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

DECEMBER 2020
# CONTENTS

I  INTRODUCTION  
II EXECUTIVE SUMMARY  
III DISEASE PROGRESSION  
IV GOVERNMENT POLICIES  
V HEALTHCARE CAPACITY  
VI ECONOMIC IMPACT  
VII TRADE AND LOGISTICS  
VIII CONSUMER SENTIMENT AND BEHAVIOUR  
IX LOOKING AHEAD  
APPENDICES  
ACKNOWLEDGEMENTS
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).1,2

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,3 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.4

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.5

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.6 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.

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Both countries announced healthcare policies aimed at optimising healthcare supply (e.g. Kenya mandated 300 ICU beds per county),8 and demand (i.e. free testing in densely-populated areas in Nairobi at mobile testing stations).3 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),9 and healthcare infrastructure (21 and 9 laboratories capable of performing PCR testing along with 318 and 55 ICU beds in Kenya and Uganda respectively),10 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),11 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.

**EXECUTIVE SUMMARY**

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 2020.12

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% 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 from ~6.0% down to ~1% 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 ~54% 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.13

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 predicted14. Exports of services such as in the tourism and transportation sectors remain heavily impacted,8 while exports of some goods have been more resilient. For example, the Kenyan tea export volume has increased by approximately 12% year-on-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 2020.12 These factors underscore the complexity of global supply chains, which continue to adapt to the evolving C19 situation and government policies.

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11 Ibid.
14 JICA-BCG Nairobi (n=308) and Kampala (n=303), Informal Sector Survey, 19 October - 4 November 2020; Nairobi.
EXECUTIVE SUMMARY

Building Resilience

C19 has impacted the lives of urban consumers 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 ~65% 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 Kenyans 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-C19 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.

Delivers 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.)
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.
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).¹ ²

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.

EXHIBIT 2: DAILY CONFIRMED CASES BY EAST AFRICAN COUNTRY

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

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.


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

Tests per million vs. cases per million

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).21

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.22

Kenya has a theoretical daily testing capacity of 7,300 tests, according to Kenya’s Targeted Testing Strategy23, 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).24

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

### KENYA

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

Overall positivity rate: 7.39%

**Overall average positivity rate: 2.76%**

![Graph showing daily and overall positivity rates and test numbers in Kenya](image)

**Note:** Uganda reports weekly testing numbers.


### UGANDA

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

Overall average positivity rate: 2.76%

![Graph showing daily and overall positivity rates and test numbers in Uganda](image)


## DISEASE PROGRESSION

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.25 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.26 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.27

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,28 while Kampala and major border crossings account for 60% of new cases in Uganda.29

**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.29 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.31

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.
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)

- **LIFESTYLE**
  - Mandatory testing for all inbound travellers, suspected cases and contacts, high risk population
  - Mandatory quarantine in government-approved facilities
  - Closure of religious sites, schools, etc.

- **HEALTH**
  - Borders/airspace closed
  - No inter-county movement
  - Curfew imposed from 7 pm – 5 am
  - Mandatory testing for all inbound travellers, suspected cases and contacts, high risk population
  - Mandatory quarantine in government-approved facilities
  - Closure of religious sites, schools, etc.
  - Fiscal measures include reduced or zero-rating on some taxes (i.e. VAT reduced by 2%) and cash transfers
  - Monetary measures include lower policy rate and Cash Reserve Ratio
  - Central Bank lowers policy rate to 7%
  - Announced 8-Point Stimulus Plan of KSh 53.7B
  - USD $1B support approved by World Bank

