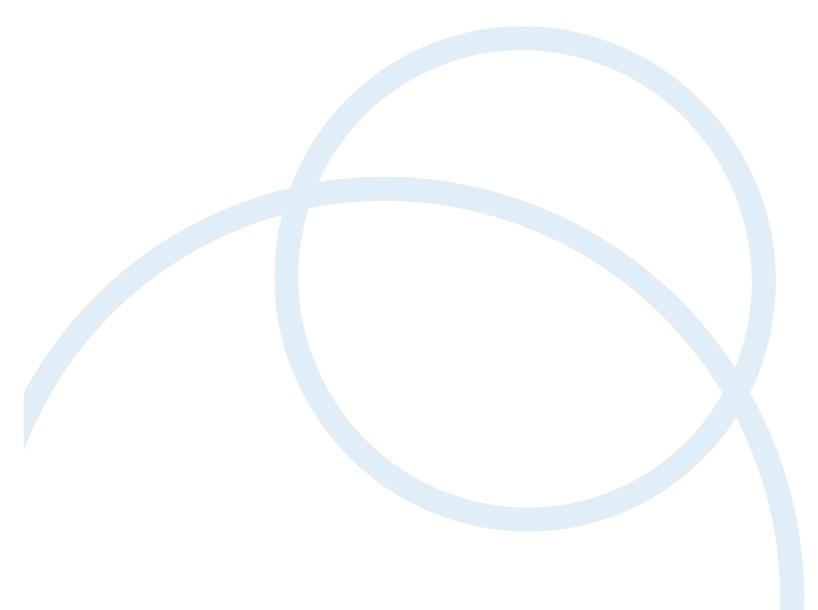
access to safe water and sanitation, etc.)

- 3. Scale up high-potential homegrown solutions: Create a platform to accelerate the development and adoption of innovative homegrown solutions in Africa. Emerging in response to C19, some of these solutions have the potential to generate sustainable at-scale impact if sufficiently supported (e.g. provide technical and financial support, match to strategic partners, etc.)
- 4. Take East African Community (EAC) regional harmonization to the next level: Strengthen emergency response coordination mechanisms based on key learnings from C19 response, especially around cross-border movement of people and goods (e.g. early detection of potential disruption, data-driven collective decision-making, joint resource mobilisation, etc.)

# **APPENDICES**

List of Abbreviations	
BoU	Bank of Uganda
C19	Novel Coronavirus
CAGR	Compound Annual Growth Rate
CBK	Central Bank of Kenya
EAC	East African Community
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GoK	Government of Kenya
GoU	Government of Uganda
HCW	Healthcare Workers
ICU	Intensive Care Unit
IMF	International Monetary Fund
JICA	Japan International Cooperation Agency
KEPSA	Kenya Private Sector Alliance
KSh	Kenyan Shilling
MSME	Micro, Small and Medium Enterprises
NHIF	National Hospital Insurance Fund
NPI	Non-Pharmaceutical Intervention
OECD	Organisation For Economic Co-Operation And Development
PAYE	Pay As You Earn
PPE	Personal Protective Equipment
SDG	Sustainable Development Goals
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNCDF	United Nations Capital Development Fund
UNCTAD	United Nations Conference on Trade And Development
UNFPA	United Nations Population Fund

List of Abbreviations	
UNICEF	United Nations Children's Fund
USD	United States Dollar
USh	Ugandan Shilling
UVRI	Uganda Virus Research Institute
VAT	Value Added Tax
WHO	World Health Organization



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### **Disclaimer**

The situation surrounding COVID-19 is dynamic and rapidly evolving on a daily basis. Although we have taken great care prior to producing this report, it represents JICA and BCG's understanding at a particular point in time. This report is not intended to: (i) constitute medical or safety advice or be a substitute for the same; nor (ii) be seen as a formal endorsement or recommendation of a particular response. As such you are advised to make your own assessment as to the appropriate course of action to take, using this presentation as guidance. Please carefully consider local laws and guidance in your area, particularly the most recent advice issued by your local (and national) health authorities, before making any decision.

