

Socio-economic impact of COVID-19 in Uganda:

Short-, medium-, and long-term impacts on poverty dynamics and SDGs using scenario analysis and system dynamics modeling



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COVID-19 Policy Brief #1
Prepared by UNDP-Uganda, April 2020

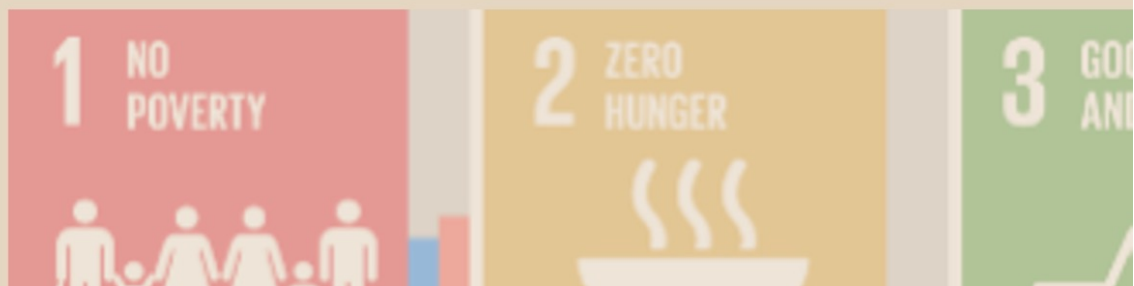


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Prepared by the Strategy and Policy Unit of UNDP-Uganda. Fiscal scenarios use the iSDG model developed by Millennium Institute (MI) and customized to the Ugandan economy by MI and National Planning Authority (NPA) with support from UNECA and UNDP.



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1. BACKGROUND: GLOBAL COVID-19 OUTBREAK

The outbreak of coronavirus, also known as COVID-19, began in Wuhan, China in December 2019.¹ The virus is spreading globally at an alarming rate, with 1,341,907 confirmed infections and 74,476 deaths as of April 7, 2020. Although COVID-19 has been slow to take root in Africa, cases are now spreading rapidly. Since the first case was recorded on the continent on February 14, 2020, Africa has registered 10,018 cases and 484 deaths as of April 7 (Figure 1). Within Eastern Africa and the Great Lakes Region, the Democratic Republic of Congo (DRC) and Rwanda have the highest number of confirmed cases, respectively 161 and 105, followed by Kenya (158), Uganda (52), Ethiopia (44) and Tanzania (24). South Sudan also registered its first case on April 5.² The number of new infections and deaths is expected to continue to rise on a daily basis as long as there is continued contact, both direct and indirect, between infected persons and uninfected members of the population, and the number of uninfected potential hosts within the population is large.

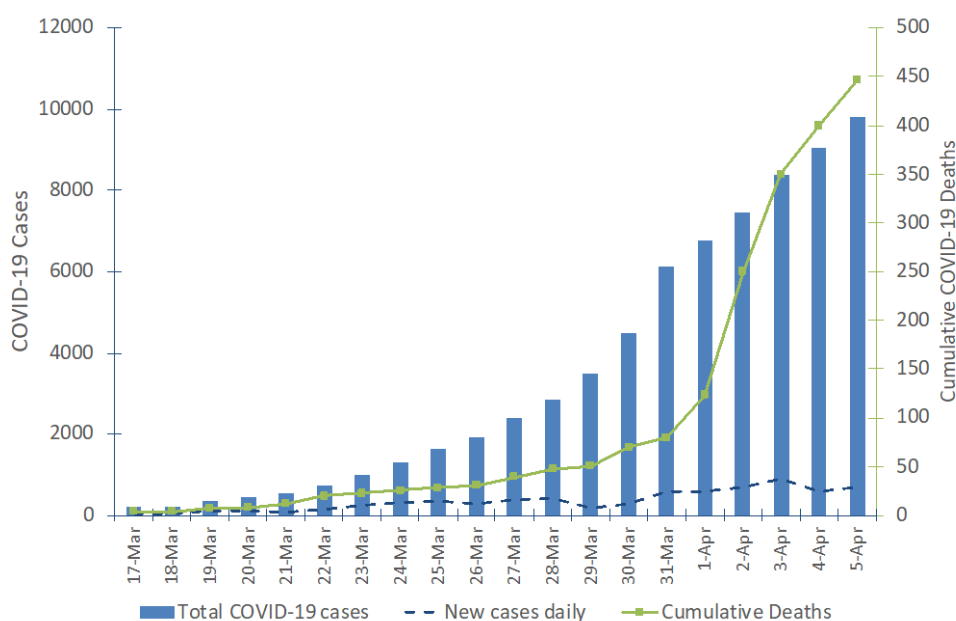


Figure 1. The trend of COVID 19 in Africa: 17-29 March, 2020. Data source: WHO COVID Database, accessed April 6, 2020.

¹ The outbreak was declared a Public Health Emergency of International Concern by the World Health Organization on 30 January 2020.

² WHO (2020). COVID-19 Data Dashboard.

In Uganda, the number of COVID infections has risen sharply (Figure 2). Only nine days since the first case was recorded on March 21, 2020, by March 30 the cases had risen to 33. As witnessed in other African countries, the number of new infections is likely to continue to rise; this was seen in countries such as Ghana (27 cases on March 24, increased to 137 on March 29) and Rwanda (17 on March 23, increased to 60 on March 29).³

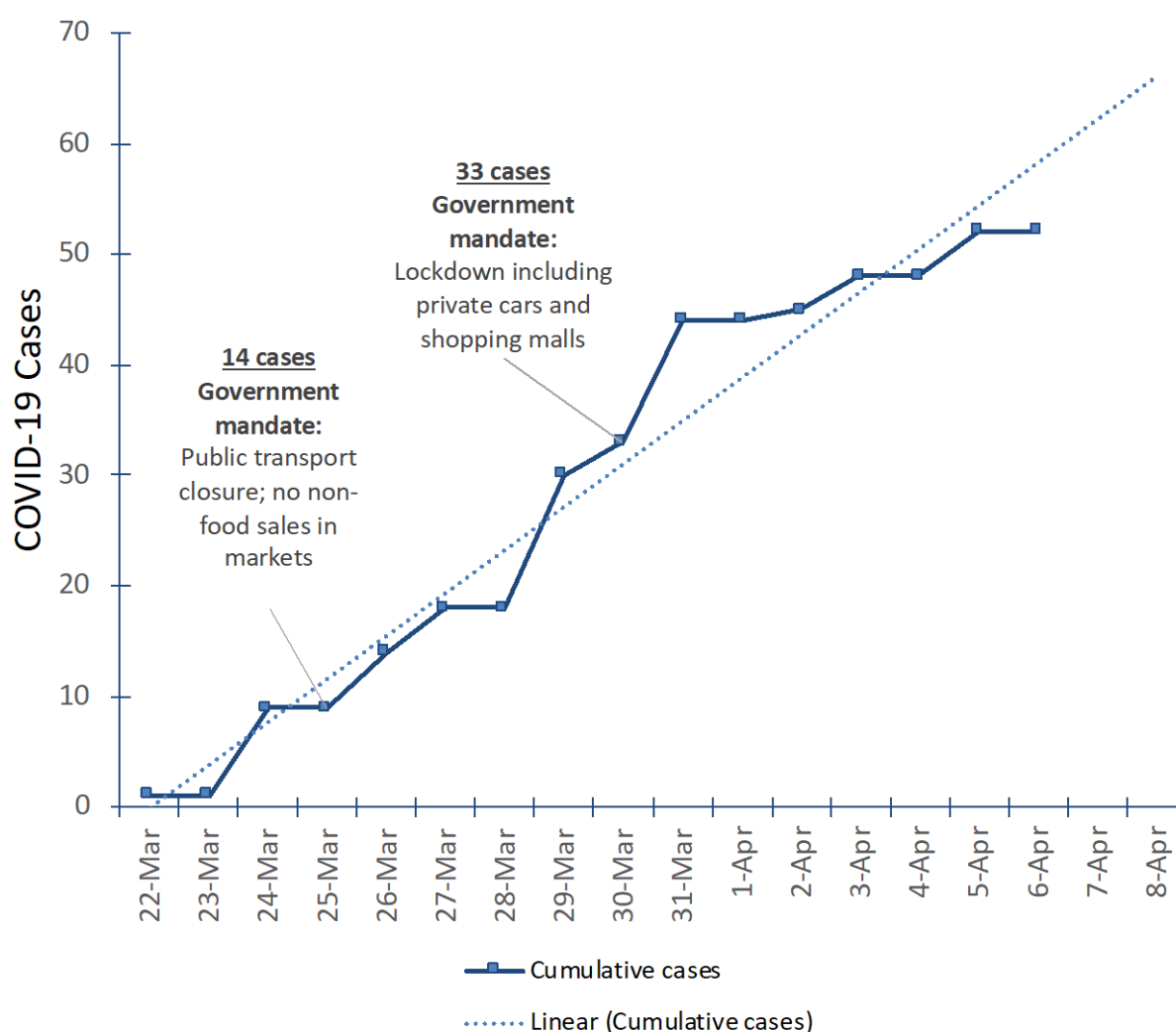


Figure 2. Trend of cases of COVID-19 in Uganda. Data source: WHO COVID-19 Database, accessed April 7, 2020.

The outbreak of coronavirus is not only a public health emergency causing large-scale loss of life and human suffering; it also poses a major threat to the global economy. The virus has halted production in affected countries, hitting supply chains across the world, and resulted in steep drop in consumption together with a collapse in confidence. The virus is already

³ WHO, 2020.

significantly affecting economic activity at global, regional and local levels. Globally, health systems in many of the affected countries are overwhelmed by the exponential growth in COVID-19 cases. Trade networks have been disrupted, causing shortages of drugs, industrial chemicals, medical equipment, and consumer goods (including basic items like toilet paper), as many factories, especially in mainland China, remain closed. Hundreds of jobs, particularly in travel, tourism, and events, have been lost. The job loss multiplier effect is large and increasing as supply chains come to a halt and people stay home. The loss in value of stocks and other financial instruments traded on global markets is raising fears of a recession, and prompting the Organization for Economic Cooperation and Development (OECD) to revise downward global growth rates in 2020 from 2.9% to 2.4%.

At a continental level, Africa is highly vulnerable to the spread of the COVID-19, given fragile public health systems and close ties (in terms of trade, investment and finance, education and security cooperation) with China. According to the UN Economic Commission for Africa (UNECA), the unfolding coronavirus crisis could exacerbate Africa's already stagnant growth. For instance, oil-exporting nations are estimated to lose up to US \$65 billion in revenues as crude oil prices continue to fall. UNECA estimates that the pandemic may result in 78% decline in GDP growth, from 3.2% to 1.8%, while OECD anticipates GDP to grow by only 1.5% due to disruption of global supply chains and other factors. UNECA further anticipates a decline in employment by 48%, and 48% decline in the size of the population expected to move out of poverty. The continent will require US \$10.6 billion in unanticipated increases in health spending to curtail the virus from spreading, while on the other hand revenue losses could lead to unsustainable debt.⁴ Lastly, and importantly for medium and long-term impacts of COVID-19, it is possible that the crisis will undermine progress on financing and implementation of SDGs, and Africa Agenda 2063. UNECA estimates that US \$100B is needed to bridge funding gap and propel the Decade of Action. Resources are likely to be diverted from implementation of SDG-related activities to economic recovery during and following the COVID-19 crisis.

For Uganda specifically, the Minister of Finance, Planning and Economic Development (MFPED) provided preliminary assessment on March 20, 2020 of the short-term impact of the pandemic, anticipating the following:⁵

- (i) Increase in the number of poor people by 2.6 million;
- (ii) Significant deterioration of the current account balance owing to expected severe reduction in exports, tourism receipts and workers remittances;
- (iii) Domestic revenue shortfall of Shs288.3 billion in FY 2019/20 and Shs350 billion in FY 2020/21 due a reduction in economic activity. Uganda Revenue Authority anticipate a loss of UGX 116.26 billion in customs revenue by the end of June due to this crisis alone, expanding the overall revenue loss UGX 513.26 billion by close of June 2020⁶.
- (iv) Heightened pressure on fiscal space as a result of additional expenditure to address rapid response in the health sector and livelihood support for affected persons.