- **ECONOMIC**
  - Restriction to/from urban areas only
  - Shortened curfew 9 pm - 5 am
  - Restriction to/from urban area lifted
  - Domestic flights resumed
  - International flights resumed
  - Religious sites reopened
  - Home-based care recommended for mild cases
  - Less stringent testing policies
  - Home isolation for asymptomatic and mild cases permitted
  - Home isolation for asymptomatic and mild cases permitted
  - Home isolation for asymptomatic and mild cases permitted
  - Announced KSh 56.6M additional economic stimulus for youth employment, VAT refunds and cash transfers
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- **Major government policies**
  - Announced policies aimed to reduce the spread of the virus, and to mitigate the impact of C19; policies largely intact until June
  - Introduced policies to enable greater economic activity while containing the virus
  - Further easing of some restrictions announced, which was considered to be a potential driver of the increase in cases in October and November

- **Source:** IMF; MoH; Our World in Data; news articles; expert interviews; BCG analysis
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. 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 accelerate more labs to test for Covid-19, while demand-side policies allocated finite testing capacity to potential Covid-19 patients and suspected cases as well as their contacts. For disease management, supply-side policies aimed to increase workforce (i.e. recruitment of 6,000 additional healthcare workers was announced in April) and infrastructure (i.e. mandating 300 ICU beds per county), while demand-side policies allocated finite capacity to potential Covid-19 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.

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%.

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.

As the worst outbreak scenario in terms of virus progression did not materialize and the economic toll was better than anticipated, the 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.

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 accelerate 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.
EXHIBIT 7: OVERVIEW OF C19 GOVERNMENT RESPONSES IN UGANDA (NON-EXHAUSTIVE)

**LIFESTYLE**

- Borders closed / travel restricted
- Public transport suspended
- Schools/universities closed etc.

**HEALTH**

- Mandatory testing and quarantine for all travellers entering Uganda
- Mobile labs set up at borders
- National stadium opened as field hospital
- 3 private labs accredited

**ECONOMIC**

- Supervised financial institutions directed to defer dividend payments and bonuses
- Supplementary budget approved
- Policy rate cut to 8%
- Repayment holidays for 12 months
- Mobile money and other digital charges cut
- Mobile money and other digital charges cut
- Additional budget approved & WB approves USD $300M for C19 support
- Policy rate cut to 7%

- Public transport allowed (50% cap.)
- Food manufacturing opens
- Markets & malls reopened
- Boda-bodas permitted
- Curfew relaxed to between 9 pm - 5:30 am
- Arcades permitted to open
- Reopened (both airports and land borders)
- Schools/universities reopened
- Places of worship reopened
- Fee imposed for voluntary tests
- Home-based care for mild cases
- All travellers need neg. test 5 days prior to travel
- attendance increased to 100

- Markets & malls reopened
- Public transport allowed
- 3 private labs accredited
- Mobile money and other digital charges cut
- Introduced stringent policies quickly to reduce the spread of the virus; sustained through May
- Relaxing of lockdowns for economic recovery, potentially contributing to increase in number of daily new cases from mid-August
- Continued easing of restrictions together with political gatherings potentially contributing to increased cases

**Source:** IMF; MoH; Our World in Data; news articles; expert interviews; BCG analysis
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 demand-side policies allocated finite capacity to potential C19 patients in an outbreak scenario (i.e. elective procedures were postponed).41

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.42

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.43

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.

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

Testing: Lab professionals per 1K pop.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lab professionals per 1K pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda</td>
<td>0.08</td>
</tr>
<tr>
<td>Uganda</td>
<td>0.06</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>0.04</td>
</tr>
<tr>
<td>Kenya</td>
<td>0.03</td>
</tr>
<tr>
<td>World average for reference: 0.28</td>
<td></td>
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</tbody>
</table>

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

2018 of latest available

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of ICU beds</th>
<th>Number of ventilators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Uganda</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>South Africa</td>
<td>55</td>
<td>46</td>
</tr>
<tr>
<td>Nigeria</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>Kenya</td>
<td>350</td>
<td>169</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>518</td>
<td>259</td>
</tr>
<tr>
<td>Liberia</td>
<td>570</td>
<td>557</td>
</tr>
<tr>
<td>WHO recommendation to reach SDG threshold by 2030 for Africa</td>
<td>3,300</td>
<td>3,200</td>
</tr>
</tbody>
</table>

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).

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), 1.2 nurses per 1,000 people (WHO target is 2.4), and 0.03 lab technicians per 1000 people (equivalent to the sub-Saharan Africa average). In Uganda, there are also 0.2 physicians per 1,000 people (WHO target is 0.97), 1.2 nurses per 1,000 people (WHO target is 2.4), and 0.06 lab technicians per 1000 people (equivalent to the sub-Saharan Africa average).

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


EXHIBIT 9: HEALTH EXPENDITURE BY SOURCE IN EAST AFRICAN COUNTRIES

Source of health expenditure (2017)

<table>
<thead>
<tr>
<th>Country</th>
<th>Private (social security, NHIF)</th>
<th>Private (insurance, NGO, etc.)</th>
<th>Private (out-of-pocket)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>20%</td>
<td>42%</td>
<td>39%</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>45%</td>
<td>21%</td>
<td>34%</td>
</tr>
<tr>
<td>Kenya</td>
<td>49%</td>
<td>27%</td>
<td>24%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>69%</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Healthcare capacity

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). In particular, the procurement of testing kits and reagents was a particular bottleneck and severe supply limitations hampered the testing capacity of both countries.

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).

Both Kenya and Uganda have relatively high out-of-pocket spending at 24% and 39% respectively, which presents a risk with household finances already strained from the economic impact of C19.

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.

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.

References:
- Expert interviews conducted September 2020
- Expert interviews conducted September 2020
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. 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.

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.

As of 23 November 2020

EXHIBIT 10: MAJOR CAUSES OF DISEASE BURDEN AND MORTALITY IN KENYA AND UGANDA

KENYA

Disease burden and leading causes of death

Thousands of estimated DALYs, 2016

Thousands of deaths, 2016

UGANDA

Disease burden and leading causes of death

Thousands of estimated DALYs, 2016

Thousands of deaths, 2016


Source: WHO Disease Burden and Mortality estimates 2000-2016; Our World in Data; BCG analysis

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. 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). However, shortages of reagents have affected the potential full testing capacity.

62 Expert interviews conducted September 2020; Kenya JICA Focus Groups and in-depth interviews conducted September 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.64

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.

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64 JICA-BCG Nairobi & Mombasa, Kenya Consumer Survey, 16 October - 5 November 2020
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?”

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. 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.


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.
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. 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%.

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 11% 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.

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

<table>
<thead>
<tr>
<th>Country</th>
<th>Forecast pre-C19</th>
<th>Updated forecast as of October 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>3.6%</td>
<td>-3.0%</td>
</tr>
<tr>
<td>Kenya</td>
<td>6.0%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Uganda</td>
<td>6.2%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>7.2%</td>
<td></td>
</tr>
<tr>
<td>Tanzania</td>
<td>1.9%</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>1.9%</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Angola</td>
<td>-4.3%</td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>-4.0%</td>
<td></td>
</tr>
</tbody>
</table>

BUILDING RESILIENCE

ECONOMIC IMPACT

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. 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.

[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.

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.

Figures include formal and informal sectors.

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

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)

Kenya

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

Uganda

Note: Figures include formal and informal sectors.

Note: FDI Markets data is collected from media sources, industry organisations, investment agencies etc. and is inclusive of “announced” FDI - 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/UNCEDE who receive data from national authorities.


As of 23 November 2020
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


ECONOMIC IMPACT

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.77 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.

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

**KENYA**

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

- Food and non-alcoholic beverages
- Alcoholic beverages, narcotics & tobacco
- Housing, utilities, gas & fuels
- Transport
- Recreation, sport & culture

- *Kenya*
- *Exhibit 17: Monthly Inflation vs. Previous Year for Key Categories in Kenya and Uganda*.