⁴ UNECA, 2020. <https://www.uneca.org/stories/eca-estimates-billions-worth-losses-africa-due-covid-19-impact>

⁵ MFPED, 2020.

⁶ URA, 2020. Impact of corona virus on revenue performance.

- (i) Decline in economic growth in FY2019/20 from 6% to about between 4.6% and 5.1% under the worst-case scenario.

1.1 Objectives of this policy brief

Addressing this shock will require policymakers to not only respond to the immediate crisis, but also to take a multisectoral view that accounts also for the diverse and overlapping dynamics driving outcomes. This will require deeper analysis of socio-economic impact on key sectors, in addition to their interplay with social dimensions such as poverty, inequality, gender, and urbanization, to guide strategic short-term to long-term policy interventions for response and recovery periods. Effective implementation of such strategic short- and long-term policy interventions can also build resilience against future shocks.

The primary objective of this policy brief is to assess the potential short-term impacts of COVID-19 – both the health crisis and the economic impacts of the response – in addition to analyzing the medium- and long-term impacts of the response measures, particularly fiscal policy response. The brief begins in Section 2 by outlining key immediate direct and indirect health, economic, and social effects of COVID-19. A rapid scenario analysis is then performed to assess the impacts of COVID-19 on households, and how the containment measures may affect household incomes and, subsequently, their position relative to the poverty line. In light of the Minister of Finance’s March 20 estimation of an increase in the number of Uganda’s poor by 2.6 million, we update these estimations based on the current situation and provide scenarios that also incorporate the beneficial effects of the immediate response by the government. In particular, these scenarios illustrate how scaling up food distribution and income support may cushion the impact for vulnerable Ugandans. This component of the brief thus addresses the following questions:

1. Explore the household-level poverty implications of the COVID-19 response measures, particularly income lost due to lockdown restrictions
2. Highlight critical vulnerabilities at the household level, particularly those exacerbated by extended lockdown restrictions
3. Identify specific policy measures, such as scaling up social protection, that could cushion households and support households with financial and food security safety nets

Applying a different scenario analysis approach, the brief then explores potential medium- and long-term effects of COVID-19, based on the fiscal policy response. The brief dives into the implications of spending reallocation to meet the needs of the COVID-19 crisis on Uganda’s performance relative to the UN’s 17 Sustainable Development Goals (SDGs). This highly simplified and rapid assessment of possible effects of diverting funds into the health sector uses the integrated-SDG (iSDG) model developed by Millennium Institute and National Planning

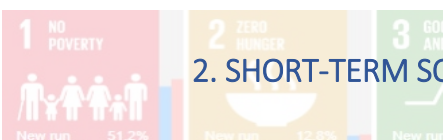
Authority (NPA) with support from UNDP and UN ECA.⁷ This component of the analysis seeks to answer the following three questions:

1. How might the diversion of development funds into the COVID-19 response affect other development outcomes?
2. What SDG areas will be the most affected by the fiscal policy response associated with the COVID-19 outbreak and response?
3. What additional policy measures might be necessary in order to mitigate the negative economic spill over effects from the COVID-19 response?

The brief concludes with policy recommendations for the short, medium, and long terms, identifying actions that the Government can take to alleviate some of the lasting impacts of the COVID-19 crisis and its impacts on vulnerable Ugandan households.

Critically, the scenario analyses performed throughout this policy brief are rapid, subject to change, and are limited in scope. The analyses focus on particular elements of the COVID-19 crisis, namely poverty dynamics resulting from lockdown measures and overall SDG performance impacts from fiscal policy adjustment. There are, of course, many additional factors in the COVID-19 crisis that should be explored in further detail, including health, gender, governance and human rights, and COVID-19 in combination with other compounding crises such as desert locusts and climate change.

⁷ While this analysis focuses on the fiscal policy response, the iSDG model is comprehensive and also capable of analyzing COVID-19 scenarios related to changes in governance (SDG16), industry, and other critical sectors for SDG achievement.



2. SHORT-TERM SOCIOECONOMIC IMPACT OF COVID-19 ON UGANDA

2.1 Overview of potential short-term impacts

The COVID-19 outbreak is likely to impact on Uganda through several transmission channels (Figure 3). These include the immediate short-term effects, in addition to medium and long-term effects, caused not only by the virus directly but also the indirect effects resulting from the response measures. In this section, the immediate short-term effects are outlined by direct and indirect effects, and the next section analyzes potential medium- and long-term effects on SDGs. Several of the impacts identified in this brief reflect the Government assessment recently presented by the Minister of Finance, Planning and Economic Development (MFPED, 2020).

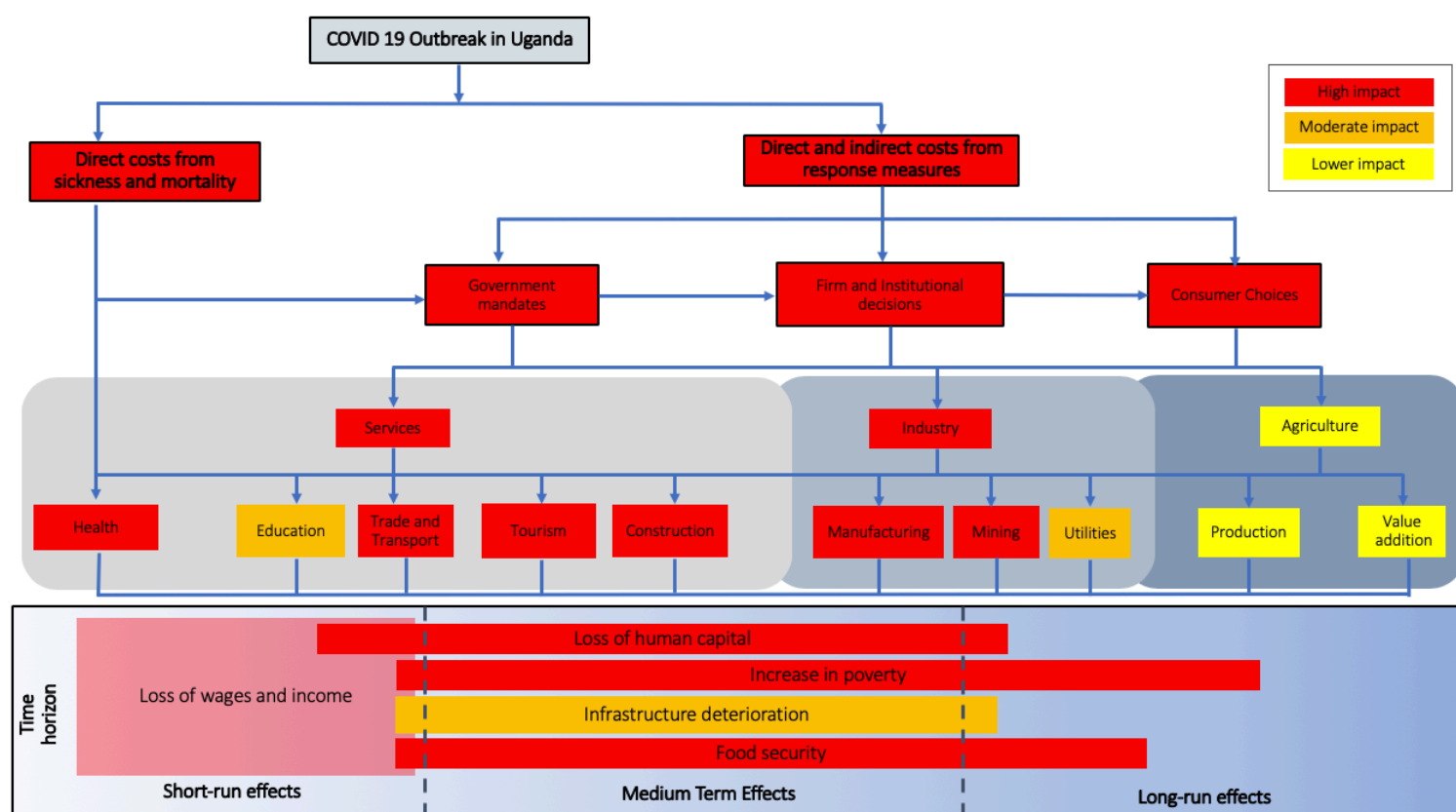


Figure 3. Channels of potential socioeconomic impact of COVID-19. Source: Author adaptation from Evans and Over (2020).

2.1.1 Immediate direct impact on health

If widespread, the rapid transmission of the virus, will overwhelm the health system to unprecedented levels and cause severe morbidity and mortality. Following the experience from advanced economies like Italy, it is evident that Uganda's health care, characterized by less than 100 intensive care Units that are largely concentrated in the city, staffing challenges, and limitations of medical supplies, could face more impediments. According to the Health Sector Performance Report 2018/19, there are only 1.87 professional health workers per 1000 people, below the national target of 2.28. At this rate, one nurse is expected to serve 2,967 people, while a doctor is to serve 23,700 people. Additionally, Uganda currently has only 55 functional ICU beds, resulting in approximately 1.3 ICU beds per million Ugandans (Atumanya et al., 2020). Beyond the clear strain a severe COVID-19 outbreak would place on the health sector, the anticipated rise in hospitalization and deaths would severely impact productivity across sectors, employment, and earnings, as well as quality of life and human capital in the short and long run.

2.1.2 Immediate direct and indirect impact of policy responses

The impact of the outbreak has triggered immediate and necessary government response. As has already been witnessed across segments of the economy as of March 30, 2020, this response will impact the decisions of economic actors, which has significant implications in the immediate, medium and long terms. Some of these include the following:

- (i) **Immediate losses in the tourism industry:** Tourism contributes approximately 10 percent of GDP and over USD \$1.6 billion in foreign exchange and has made significant strides with annual international arrivals rising from 1,684 in 2013 to 1,927 in 2017. The stoppage of airline travels, and imposition of quarantines on inbound travellers across the globe led to the complete fall in the number of tourist arrivals, and distortion of the entire value chain. The effect will be far reaching given that the sector contributes to more than 6% of total employment, directly and indirectly. In 2017 alone, tourism employed 605,500 people (6.3% of total employment).⁸ Following the immediate drop in occupancy rates, several large hotels laid off more than 1,000 workers, each, with more layoffs anticipated in coming days. More is anticipated for accommodation in national parks, affecting the entire value chain in the tourism industry.
- (ii) **Unemployment for both formal and informal workers:** The closure of business is already affecting millions of Uganda's who depend on them for employment. According to the National labour force survey (2016/17), the informal economy alone employs 84.9 percent of the population, 90% of whom are youth (10-30 years). Closure of business imply that this segment of the population is already out of the market. Survival could imply adoption of negative coping strategies, such as cutting down on consumption to the bear minimum, theft and insecurity. The shock on the services sector, which contributes to 43.5% of GDP⁹ and employs close to 43% of the total labour force (67% of whom are in urban areas, and more than 80%

*Job loss for
informally
employed, 90%
of which are
youth*

⁸ Tourism Sector Annual Performance Report, 2017/18.

⁹ UBoS, 2019. Rebased GDP estimates, 2018/19.

in Kampala alone¹⁰) will significantly affect growth and livelihoods of millions of Ugandans. Overall, the pandemic will directly affect the livelihoods of more than 60% employed in both industry and services, close to 90% of whom depend on these two sectors in urban areas. These sectors are largely informal, employing 90.5% of young people.

Table 1. Employment by sector. Data source: National Labour Force Survey 2016/17.