**UGANDA**

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

- Communication
- Food and non-alcoholic beverages
- Education
- Housing, utilities, gas & fuels
- Recreation and culture

- *Uganda*
- *Exhibit 17: Monthly Inflation vs. Previous Year for Key Categories in Kenya and Uganda*.

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**ECONOMIC IMPACT**

**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.82

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 disproportionately 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.”84

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.85 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.86

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.”


83 Ibid.

84 Percentages add up to more than 100% as multiple responses were accepted

85 Ibid.
**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

<table>
<thead>
<tr>
<th>Business Challenge</th>
<th>Kenya (%)</th>
<th>Uganda (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change in revenue</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Revenue increase</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Revenue decrease</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Business Challenge</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced customer demand</td>
<td>75%</td>
</tr>
<tr>
<td>Access to financial support</td>
<td>56%</td>
</tr>
<tr>
<td>Cannot physically operate because of C19 restrictions</td>
<td>20%</td>
</tr>
<tr>
<td>Lack technical skills to conduct other businesses (to make extra income)</td>
<td>19%</td>
</tr>
<tr>
<td>Can’t afford goods for C19 prevention (sanitiser, masks etc.)</td>
<td>17%</td>
</tr>
<tr>
<td>Increased theft and vandalism</td>
<td>13%</td>
</tr>
<tr>
<td>Limited stock due to border closures</td>
<td>13%</td>
</tr>
<tr>
<td>Reliable and stable water supply</td>
<td>12%</td>
</tr>
<tr>
<td>Can’t find employees with right skill sets</td>
<td>11%</td>
</tr>
<tr>
<td>Reliable and stable electricity supply</td>
<td>10%</td>
</tr>
<tr>
<td>Don’t know how to use online business tools (e.g. sales/marketing)</td>
<td>8%</td>
</tr>
<tr>
<td>Lack of basic business skills (bookkeeping/inventory management etc.)</td>
<td>7%</td>
</tr>
<tr>
<td>Secure access to land</td>
<td>6%</td>
</tr>
<tr>
<td>Reliable and stable internet</td>
<td>5%</td>
</tr>
<tr>
<td>Cannot afford internet</td>
<td>3%</td>
</tr>
</tbody>
</table>

Question: What are the biggest challenges facing your business during this time? Please select top 3.
Source: JICA-BCG Nairobi and Kampala Informal Sector Survey, September - November 2020

Question: By how much have your average monthly sales been impacted since the C19 pandemic hit Kenya?
Source: JICA-BCG Nairobi (n=308) and Kampala (n=303) Informal Sector Survey, September - November 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.\(^8\)

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 COVID-19 prevention tools posed a significant challenge \((-24\%\) increased theft and vandalism were a concern in Uganda \((-19\%)\).\(^9\)

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.

Business owners are hesitant to borrow, partially 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.”

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-COVID-19 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-COVID-19 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.”

\(^8\) JICA-BCG Informal Sector Survey, October 2020
\(^9\) 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 Kenya and ~11% in Uganda increased prices in response to C19. 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. 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.

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88 Percentages add up to more than 100% as multiple responses were accepted
89 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.90

Note: South Sudan is excluded from the calculation of EAC members' exports due to the lack of reliable data.

## Exhibit 21: East African Exports and Imports

### EAC Exports in 2018 (USD $B)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Exports 2018 (USD $B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goods</strong></td>
<td></td>
</tr>
<tr>
<td>Crude oil &amp; other minerals</td>
<td>3.1</td>
</tr>
<tr>
<td>Animal or veg. fat &amp; oils</td>
<td>0.7</td>
</tr>
<tr>
<td>Other agriculture</td>
<td>0.8</td>
</tr>
<tr>
<td>Crude oil &amp; other minerals</td>
<td>0.7</td>
</tr>
<tr>
<td>Pearls &amp; jewelry</td>
<td>1.5</td>
</tr>
<tr>
<td>Machinery</td>
<td>3.1</td>
</tr>
<tr>
<td>Textiles</td>
<td>1.3</td>
</tr>
<tr>
<td>Furniture &amp; toys</td>
<td>1.9</td>
</tr>
<tr>
<td>Other goods</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26.6</strong></td>
</tr>
</tbody>
</table>