Sector	Share of employment			Median monthly earnings (UGX)
	Rural	Urban	Total	
Agriculture, forestry and fishing	56.2	12.9	41.2	60,000
Services	29.4	66.9	42.4	190,000
Industry	14.3	20.2	16.4	240,000

- (iii) **Worsening revenue collection to severely impact fiscal space, including areas of immediate spending to avert crisis:** The slowdown in international trade, which accounts for about 42 percent of all the tax revenue is likely to have a massive negative impact to tax collections in 2020. The situation will be worsened by the reduced economic activity in the retail and trade, services, hotels, tourism and manufacturing sectors, which will translate in both reduced VAT, remittances and corporation tax payments to the URA. From the March 19th 2020 Finance Minister's statement to Parliament indicated that the resultant reduction in international trade taxes as well as consumptive taxes will lead to shortfalls in government revenues, that could reach anywhere between Shs.82.4 billion and Shs.288.3 billion in FY2019/20, and could worsen between Shs.187.6 billion and Shs.350 billion in FY2020/21. Recent information from URA indicate that the impact COVID-19 on revenue is even much bigger. It is projected that about UGX 116.3 billion is to be lost in customs revenue by the end of June 2020 due to this crisis alone. This is projected to expand the projected deficit from customs revenue to UGX 513.3 billion by close of June 2020.
- Approximately UGX 116.3 billion may be lost in customs revenue by the end of June 2020 due to this crisis alone*
- (iv) **With Uganda's main trading partners hard-hit, the external sector is suffering with immediate effect:** In 2018, the 5 leading importers of Uganda's products included Kenya, United Arab Emirates, South Sudan, Rwanda and DRC, accounting for 62 percent of total exports (Figure 4). As of March 29, 2020, these countries had 612 combined COVID 19 cases, and had imposed restrictions or lockdowns to combat the spread. The top 5 sources of Uganda's imports (accounting for 59 percent of total imports) include China, India, United Arab Emirates, Saudi Arabia and Kenya, which have 85,124 combined cases of coronavirus and have applied equally restrictive measures (Figure 4).
- The top 5 sources of Uganda's imports are countries which have been hit hard by coronavirus*

¹⁰ UBoS, 2017. National Labour Force Survey, 2016/17.

COVID-19 Scenarios for short, medium, and longer-term socioeconomic impacts

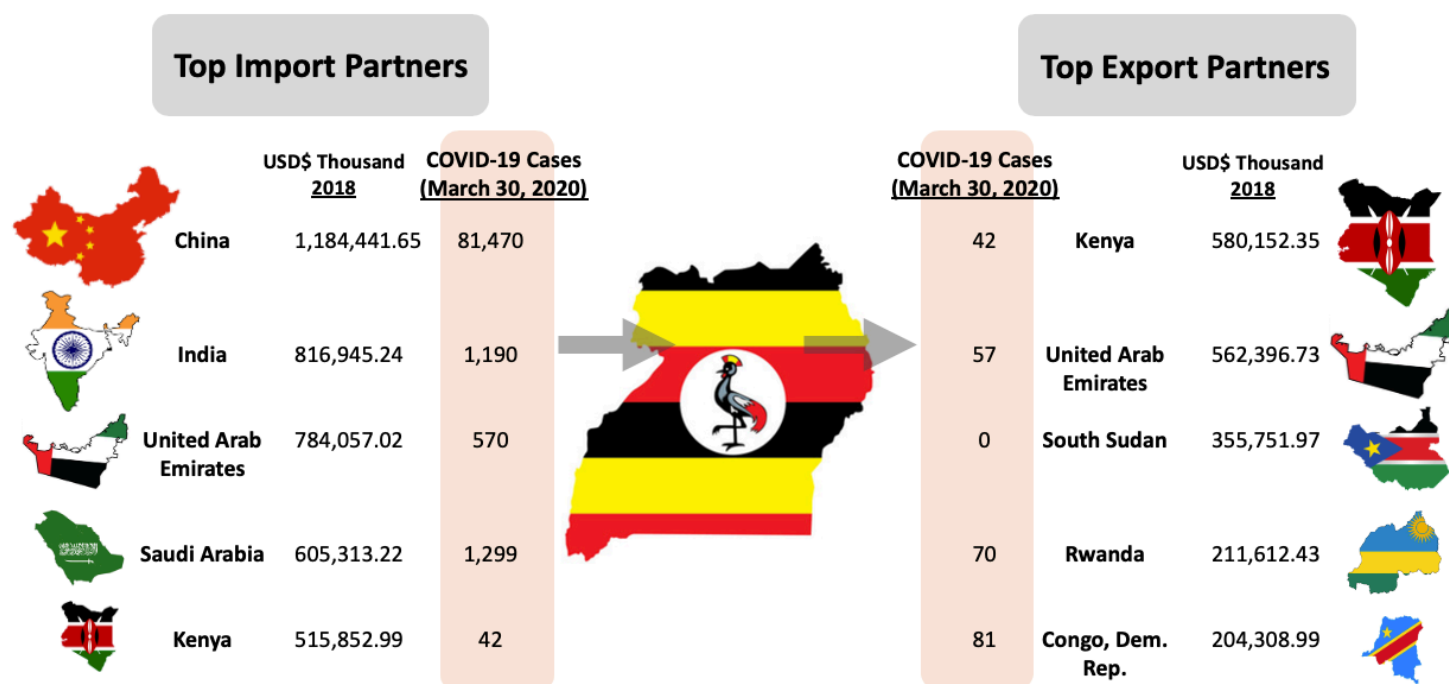


Figure 3. Primary import and export partners for Uganda, 2018. Data source: Author's calculations from WITS, 2018.

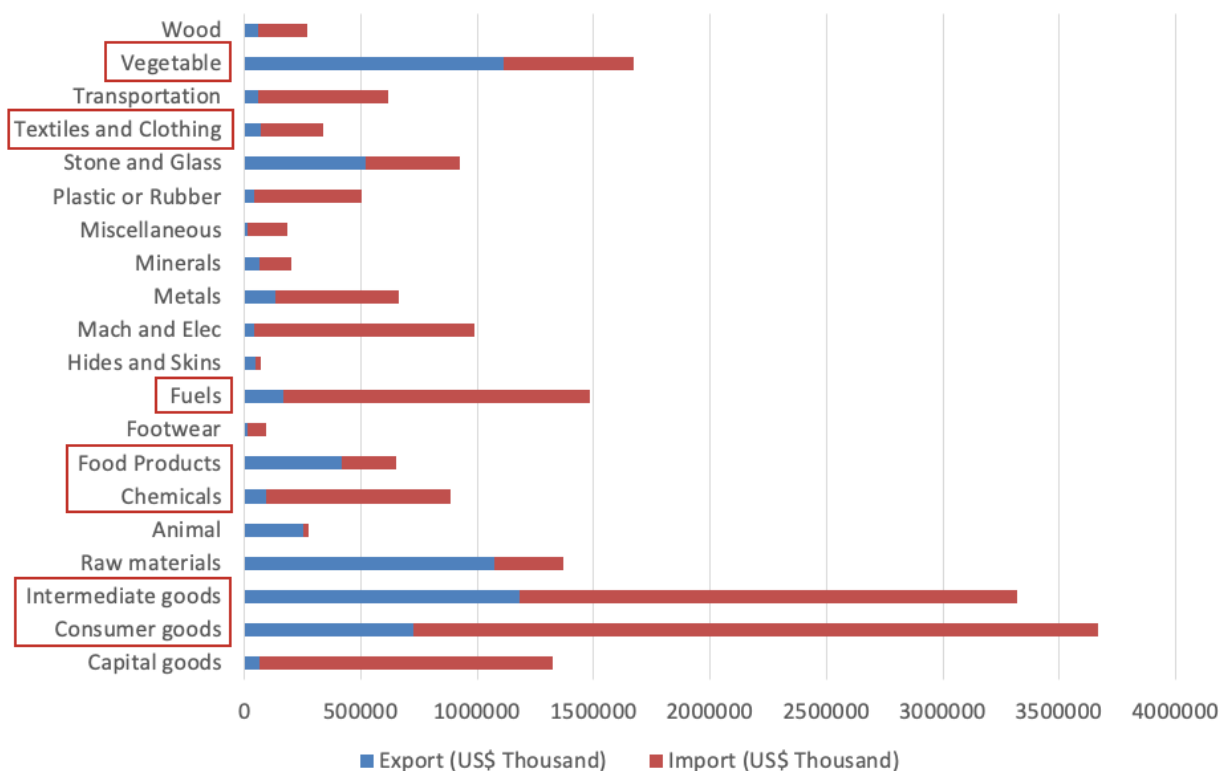


Figure 4. Primary products for import and export for Uganda, 2018. Red box indicates areas which may be hardest by COVID-19 pandemic and response.

in Table 2. Some of the leading imports from China include furnishing articles, electrical apparatuses, gas/liquid/electricity production meters, refrigerators and electrical transformers. In February 2020, the electrical apparatus imports declined by UGX 30.1 billion in value compared to February 2019. Electrical transformers declined by UGX 2.6 billion in February 2020 compared to the same month in 2019. Furthermore, as shown in Figure 4, Uganda imports critical items such as capital, consumer, and intermediate goods while it exports food items such as vegetables and some intermediate goods. As the restrictions on movement continue, the impact on the economy – particularly on the budding manufacturing sector – will be significant.

Table 2. Imports from China in February 2020 compared to 2019. Data source: Author's calculations from URA databases, accessed March 29, 2020.

	February 2019 (UGX Bn)	February 2020 (UGX Bn)	Decline (UGX Bn)	Decline (%)
Dutiable imports	166.00	146.46	-19.54	-11.8%
VAT taxable imports	252.08	244.73	-7.35	-2.9%
Total imports	732.46	449.46	-283.00	-38.6%

- (v) **In terms of social effects, the closure of schools, places of worship, entertainment venues negatively impacting quality of life and has potential to impact human capital development going forward:** In the education sector, the impact will be felt by low and average-income households in both public and private schools, given the inability to access innovative educational instructions. More than 17.5 million people are in both public and private schools, all seated at home.
- (vi) **Immediate deterioration of Uganda's foreign exchange, expected to hit UGX 4000 for one US dollar in coming day:** The foreign exchange started to deteriorate immediately after the first case was announced, and has been worsening daily (Figure 5). Deterioration of the exchange rate will have severe effects, including on loan servicing, requiring importation of critical products and drawing on foreign reserves to stabilise the Ugandan shilling, among other critical impacts. As of March 30, 2020, Bank of Uganda had provided a USD \$200 million intervention in an attempt to stabilise the currency, though it has not yet appeared to be sufficient to prevent the continuing decline of the shilling.¹² Therefore, further intervention will likely be necessary.

¹² https://www.newvision.co.ug/new_vision/news/1517091/shilling-drops-despite-bou-intervention

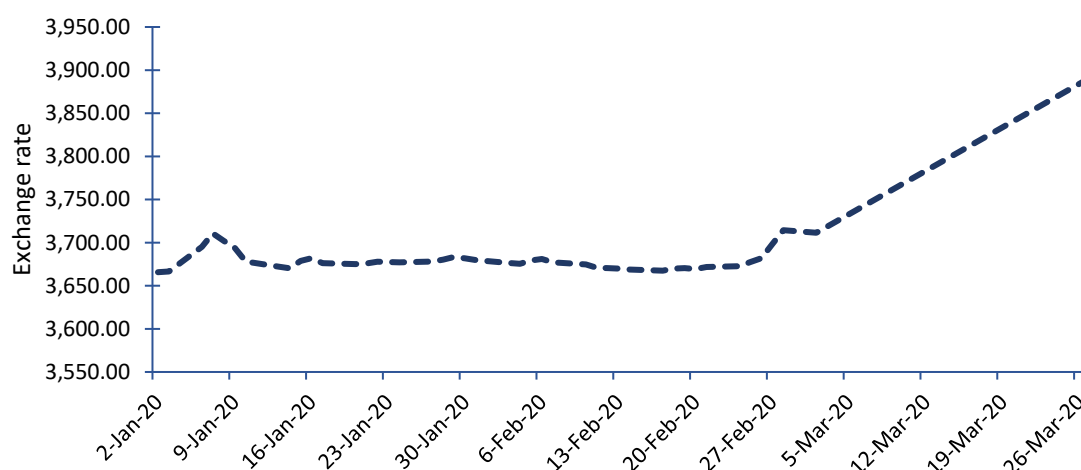


Figure 5. Exchange rate trends in Uganda. Source: Bank of Uganda, accessed on March 27, 2020.

- (vii) **Overall economic growth expected to suffer:** For 2019/2020, the trajectory for economic growth has already been revised downward from 6% to between 4.6% and 5.1% under the worst-case scenario (Figure 6).

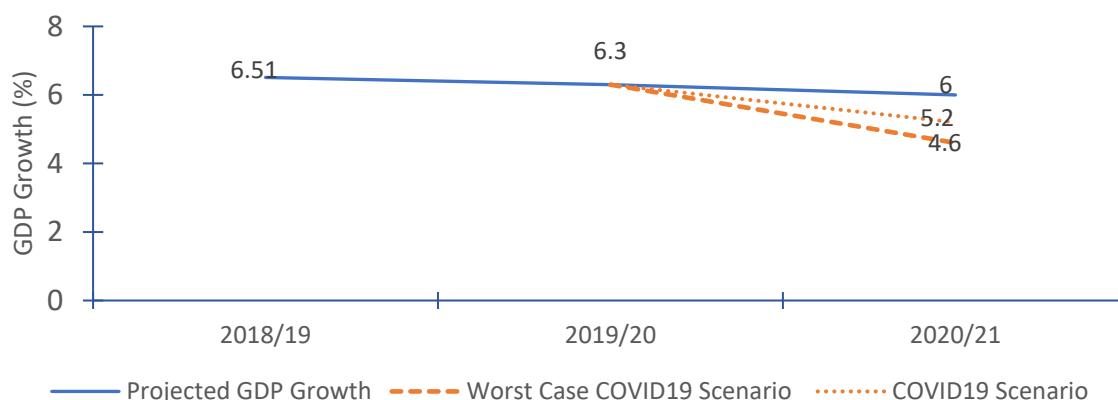


Figure 6. Projected GDP growth trends in Uganda. Source: Author's adaptation based on MFPED, 2020.

- (viii) **While growth projections are being revised downwards, the potential rise in prices may negatively affect food security and welfare of the population:** Considering that food constitutes 45.5 percent of household monthly expenditure, price rises can have devastating effects at the household level.¹³ Reviewing commodity price trends for the last three months, prices appear to be rising, though not yet to an alarming level. The rise of prices is more substantial for food commodities. Food items such as fruits and bananas in particular registered significant increase in price. At the end of January 2020, prices began an upward

¹³ UBOS, 2017. National Household Survey 2016/17.

trend which has continued through February and March, coinciding with the outbreak of the COVID-19.

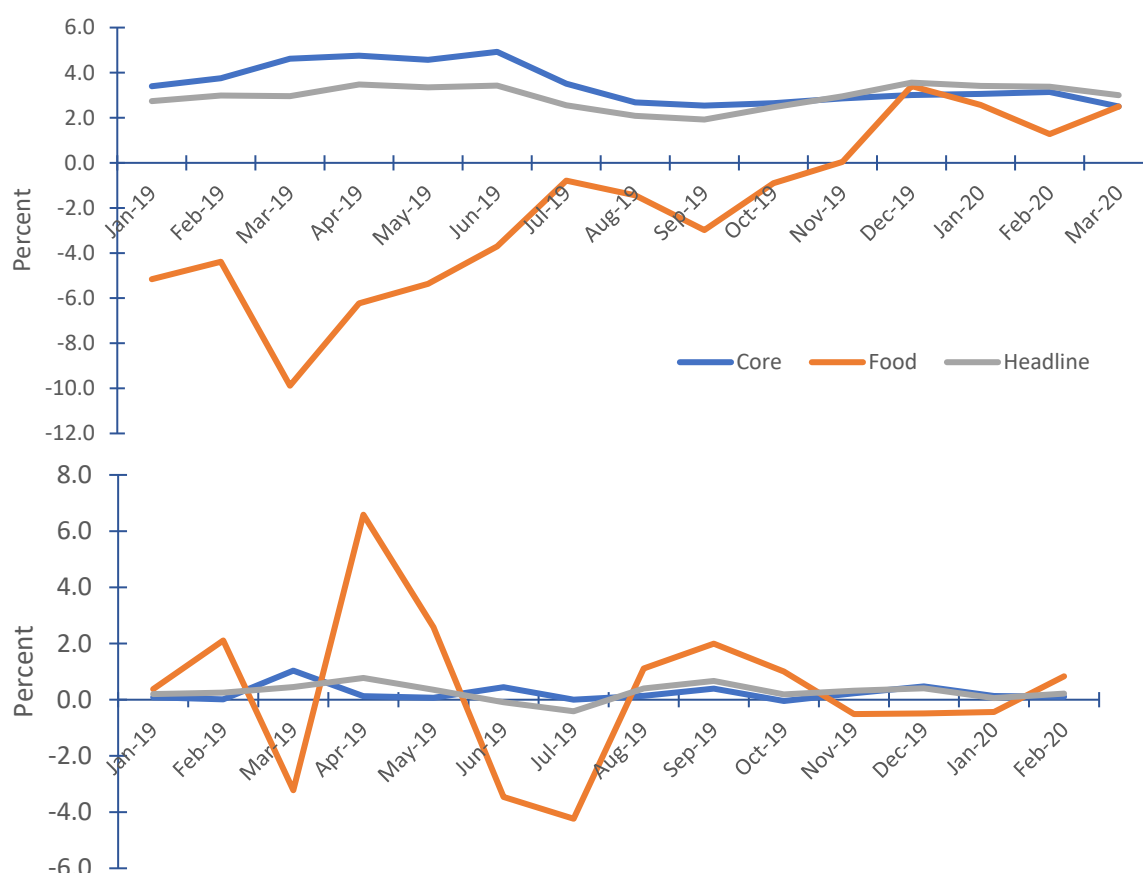


Figure 7. Inflation (top: annual percent change; bottom: monthly percentage change).

2.1.3 Immediate direct and indirect impact on households and vulnerable groups

In light of the immediate, wide-reaching impacts of the virus containment measures throughout Uganda's health systems, economy, and society, there will also be undesirable impacts felt at the household level outside of the direct effects of the virus itself. While commendable in terms of their efforts to contain the spread of COVID-19, the economic impact of the movement restrictions, lockdown, and halting of economic activities could have both immediate and lasting implications for Ugandan families, particularly for the poorest and most vulnerable. As previously mentioned, more than 17.5 million people are in both public and private schools, currently all closed. The loss of this time in education will hit the poorest and most vulnerable the hardest, as education has been identified as a key variable in reducing vulnerability to poverty and increasing household resilience to shock (UNDP-Uganda, 2020a). Unemployment and food insecurity could also result from loss of wages and economic activity. Further, there are well-known disparities in development throughout Uganda, and improvements in household income and opportunity have not been evenly distributed; these

inequalities persist both by region and also by consumption quintile (UNDP-Uganda, 2020a). This means that, while some regions may be hit more or less hard by the coronavirus itself, some populations may be hit harder by the economic impacts of the containment measures. While Kampala and Central subregions have seen improvement in human development, subregions particularly in the East and North have been left behind (UNDP-Uganda, 2020b). Economic shock may severely impact these subregions. In addition, households in low consumption quintiles, including the bottom 40% of the population, have slower improvement as well, and these disparities are also seen across sectors of employment, poverty status, education levels, and due to household characteristics, such as having large family size. This greatly affects households' abilities to cope with shocks, including major shocks such as the COVID-19 crisis and potential loss of incomes during lockdown. Women of reproductive age, children, persons with disabilities, those living with HIV/AIDs, and additional vulnerable and marginalized groups are also at risk of experiencing more impactful shock and having less ability to recover from the shock (UNDP-Uganda, 2020a). This also includes women who may be at greater risk from gender-based violence when in lockdown with abusive partners.

Relative to the baseline of movement to businesses and general economic activity, Google Mobility Reports estimate that visits to retail and recreation areas in Uganda have declined 50%, and visits to grocery and pharmacies have declined 36% since measures were enacted in mid-March (Figure 8).¹⁴ Those that persist may be boda-boda deliveries and other permitted activity. In general, these findings illustrate not only widespread compliance with the lockdown measures, but also the decline in economic activity as a result of COVID-19 measures.

The disruption of economic activity country-wide will most likely increase food insecurity, among heightening of other vulnerabilities. The restrictions of movement, transport, and market operations will negatively impact agricultural households that rely on market sales and will negatively impact households that do not have harvest in stock to survive on. Food insecurity could increase vulnerability of households and increase overall insecurity. Additionally, pregnant women and those with pre-existing or chronic medical conditions may experience reduced access to proper nutrition and basic health services. Impacts for vulnerable households may range from loss of food security and nutritional issues to job and income loss and heightened probability of falling into poverty or chronic poverty. Additionally, those employed in tourism and hospitality, and retail trades other than food, especially women, may be furloughed or lose jobs as a result of the

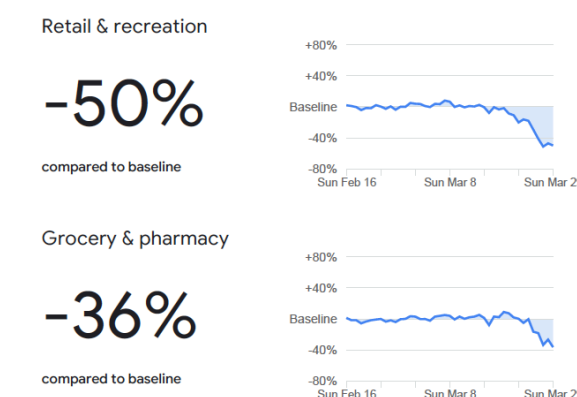


Figure 8. Google COVID-19 mobility report using anonymized location data. Data source: Google COVID-19 Community Mobility Reports, March 29, 2020

¹⁴Google (2020). These data exhibit bias due to unclear algorithmic treatment of unplanned settlements (slum areas), large numbers of individuals without smartphones, and continued activity by informal or unregistered businesses. The figures are nonetheless useful in illustrating the immediate effect of containment measures on movement.

massive decline in tourist arrivals and subsequent activity in these sectors. This includes restaurant and hotel spending and suspension of national park permit purchases.

In the context of these potentially critical impacts on households, the scenarios presented in the next section were developed in order to better understand the possible effects of the crisis on poverty, and in order to identify steps that the Government can take immediately in order to cushion the most vulnerable households.

2.3 Methodology: Short-term household poverty scenarios

In this component of the policy brief, we perform a rapid assessment of the potential effect of the COVID-19 response on Ugandan households by examining three potential income loss scenarios. The data used are three most recent waves of the Uganda Bureau of Statistics (UBoS) National Household Surveys covering 2009/10, 2012/13, and 2016/17. We focus on the effects around thresholds, considering the movement of households between three categories: poor, non-poor but insecure, and non-poor, as identified in the Poverty Status Report 2014. Poor households are categorized using the standard UNHS poverty line, which is revalued to 2009/10 prices using the CPI and compared with the adjusted household consumption data for comparability across survey waves. This headcount poverty rate for UNHS 2016/17 was 21.4% (Table 3). Non-poor but insecure households are those who have a consumption expenditure of less than double the poverty line. Non-poor households have a consumption expenditure per adult equivalent that is over double the poverty line. We use these categorizations to emphasize that while a household may not currently be below the poverty line, and therefore not considered “poor,” that household – particularly those categorized as non-poor insecure – may be just above the poverty line and have characteristics that make them more vulnerable to falling into poverty in the future¹⁵.

There are number of critical limitations to the analyses in this brief. The scenarios are very coarse and make a number of key assumptions which, due to the changing nature of the COVID-19 situation, are subject to change. These scenarios are intended to paint a broad and general picture of potential effects on households resulting from the COVID-19 crisis.

Table 3. Poverty categorizations used in analysis and their frequencies in UNHS 2016/17. Poverty rate and “non-poor but insecure” rate are based on UBoS-calculated survey weights. Data source: UNHS 2016/17.

<i>Poverty Status Category</i>	<i>Population</i>	<i>Freq.</i>	<i>Cum.</i>
<i>Poor</i>	8,032,202	21.42	21.42
<i>Non-poor but insecure</i>	15,347,787	40.93	62.35
<i>Non-poor</i>	14,118,784	37.65	100.00
<i>Total</i>	37,498,773	100.00	

¹⁵ UNDP-Uganda, 2020. Estimating vulnerability to poverty and the dynamics of resilience to shocks: Laying the foundation to Leave No one Behind in Uganda.