### EAC Imports in 2018 (USD $B)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Imports 2018 (USD $B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goods</strong></td>
<td></td>
</tr>
<tr>
<td>Coffee &amp; tea</td>
<td>1.3</td>
</tr>
<tr>
<td>Flowers &amp; live plants</td>
<td>1.9</td>
</tr>
<tr>
<td>Other agriculture</td>
<td>1.2</td>
</tr>
<tr>
<td>Crude oil &amp; other minerals</td>
<td>7.6</td>
</tr>
<tr>
<td>Pearls &amp; jewelry</td>
<td>0.4</td>
</tr>
<tr>
<td>Machinery</td>
<td>5.9</td>
</tr>
<tr>
<td>Iron &amp; steel</td>
<td>2.7</td>
</tr>
<tr>
<td>Vehicles</td>
<td>2.8</td>
</tr>
<tr>
<td>Other goods</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46.2</strong></td>
</tr>
</tbody>
</table>


## Trade and Logistics

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

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.94

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

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.97

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.100

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99 When adjusted for the depreciation of the currency, total goods value has increased by USD $70 (1.6%) due to a strong first quarter.
100 Ibid.
EXHIBIT 22: VALUE OF EXPORTED GOODS IN 2019 AND 2020

KENYA

Kenyan exports in 2019 and 2020 (Jan – Sep)

Export value (KSh billion)

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

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


KENYA

Tea export volume in 2019 and 2020 in Kenya

UGANDA

Gold export volumes (kg) in 2020

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 2020.10

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. 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. 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.

EXHIBIT 24: KENyan and Ugandan imports dipped temporarily in April and May mostly due to global supply chain disruptions, but have recovered.

Kenyan imports in 2019 and 2020 (Jan – Sep)

Import value (KSh billion)

Ugandan imports in 2019 and 2020 (Jan – Sep)

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

Source: Expert interviews; press reports
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

<table>
<thead>
<tr>
<th>Destination</th>
<th>Transit Time (days)</th>
<th>Pre-C19</th>
<th>Worst period during C19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mombasa to Kampala</td>
<td>3.5</td>
<td>7 - 10</td>
<td></td>
</tr>
<tr>
<td>Mombasa to Kigali</td>
<td>7</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

Most significant impact occurred from April to June 2020

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.

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 post-agreement. 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.

Overall, these challenges have significantly reduced the efficiency of the Northern Corridor, slowing down trade across the East African region.

**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 congestion reduced significantly post-agreement. 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. Overall, these challenges have significantly reduced the efficiency of the Northern Corridor, slowing down trade across the East African region.

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Source: Expert interviews conducted September 2020

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. 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.

107 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 ~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.”

**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.

Of those who had income reduced, 47% in Kenya and 67% in Uganda saw reductions over 50%.
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. 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. Contrasting, in Uganda, affordability (~30%) is the primary reason for not being tested. Low income consumers earning less than USh 450K per month (~USD $121) 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.

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?

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

As of 23 November 2020
**EXHIBIT 29: WATER AVAILABILITY AND SUPPLY DISRUPTIONS IN KENYA AND UGANDA**

- **Water accessibility**:
  - ~47% of Kenyan and ~39% of Ugandan consumers have indoor taps.
  - % of segment: Kenya 21% (352), 38% (633), 4% (783), 1% (17), 34% (549), 33% (542), 39% (604), Tap water inside house.
  - % of segment: Uganda 25% (106), 30% (120), 45% (186), 3% (13), 38% (154), 47% (180), 5% (20), 21% (84), 42% (161), 21% (84), 1% (4).