2.4 Scenarios

The scenarios for this rapid assessment included situations where (i) households lost income based on the duration of lockdown (four weeks then extended to eight weeks, following international and regional trends, such as the recent extension of lockdown in Rwanda) and the sector in which households primarily work (agriculture vs. non-agriculture including services and trade); (ii) households lost income based on the duration of lockdown but household consumption needs were reduced by food support from the Government distributions to Kampala and Wakiso (Table 4).^{16, 17}

Table 4. Scenarios and assumptions used for analysis. Source: Authors.

	Lockdown Duration	Percentage of annual income lost ¹⁸ (by primary income source)	Government essential needs support
Scenario 1	March 30-April 30 Duration = 4 weeks	Agricultural: 1.9% Industry, trade, services: 7.7%	Targeted to households in Kampala Sub-scenario: Targeted nationally
Scenario 2	March 21- May 20 Duration = 8 weeks	Agric: 3.8% Industry, trade, services: 15%	Targeted to households in Kampala Sub-scenario: Targeted nationally

Lockdown Assumptions:

$$x - d \left(\frac{x}{52} \right) = y$$

x = monthly UNHS household consumption expenditure *

12

d = duration

y = household effect

Income Loss Assumptions:

For households whose primary source of income is non-agricultural, such as trade, industry, and services, 100% of income lost during weeks of lockdown (assuming job loss or unpaid leave)

$$x - d \left(\frac{x}{52} \right) = y$$

For agricultural households, 25% of income is assumed to be lost during weeks of lockdown due to reduced sales and price fluctuations)

$$x - 0.25d \left(\frac{x}{52} \right) = y$$

Government Support Assumptions

Roughly assuming that food expenditure is 75% of household income, and government food distribution cushions households by reducing these food needs by 30%, we assume that government support reduces household expenditure needs by 45%.

It is further assumed that the wealthiest households (top 20% of consumption expenditure) will not receive these food distributions or other income support benefits.

¹⁶ <https://observer.ug/news/headlines/64133-gov-t-ignores-parliament-on-covid-19-relief-food>

¹⁷ <https://www.monitor.co.ug/News/National/Relief-food-distribution-Kampala-Wakiso-districts-Wakiso/688334-5514014-df5lrtz/index.html>

¹⁸ Approximately 17.9% of households in UNHS 2016/17 are paid employees (and are not casual labor in agriculture). It is true that some percentage of these have more formal employment contracts and will continue to be paid, and therefore households will not experience income loss. However, in the absence of concrete data on formally-contracted employees, we assume that all experience income loss.

2.5 Findings

If lockdown and loss of incomes continues, poor are likely to stay poor and chronic poverty may be further entrenched. However, new households that were previously above the poverty line, in “non-poor insecure,” may move into poverty, and some who were previously non-poor may move into income insecurity. Figure 9 illustrates how, with no government support, the number (“density” essentially meaning frequency) of households below the poverty line¹⁹ increases with the duration of the lockdown and subsequent loss of incomes.

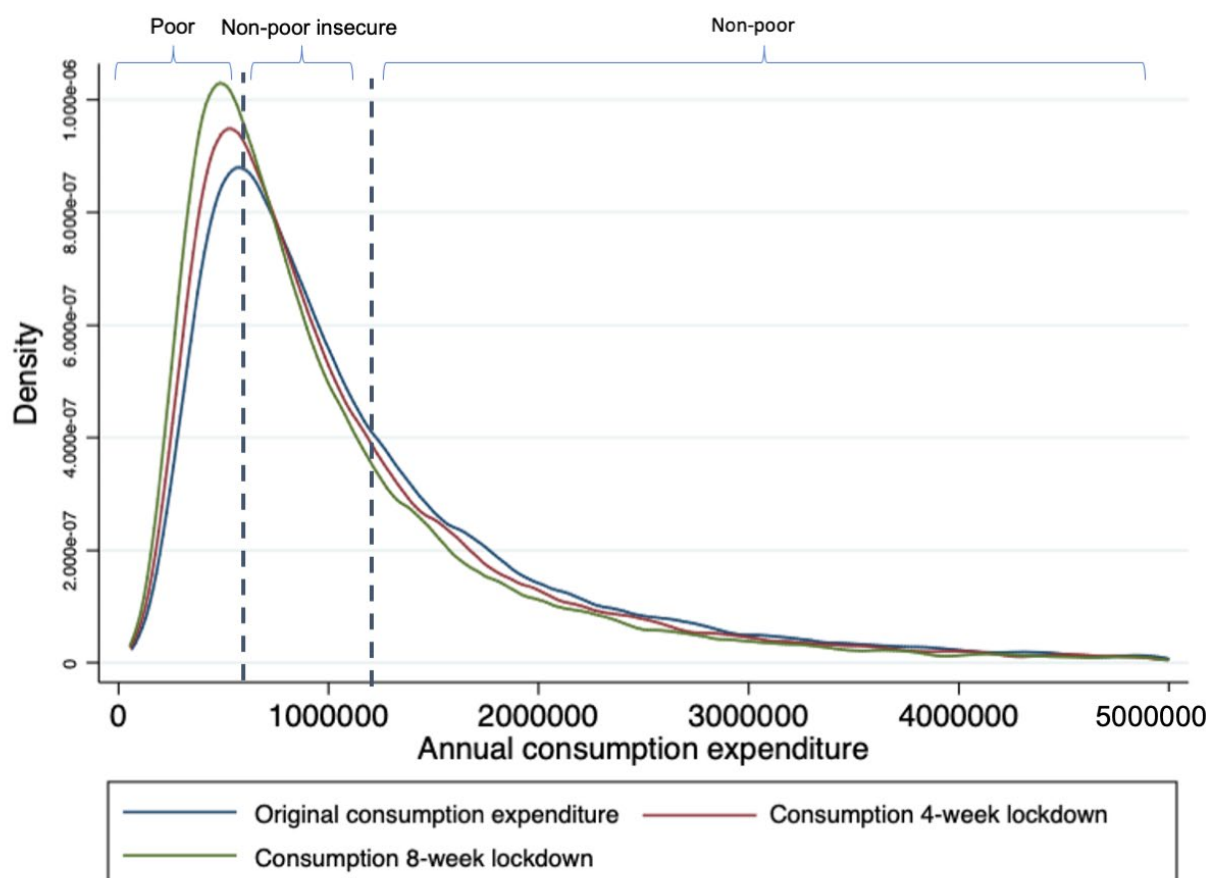


Figure 9. Kernel density estimate showing the distribution of consumption in UNHS relative to lockdown scenarios, cutting off outliers at UGX 5,000,000. Data source: UNHS 2016/17.

¹⁹ Uganda uses a spatially variant poverty line, meaning that different regions and urban/rural areas in the country have different poverty lines depending on the living conditions and food prices. Here the visualization uses the Kampala poverty line.

2.5.1 Scenario 1: Four-week lockdown

Figure 10 illustrates the effect of the four-week lockdown on the movement of poor and non-poor insecure households relative to the poverty line. The green line is the sub-scenario where Government support is scaled up from the initial food distribution in Kampala and Wakiso to be nationwide. Without Government support, it is clear that more households will move below the poverty line. Table 5 also illustrates this effect.

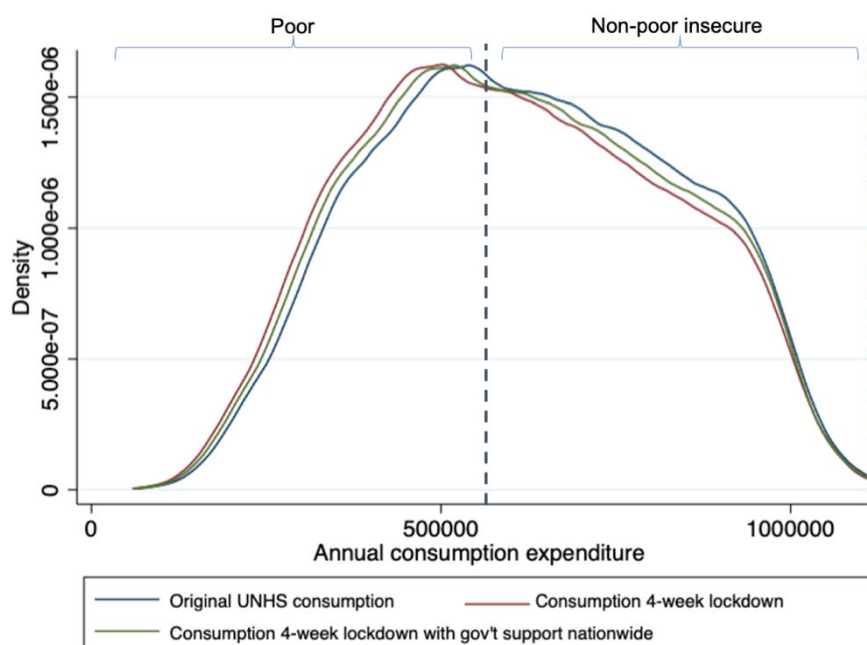


Figure 10. Scenario 1 – Kernel density estimate illustrating number of households poor and non-poor insecure after 4-week lockdown, with and without government distribution of essential needs to cushion income losses. Data source: UNHS, 2016/17

Table 5. Results of Scenario 1 analysis. Data source: Author's calculations from UNHS 2016/17.

Poverty Category	Base Population	Freq.	4 Week Lockdown Population	Freq.	GoU support Kampala Population	Freq.	GoU support all Population	Freq.
Poor	8,032,202	21.42	9,779,215	26.08	9,773,651	26.06	8,993,215	23.98
Non-poor insecure	15,347,787	40.93	15,189,894.1	40.51	15,181,604.1	40.49	15,230,394.2	40.62
Non-poor	14,118,784	37.65	12,529,663.8	33.41	12,543,517.1	33.45	13,275,163	35.40
Total	37,498,773	100.00	37,498,773	100.00	37,498,773	100.00	37,498,773	100.00

As a result of the four-week lockdown, it is possible that the poverty rate could increase as much as 4.7%. However, with Government support for essential needs, particularly support that is more widespread than only Kampala, this could be cut to an increase in poverty of approximately 2.6%.

A four-week lockdown, based on these assumptions, could cause as many as 1.7 million additional Ugandans to fall into poverty. However, widespread government support through distribution of essential needs, which lessens the consumption burden during a time of income loss, could prevent approximately 786,000 Ugandans from falling into avoidable poverty.

2.5.2 Scenario 2: Eight-week lockdown

Not surprisingly, the effects of the eight-week lockdown simulated in Scenario 2 are greater than for Scenario 1. It is possible that the poverty rate could increase approximately 9.7%. This means an additional 3,637,137 Ugandans could fall into poverty with an eight-week lockdown, well over double the additional poor Ugandans following a four-week lockdown, as the duration of the lockdown extends, the possible household-level economic impacts become worse. However, with Government support for essential needs, particularly support that is more widespread than only the initially-targeted districts of Kampala and Wakiso, this could be cut down to an increase of approximately 5.2%, closer to the level of the four-week lockdown. The red line in Figure 11 and Table 6 illustrate the effect of the eight-week extended lockdown on the movement of households relative to the poverty line. Without Government support, the green line, more households will move below the poverty line. While the Government support will not entirely alleviate the shock for households, it will reduce the numbers pushed into poverty.

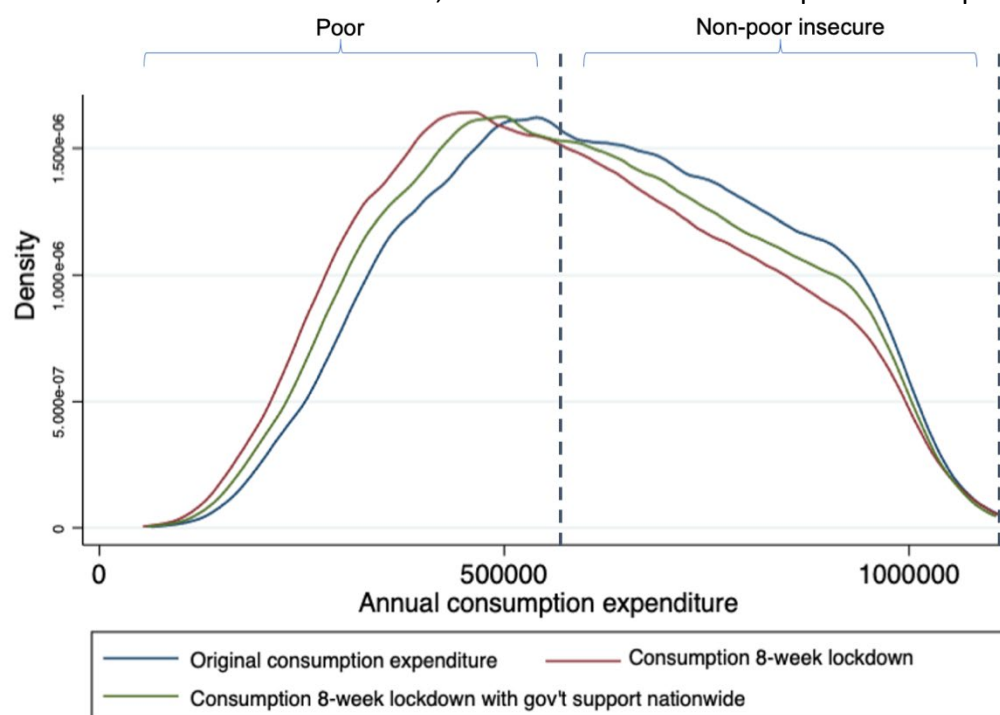


Figure 11. Scenario 2 – Kernel density estimate illustrating number of households poor and non-poor insecure after 8-week lockdown, with and without government distribution of essential needs to cushion income losses. Data source: UNHS, 2016/17

Table 6. Results of Scenario 1 analysis. Data source: Author's calculations from UNHS 2016/17.

Poverty Category	Base Population	Freq.	8 Week Lockdown Population	Freq.	GoU support Kampala Population	Freq.	GoU support all Population	Freq.
Poor	8,032,202	21.42	11,669,339	31.12	11,642,213	31.05	9,979,898	26.61
Non-poor insecure	15,347,787	40.93	14,930,617	39.82	14,893,021	39.72	15,150,520	40.40
Non-poor	14,118,784	37.65	10,898,817	29.06	10,963,538	29.24	12,368,355	32.98
Total	37,498,773	100.00	37,498,773	100.00	37,498,773	100.00	37,498,773	100.00

It is also important to note the effect of the lockdown on the middle class. Middle class households, those with consumption expenditure over double the poverty line, are not always secure in times of shock (UNDP-Uganda, 2020a). The eight-week lockdown reduces the size of the middle class by 8.6%, sending many of those households into the non-poor insecure, the size of which remains fairly stable at approximately 40% across all scenarios, and into poverty.

As mentioned in Footnote 18, there are a number of critical factors to consider when assessing these results. The duration of the COVID-19 crisis and the containment measures taken is clearly important in the outcome. It affects the severity of shock that households experience. However, it is also critical to note that different households are experiencing the COVID-19 lockdown in different ways; while a household head that is informally employed in the trade sector may lose 100% of their income for the duration of the lockdown, someone formally employed in the same sector may continue to be paid despite the measures, or only lose some smaller percentage of their anticipated income for the period. Further, many Ugandans involved in tourism and hospitality might be furloughed, placed on leave without pay, or be outright fired, but may have the opportunity to quickly regain those jobs following the crisis and lifting of containment measures. It is therefore difficult to develop generalized scenarios and to assess the medium- and long-term impacts of these results in terms of the medium-term poverty implications in Uganda.

That said, this analysis is a rapid assessment that has assessed poverty in aggregate, without disaggregating based on household characteristics or by vulnerable groups. Some groups and households in some regions may be disproportionately affected by the loss of income resulting from the containment measures, leading to marginalized groups potentially being left behind. Overall, it is clear that with Government support, and particularly Government support

that is more widespread than the initially Kampala-focused food distributions and other Government support, many Ugandans could be cushioned from a major shock. As the effects of the containment measures such as the lockdown are felt throughout the country, it is less effective to only target economic and food support to the areas that have reported the most confirmed cases such as Kampala. However, if there is hesitation to expand food distribution and other support nationwide, other coronavirus-hit areas could be the first to receive additional government support, such as Hoima (Figure 12).

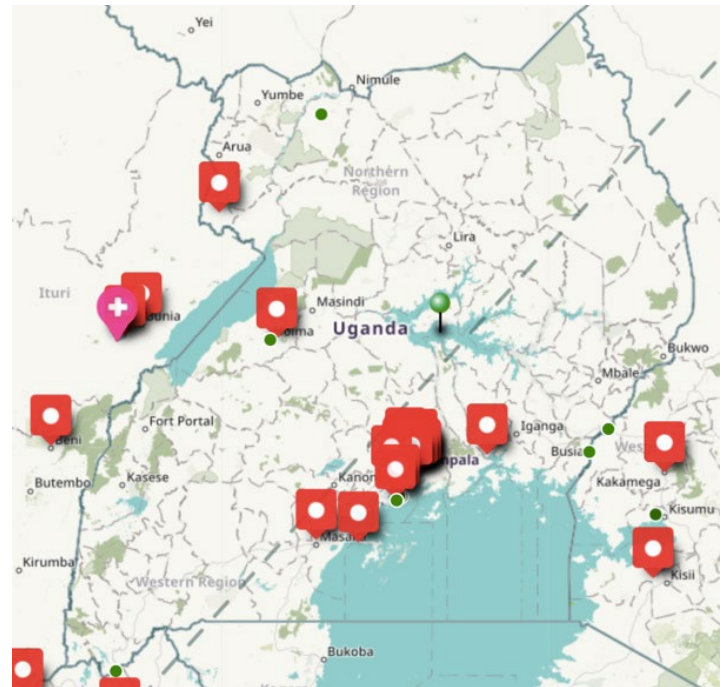


Figure 12. Mapping of confirmed cases of COVID-19 in Uganda as of April 7, 2020. Data source: <http://covid-19-africa.sen.ovh/>



3. MEDIUM- AND LONG-TERM SOCIOECONOMIC IMPACT OF COVID-19 ON UGANDA

COVID-19 poses a serious challenge, as previously discussed, in the immediate term for health and wider socioeconomic development including decline in human development and increase in poverty; however, COVID-19 also poses a threat to Uganda's progress towards SDGs in the medium- to long-term if the response is not swift and effective. This goes beyond only SDG1, eliminating poverty, which was the focus of the previous section. In light of the immediate direct and indirect health, social, and economic effects of COVID-19 and response, including the effects on vulnerable Ugandan households, it is clear that Uganda will need to divert significant spending from previously planned development activities into the health sector in order to both mitigate and respond to the outbreak of COVID1-19. Furthermore, direct and indirect revenue will decline due to the loss of incomes and consumption resulting from the outbreak mitigation measures. The Government of Uganda is expected to draw on previously unplanned concessionary loans from the World Bank and IMF in order to cover components of this response. These fiscal policy options are discussed in further detail in the following section.

This obstacle is concerning in light of the recent progress and effort Uganda has made to achieve the SDGs. Uganda has embedded SDGs into its national development planning process, as evidenced in the Second and Third five-year National Development Plans (NDPII and NDPIII). It has also increasingly aligned its budget to SDG-related spending, with close to 61% of budget in 2019/21 been directly contributing to SDGs.²⁰ While progress towards SDGs may vary from one goal to another, Uganda has nonetheless made significant progress towards the achievement of SDGs. According to the Sustainable Development Solutions Network (SDSN) '2019 Africa: SDG Index and Dashboard Report,' Uganda ranks 18th among 52 African countries based on 97 indicators across all 17 Goals. Uganda further received an overall score of 54.88 compared to the regional average of 52.7. The score indicates that, by SDSN's calculations, Uganda is more than 50 percent of the way towards achieving SDGs by 2030, on track with the rest of the continent.

However, Uganda needs to accelerate progress to achieve the SDGs. While Uganda is making significant progress on health, gender equality, decent work and economic growth, industry innovation and infrastructure and partnerships, notably, performance is stagnating when considering SDGs related to poverty, hunger, education, clean water and sanitation, affordable and clean energy, sustainable cities, life on land, and peace and justice.²¹

²⁰ NPA, 2020. Certificate of Compliance of 2019/20 budget.

²¹ Sustainable Development Solutions Network (SDSN) '2019 Africa: SDG Index and Dashboard Report'

In order to analyse the effect of COVID-19 on medium and long term, UNDP uses the iSDG model developed by National Planning Authority and Millennium Institute with support of UNECA and UNDP. The section below presents the system dynamics model, which has been customized to the Ugandan context, and which was developed to inform NDP III.

3.1 Methodology: Medium- and long-term fiscal scenarios using the iSDG model²²

The integrated-SDG (iSDG)-Uganda model is structured to analyse medium- and long-term development issues at the national level. The model integrates the economic, social, and environmental aspects of development and applies the systems dynamics methodology (Sterman, 2000). Originally designed to inform interventions selected for NDP III programmes, the model is comprehensive and its level of aggregation make it an appropriate tool to analyse different government strategies (Allen et al, 2016; UNEP, 2014). The analysis itself is not intended to provide a forecast, but to highlight complex intersectoral connections, thereby enabling policymakers to approach the of design public policies from a holistic perspective.

This model is comprised of 30 interacting modules (Figure 13). The 30 modules are divided into economic (blue), social (red) and environmental (green). Each individual module could be considered as a separate model, which links to other modules and calculates certain outcome variables based on inputs from other modules and historical data. However, linking the modules together allows the analysis of dynamic interactions across modules. The dynamic interactions capture feedback loops, non-linearity and delays, all of which are fundamental elements of complex social/economic/environmental systems including those critical in development. Economic activities take place within society, from which social resources are drawn to generate economic value, limited and feeding back into the carrying capacity of the natural environment.

The model was subjected to extensive validation. The structure of iSDG-Uganda model and models it is based on was validated primarily through peer-reviewed research by the modelling team. iSDG-Uganda has been customized to the conditions of Uganda through a specific calibration process, relying on historical data from 1995 until the present moment. Data has been collected from both international and national data sources. National data sources were prioritized, with international data filling gaps where national data was unavailable or local data did not exist for specific indicators. Collection and analysis of data took place in close coordination with NPA and UNDP-Uganda technical experts, and external experts when existing data was insufficient. Where data was still missing, assumptions were made in order to fill in the gap. All of the historical data, parameters and assumptions were discussed with and ultimately confirmed by the partners from NPA and UNDP. For further detail on the calibration of modules, data sources, and limitations of the model and approach, see the Millennium Institute's final report on the iSDG-Uganda.²³

²² This section is adapted from the report *Dynamic analysis of Sustainable Development Goals in the context of Uganda's Third National Development Plan*. Millennium Institute, February 2020.

²³ *Dynamic analysis of Sustainable Development Goals in the context of Uganda's Third National Development Plan*. Millennium Institute, February 2020.

Importantly, the scenario analysis presented in this policy brief is limited in scope and was highly simplified. This analysis should be interpreted cautiously, in general terms. Due to the rapidly changing nature of the COVID-19 crisis, this analysis is also subject to change.