  **Sample size:** 1,662 Kenya, 1,036 Uganda.

- **Water supply**:
  - ~15% in both countries experienced significant disruptions while costs rose for ~18% in Kenya and ~10% in Uganda.
  - % of respondents: Kenya 16% (256), 15% (246), 66% (1,000), Uganda 10% (106), 16% (164), 74% (770).

  **Sample size:** 1,662 Kenya, 1,036 Uganda.

- **Cost**:
  - Water costs rose more severely in Uganda with ~33% reporting rises over 50% vs. ~19% in Kenya.
  - % of segment with increased costs: Kenya 8% (19), 11% (26), 13% (34), 36% (86), 43% (106), 50-100%, 20-50%, ~50%, More than 100%.
  - % of segment with increased costs: Uganda 13% (14), 20% (21), 36% (38), 28% (30), Less than 20%, 20-50%, 50-100%, More than 100%.

  **Sample size:** 246 Kenya, 106 Uganda.

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**Consumer Sentiment and Behaviour**

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 (~62% 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. 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 boda-bodas (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.
CONSUMER SENTIMENT AND BEHAVIOUR

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. 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. Some of the shifts observed in mobility trends may persist longer-term. Consumers expect to travel less overall 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

<table>
<thead>
<tr>
<th>KENYA</th>
<th>Mobility trends in Nairobi and Mombasa in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. % change vs. baseline</td>
<td></td>
</tr>
<tr>
<td>Feb</td>
<td>Apr</td>
</tr>
<tr>
<td>Grocery &amp; pharmacy</td>
<td>-42%</td>
</tr>
<tr>
<td>Retail and recreation</td>
<td></td>
</tr>
<tr>
<td>Workplaces</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UGANDA</th>
<th>Mobility trends in Kampala in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. % change vs. baseline</td>
<td></td>
</tr>
<tr>
<td>Feb</td>
<td>Apr</td>
</tr>
<tr>
<td>Grocery and pharmacy</td>
<td>-82%</td>
</tr>
<tr>
<td>Workplaces</td>
<td></td>
</tr>
<tr>
<td>Retail and recreation</td>
<td></td>
</tr>
</tbody>
</table>

---

115 Expert interviews conducted with Kenya Bureau of Statistics, JICA, Uber, UNCDF and UNFPA.
117 Ibid.
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

<table>
<thead>
<tr>
<th>Factor</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>63%</td>
</tr>
<tr>
<td>Physical distance to other passengers</td>
<td>35%</td>
</tr>
<tr>
<td>Cleanliness of vehicle</td>
<td>27%</td>
</tr>
<tr>
<td>Comfort</td>
<td>19%</td>
</tr>
<tr>
<td>Travel duration</td>
<td>15%</td>
</tr>
<tr>
<td>Risk of accident</td>
<td>12%</td>
</tr>
<tr>
<td>Flexibility to switch modes</td>
<td>9%</td>
</tr>
<tr>
<td>Privacy</td>
<td>7%</td>
</tr>
<tr>
<td>Ease of use</td>
<td>6%</td>
</tr>
<tr>
<td>Independence from schedules</td>
<td>6%</td>
</tr>
<tr>
<td>Environmental sustainability</td>
<td>5%</td>
</tr>
<tr>
<td>Ability to read/work etc.</td>
<td>5%</td>
</tr>
</tbody>
</table>

**UGANDA**

*Mobility decision drivers*

Physical distancing ranks 2nd at ~35% after cost (~57%) and duration (~40%), implying that Ugandan consumers are less concerned about C19