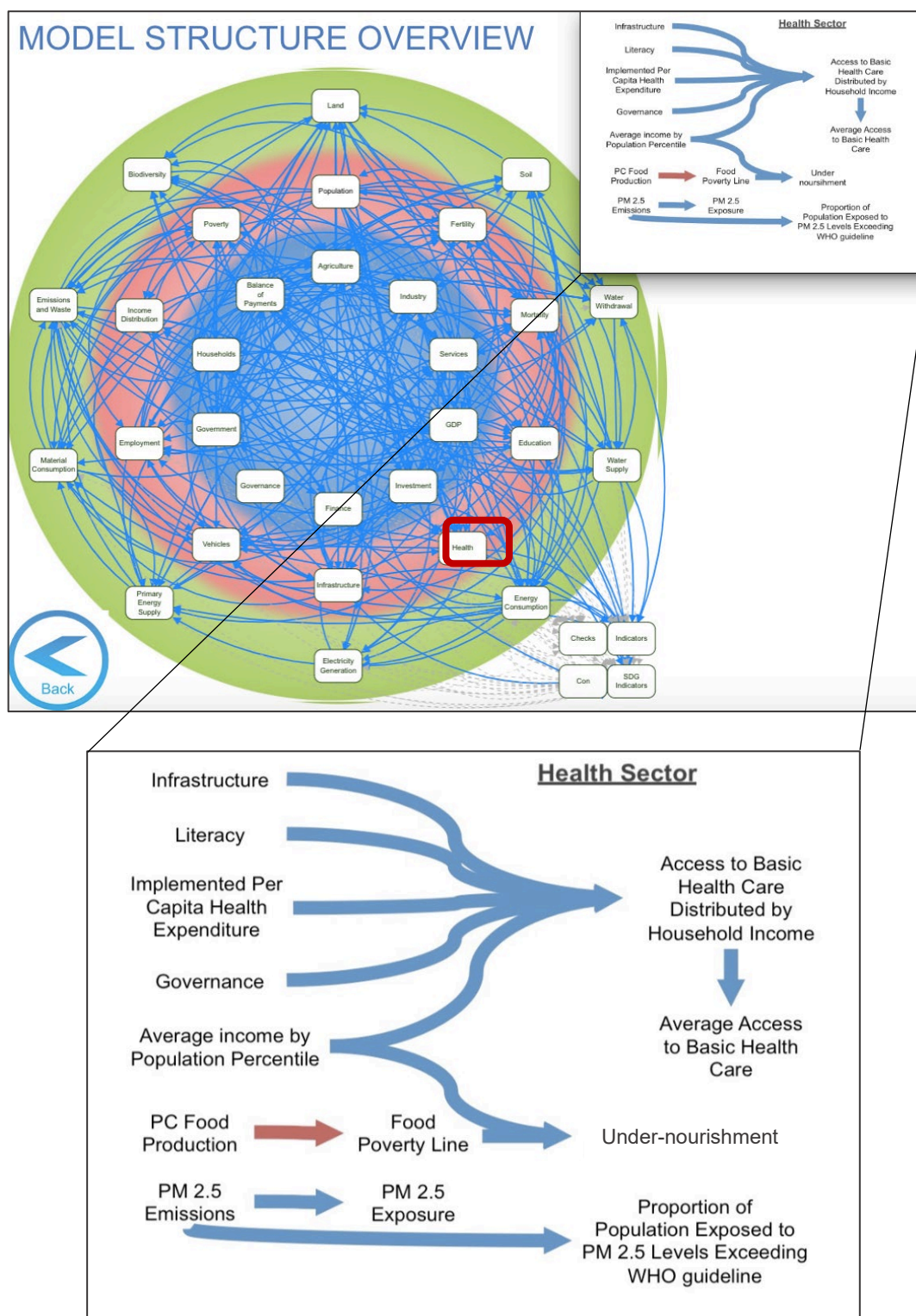


Figure 13. Structure of the iSDG model and the Health Sector in particular. In this policy brief, we simulate the impact of reallocating fiscal spending from other sectors into Access to Basic Health Care.

3.2 Scenarios

From the iSDG-Uganda model's data-calibrated base, or business-as-usual, we can perform simple scenario analysis to illustrate the effect of fiscal policy changes *now* on SDGs into 2030 for Uganda. This corresponds specifically to the "Government Mandates" channel of potential impacts of COVID-19 (Figure 3). In these scenarios, fiscal policy response is called upon

Three scenarios were used to broadly and rapidly estimate potential medium- and long-term socioeconomic effects of the COVID-19 response

in short-term interventions, either by supporting the health sector or strengthening economic activities to buffer the economy and protect social development gains. Three scenarios were developed around potential fiscal policy changes, to understand implications for SDGs. The three scenarios developed to assess COVID response against SDGs are outlined below.

The first scenario assumes that the current budget envelope will be the only available resource that the government of Uganda has at its disposal to reallocate in response to COVID-19 in the 2020/21 budget period. Additionally, while the unfolding impact of COVID-19 on the economy continues, reducing GDP growth by 2%,²⁴ and all reallocation focus goes to combating the health impact. For the purposes of this analysis we assumed that Uganda will need to double its health spending, adding an additional 3% of GDP. We further assumed that Government will pull this money from infrastructure- and industry-related interventions in the next budget period. The summary of the assumptions are provided in Table 7.

Table 7. Scenario 1 assumptions.

Scenario	Increased budget allocation	Reduced budget allocation	Growth assumption	Other assumptions
1	3% of GDP increased in health sector	-2% of GDP infrastructure-related interventions -1% of GDP industry-related interventions, including energy ²⁵	An average of 2% reduction in nominal GDP growth for the next two years	No additional resources mobilized; only government budget envelope for 2020/21

The second scenario is builds on the first, maintaining the same growth loss, but assumes that rather than reallocate existing funds, the Government of Uganda will mobilize additional concessional resources to combat the health effect. This will increase nominal foreign debt by approximately 5.7% of GDP. Further, the second scenario assumes direct tax revenue will decline by 1% of GDP (Table 9).

²⁴ Based on the estimate provided by MFPED's "worst case scenario" for Uganda, but also the approximate average for African countries' GDP growth loss by UNECA.

²⁵ Energy is a component in the industry module. Hence the deduction is, in part, from energy sector interventions.

Table 8. Scenario 2 assumptions.

Scenario	Increased budget allocation	Reduced budget allocation	Growth assumption	Other assumptions
2	An additional 3% GDP increase in 2020/21 to health (see other assumptions) An additional 2.7% GDP increase in 2021/22 to health ²⁶ (see column “Other assumptions”)	No money shifted away from current development objectives in existing resource envelope ²⁷	An average of 2% reduction in nominal GDP growth for the next two years	Additional resources mobilized at USD 190 million increasing foreign debt by 5.68% of GDP, split between 2020 and 2021. 100 million released in 2020 and 90 million released in 2021. Loss in direct tax revenue of 1% of GDP for 2020 and 2021.

The third scenario, presented in Table 9, builds then upon the second, whereby additional resources will be secured from development partners to handle the COVID-19 impacts over the next two years but instead of directing all of these additional resources to health-related interventions, it will also provide stimulus to the economy in the second year. This means the Government will have extra budget resources to fight COVID-19, strengthening health sector response, but will also be able to provide swift fiscal interventions to stimulate the economy.

Table 9. Scenario 3 assumptions.

Scenario	Increased budget allocation	Reduced budget allocation	Growth assumption	Other assumptions
3	An additional 3% GDP increase in 2020/21 to health (see other assumptions) An additional 2.7% GDP increase in 2021/22 to economic stimuli (see column “Other assumptions”)	No money shifted away from current development objectives in existing resource envelope	An average of 2% reduction in nominal GDP growth for the next two years	Additional resources mobilized at USD 190 million, increasing foreign debt by 5.68% of GDP, split between 2020 and 2021. 100 million released in 2020 and 90 million released in 2021. Loss in direct tax revenue of 1% of GDP for 2020 and 2021.

In the sections 3.2.1-3.2.3, we present findings from these scenarios (1, 2, and 3) for comparative purposes. To reiterate, this brief presents selected results of a rapid assessment of fiscal policy adjustment scenarios for SDGs into 2030 based on the COVID-19 spending and revenue reallocations described above. Importantly, this is a rapid assessment that is limited in

²⁶ The base year for this analysis is 2018/19.

²⁷ This was also compared to additional scenarios, not currently presented in this policy brief, whereby additional resources were mobilized AND budget was also reallocated. These further analyses will be presented in later versions of this preliminary brief.

scope, due not only to the limitations of the model itself (described in the MI final report²⁸) but also due to the fact that the COVID-19 situation changes on a daily basis. The changing nature of the situation and increasingly strict measures implemented make estimating the medium- and long-term effects on Uganda difficult to quantify. These results are thus preliminary and constantly evolving as of March 26, 2020 and are subject to change.

This analysis was rapid and limited in scope; the findings should be interpreted in general terms and are subject to change

3.2.1 Scenario 1: Spending reallocation (*No additional resources mobilized*)

Based on the assumptions presented for Scenario 1, which reallocates budget in the current envelope without additional resources and assumes 2% decline in GDP growth, there could be potential negative performance across all SDGs into 2030, with the exception of environmental SDGs (Figure 14). Indeed, net change in SDG achievement drops -22.8% for eliminating poverty (SDG1), -30.7% for infrastructure and industry development (SDG9), and -38.3% for reducing inequality (SDG10) by 2030, as compared to achievement in the base run. However, climate and forest-related SDGs 13 and 15 increase 14.4% and 17.6%, respectively (Figure 14). Furthermore, the increase in budget allocated to the health sector (double its current allocation) is insufficient to outweigh the overall effects of economic decline, and performance in health outcomes (SDG3) drops by 17.2%. Furthermore, this simple scenario analysis does not capture the distinction between access to basic health care and the COVID-19 -only health care. The majority of funding reallocated to the health sector would likely go to coronavirus-related care. The world has witnessed that due to the high transmission rates of COVID-19 coupled with its mortality rate of approximately 3%, health systems in countries around the world are unable to handle health problems outside of COVID-19 during an outbreak. In terms of eliminating hunger, performance in SDG2 also declines, although with a 2.4% decline this drop is less severe than the declines seen in other SDGs.

These results thus can be cautiously interpreted to indicate that if the COVID-19 response only reallocates existing resources without securing additional resources, there may be longer-term implications for Uganda's achievement of SDGs and other development objectives. Figure 9 presents the model dashboard illustrating impact on SDGs.

²⁸ *Dynamic analysis of Sustainable Development Goals in the context of Uganda's Third National Development Plan.* Millennium Institute, February 2020.

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Figure 14. Results dashboard indicating the effect of spending reallocation coupled with expected decline in GDP growth on SDG performance by 2030. The blue bar next to each SDG indicates the achievement by 2030 in the base run, and the red bar indicates achievement in the scenario run.

As shown Figures 15 and 16, the reallocation of spending within the current envelope away from infrastructure will negatively affect Industry, Innovation, and Infrastructure (SDG9), which is the SDG demonstrating the greatest decline in performance by 2030. On the bright side, the loss of investment in road infrastructure may result in fewer road fatalities (Figure 15), and lower carbon emissions (Figure 16). In the graphs on the righthand side of each figure, the solid line represents the base run trend, while the dashed line represents the trends given the spending reallocation and economic growth decline.

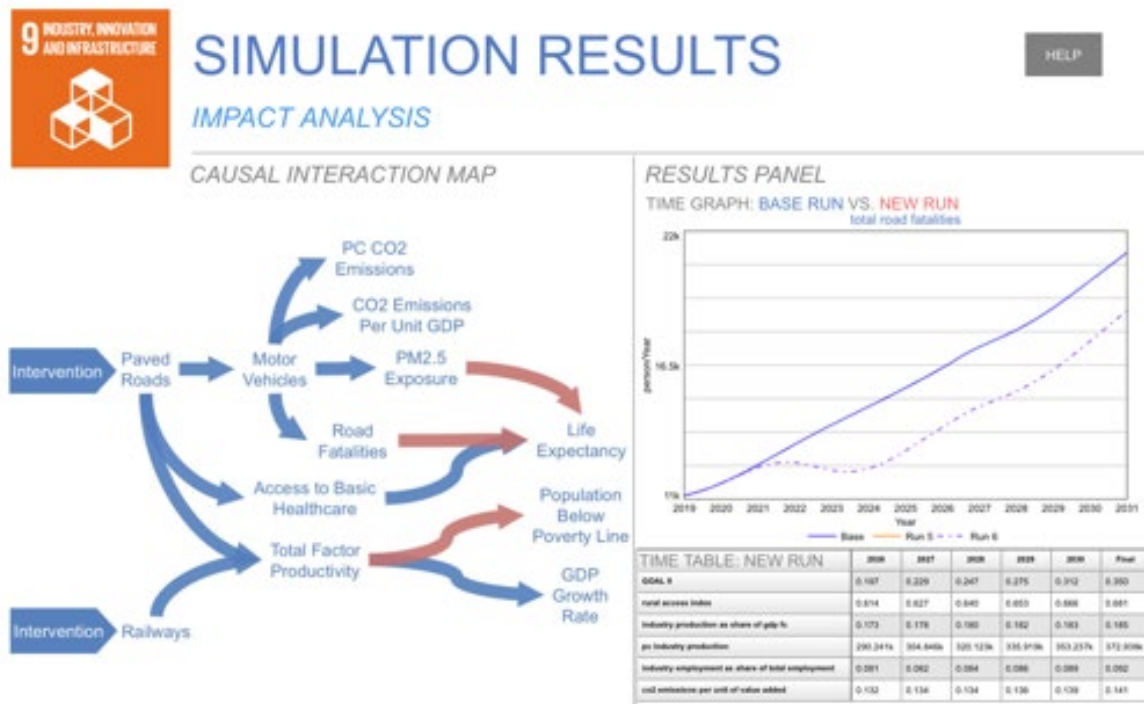


Figure 15. Potential reduction in road fatalities as a result of declining investment in road infrastructure.