<table>
<thead>
<tr>
<th>Factor</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>57%</td>
</tr>
<tr>
<td>Travel duration</td>
<td>40%</td>
</tr>
<tr>
<td>Physical distance to other passengers</td>
<td>33%</td>
</tr>
<tr>
<td>Risk of accident</td>
<td>23%</td>
</tr>
<tr>
<td>Comfort</td>
<td>19%</td>
</tr>
<tr>
<td>Cleanliness of vehicle</td>
<td>15%</td>
</tr>
<tr>
<td>Privacy</td>
<td>13%</td>
</tr>
<tr>
<td>Ease of use</td>
<td>12%</td>
</tr>
<tr>
<td>Flexibility to switch modes</td>
<td>6%</td>
</tr>
<tr>
<td>Independence from schedules</td>
<td>5%</td>
</tr>
<tr>
<td>Environmental sustainability</td>
<td>3%</td>
</tr>
</tbody>
</table>

Question: Which of the following are the 3 most important factors for you when considering which mode of transport to use today?


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

**KENYA**

*Internet usage frequency across income brackets*

Usage is correlated with income but Ksh 70-150k segment is more likely to increase usage than those earning Ksh 150k+

<table>
<thead>
<tr>
<th>Income Bracket</th>
<th>% of segment</th>
<th>Net change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than KSh 15k</td>
<td>15%</td>
<td>-2%</td>
</tr>
<tr>
<td>KSh 15k - 30k</td>
<td>57%</td>
<td>13%</td>
</tr>
<tr>
<td>KSh 30k - 70k</td>
<td>42%</td>
<td>32%</td>
</tr>
<tr>
<td>KSh 70k - 150k</td>
<td>19%</td>
<td>6%</td>
</tr>
<tr>
<td>Over KSh 150k</td>
<td>34%</td>
<td>49%</td>
</tr>
</tbody>
</table>

**UGANDA**

*Internet usage frequency across income brackets*

Strong correlation with USh 450k segment being ~7% more likely to reduce usage and the USh 4.5M+ segment being ~47% more likely to increase usage

<table>
<thead>
<tr>
<th>Income Bracket</th>
<th>% of segment</th>
<th>Net change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below USh 450k</td>
<td>21%</td>
<td>-7%</td>
</tr>
<tr>
<td>USh 450k - 900k</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>USh 900k - 2,000k</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>USh 2,000k - 4,500k</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>Over USh 4,500k</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Note: Income is monthly household income

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

**Digital adoption**

*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 US$ 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, 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.

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*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.)
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoU</td>
<td>Bank of Uganda</td>
</tr>
<tr>
<td>C19</td>
<td>Novel Coronavirus</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compound Annual Growth Rate</td>
</tr>
<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
</tr>
<tr>
<td>EAC</td>
<td>East African Community</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GoK</td>
<td>Government of Kenya</td>
</tr>
<tr>
<td>GoU</td>
<td>Government of Uganda</td>
</tr>
<tr>
<td>HCW</td>
<td>Healthcare Workers</td>
</tr>
<tr>
<td>ICU</td>
<td>Intensive Care Unit</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
</tr>
<tr>
<td>KEPSA</td>
<td>Kenya Private Sector Alliance</td>
</tr>
<tr>
<td>KSh</td>
<td>Kenyan Shilling</td>
</tr>
<tr>
<td>MSME</td>
<td>Micro, Small and Medium Enterprises</td>
</tr>
<tr>
<td>NHIF</td>
<td>National Hospital Insurance Fund</td>
</tr>
<tr>
<td>NPI</td>
<td>Non-Pharmaceutical Intervention</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation For Economic Co-Operation And Development</td>
</tr>
<tr>
<td>PAYE</td>
<td>Pay As You Earn</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
</tr>
<tr>
<td>UNCDF</td>
<td>United Nations Capital Development Fund</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade And Development</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
</tr>
<tr>
<td>USD</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>USh</td>
<td>Ugandan Shilling</td>
</tr>
<tr>
<td>UVRI</td>
<td>Uganda Virus Research Institute</td>
</tr>
<tr>
<td>VAT</td>
<td>Value Added Tax</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
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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.