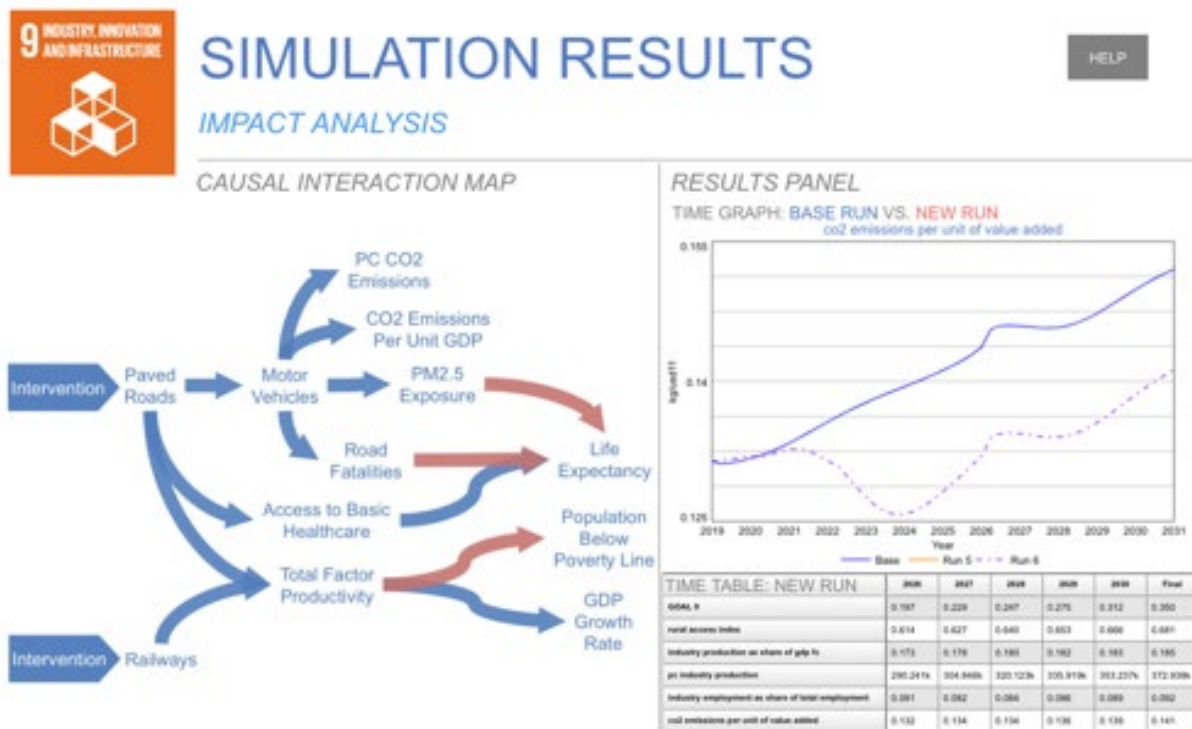


Figure 16. Reduction in carbon emissions as a result of reduction in infrastructure investment and overall loss of economic growth and activity.

3.2.2 Scenario 2: Fiscal policy adjustment incl. spending and revenue (*100% of borrowing goes to health sector*)

Scenario 2 (Figure 17) builds upon Scenario 1 but goes further in also assuming decline in direct tax revenue for the next two years. However, this scenario also assumes that Government mobilises concessional funding equivalent to 5.68 % of GDP, to be released between 2020 and 2021, to respond to the COVID-19 health crisis. This therefore increases foreign debt. The findings indicate that coordinated Government response which mobilises additional external resources to the health sector would reduce the potential negative effect of COVID-19 on a number of the SDGs by 2030, compared to the situation where Government relies on its current resource envelope (Scenario 1). This reduces the negative impacts of drawing resources away from other development objectives. If the release of these resources is limited to the health sector, as it is in this scenario, the COVID-19 outbreak can still have potential negative effects on the achievement of several SDGs. These include zero hunger (SDG2), decent work and economic growth (SDG8), and industry, innovation and infrastructure (SDG9).

However, this response will help to reduce the catastrophic impact on good health and wellbeing (SDG3) into 2030, as illustrated in Figure 17. This indicates that perhaps the potential gains arising from mobilized resources to improve health services that may outlast the COVID-19 outbreak, again, if effectively implemented. The response may not only help to address the immediate impact of COVID-19 by saving lives and reducing morbidity but might contribute positively to the achievement of SDG3 by approximately 5%. This is unlike Scenario 1, where SDG3 declined 17.2% despite the funding reallocation.

Mobilizing additional resources to fund the COVID-19 response, rather than reallocating existing resources earmarked for development, might prevent the derailing of other development objectives and cushion the economic blow

Further, as economic activity is assumed to reduce for 2020 and 2021, the burden on the environment continues to be lessened in this scenario, as compared to the base (SDG12, SDG13, SDG15) (Figure 17). Additionally, the scenario focused on releasing mobilized resources into the health sector illustrated that there may be positive contributions through this approach to long-term progress towards reducing poverty (SDG1) and cushion the negative impact on inequality (SDG 10) as well as fighting hunger (SDG2). Yet, the health-only response could not reduce

fully the COVID potential impact on inclusive growth (SDG 8). It is also important to note that the SDG1 result may be in part due the model attributing the 1% of GDP loss of direct tax revenue to a lessened tax burden on households, more than as a result of the loss of household income. In reality, the COVID-19 response has, as of March 30, 2020, led to a lockdown on movement of the public, including a shutdown of public transport, non-food sales in markets, and other critical measures which will result in widespread loss of incomes. Depending on the net effect of these lockdown measures, the result on the poverty could change. Therefore, further analysis is necessary to better understand the actual implications of fiscal policy adjustment on SDG1 achievement by 2030.

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Figure 17. Results dashboard indicating the effect of spending reallocation coupled with expected decline in GDP growth, direct tax decline, and foreign debt increase on SDG performance by 2030. The blue bar next to each SDG indicates the achievement by 2030 in the base run, and the red bar indicates achievement in the scenario run.

3.2.3 Scenario 3: Fiscal policy adjustment incl. spending and revenue (*Borrowing goes to health in Y1, economic support in Y2*)

In the previous section regarding Scenario 2, it was assumed that 100% of the borrowed funds went directly to combat the health crisis arising from COVID-19 in the years 2020 and 2021. Scenario 3 builds on Scenario 2 by maintaining the decline in growth, -2%, and direct tax revenue loss of 1%, but assumes that the US \$190 million secured will be used to address the health crisis in first year, and shifts in the second year towards economic and livelihoods support (Figure 18).²⁹

The scenario shows that a balanced approach in Government response, focused not only on health but also on economic stimulus, could help to improve performance – or at least cushion performance loss— in several SDGs by 2030. For example, Scenario 3 improves the economic

²⁹ Within the model, this manifests as household energy and agricultural training.

growth potential (SDG 8), and reduces the potential negative effect in terms of widening inequality (SDG10), as well as on eliminating hunger (SDG2).

iSDG UGANDA

INTEGRATED SIMULATION TOOL Preliminary Version (Feb 25, 2020)

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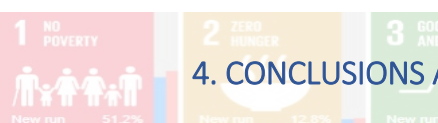


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Figure 18. Results dashboard indicating the effect of spending reallocation coupled with expected decline in GDP growth, direct tax decline, and foreign debt increase on SDG performance by 2030. However, unlike Figure 12, the 2021 borrowed funds are put into economic support rather than directly into the health sector. The blue bar next to each SDG indicates the achievement by 2030 in the base run, and the red bar indicates achievement in the scenario run.

Indeed, SDG2 improves approximately by 13% relative to Scenario 2, where all borrowed funds go into health. However, performance on SDG1, eliminating poverty, declines marginally relative to Scenario 2, by approximately 2%, indicating that there is some tradeoff in terms of the effect of resource allocation into different sectors in 2021. Between Scenarios 2 and 3, the economic stimulus will not affect significantly the achievement of environmental SDGs (SDGs 12, 13, 14 and 15). In summary, the Scenario 3 response, which included both health sector as well as economic stimulus from external resource mobilization, illustrates a potentially boosted health sector capacity to absorb COVID-19 shock while also cushioning the potential prolonged effect of the virus on economic growth.



4. CONCLUSIONS AND POLICY IMPLICATIONS

The unforeseen outbreak of COVID-19 and its subsequent escalation into a global pandemic has resulted in the need for swift action in Uganda. The direct effects of the outbreak itself, in addition to the indirect effects of the response measures, have both short-term and far-reaching implications for Uganda's socio-economic development. While the spread of the novel coronavirus is primarily a public health crisis, it also poses a serious risk to the macroeconomy through the halt in production activities, disruption of people's movement, cut-off of supply chains, and other indirect effects which are transmitted through numerous channels. Besides the direct cost associated with human life and suffering, the COVID-19 virus is expected to reduce Uganda's growth potential in the near term. It will also affect employment and livelihoods for many people, due in part to the reduced movement both domestically and internationally.

Households whose livelihoods depend on economic activities within the services sector will be affected severely and the impacts economy-wide will be felt across the population. The analysis in the first component of this policy brief has illustrated that the loss of income resulting from extended virus containment measures, including restriction of movement and shutdown of transportation systems, for up to **four weeks could cause as many as 1.7 million additional Ugandans to fall into poverty**. However, widespread government support through distribution of essential needs, which lessens the consumption burden during a time of income loss, could prevent approximately 786,000 Ugandans from falling into avoidable poverty. **However, if the mitigation measures are further extended to eight weeks, due to difficulty containing the spread of the virus, the pandemic has the potential to increase the poverty rate by approximately 9% and could potentially leave 3.6 million additional Ugandans in poverty. The middle class will also be negatively impacted, with approximately 9% of the middle class at risk of falling into income insecurity or poverty.** This, of course, is if Government does not intervene to support households and scale up food distribution and other immediate household support measures beyond the small group identified currently.

In addition to the short-term effect, the simple and rapid analysis in this policy brief has also illustrated that the COVID-19 outbreak is expected to have medium- to long-term effects on Uganda's development objectives into 2030, including progress across all SDGs. As indicated in the analysis, coronavirus and the efficacy and adequacy of Government response will determine the nature and severity of these long-term effects. If the Government acts without mobilizing external funds, using its own resources reallocated from the existing resource envelope, Uganda's progress on several SDGs could be reduced. The SDGs that will be potentially impacted negatively are **poverty, reduction of hunger, decent work and economic growth, industry and**

infrastructure, and inequality by 2030. This is due to the massive and economy-wide effect of the pandemic and the need for measures to control the spread of the virus that ultimately have multisectoral implications. It can also be attributed to the fact that reallocation of funding to address this public health emergency, if taken from the existing resource envelope, will be drawing funds away from those already intended to help further other development objectives.

For example, banning the use of public transport (and private transport, as of March 30, 2020), requiring social distancing, temporarily banning the sale of non-food items in markets, and acquiring the medical supplies necessary to contain the spread of the virus are all necessary and commendable measures but equate to enormous economic disruption. Despite the unclear timeline for the length of these measures, the economic disruption could, according to the findings of this assessment, continue to effect Uganda and its development performance well into 2030. This is largely due to the multiplier effect of reallocation of resources away from major growth promoting sectors such as infrastructure. It is clear that SDGs 1, 2, 8, 9, and 10 will be severely affected throughout the Decade of Action by the coronavirus pandemic and subsequent response in Uganda.

On the other hand, if Government of Uganda has access to additional resources in addition to its own, and spends these mobilized funds either only in the health sector or distributed to both health and economic stimulus, the potential negative impact of COVID-19 on SDG progress could be cushioned. Further analysis is necessary to determine whether the latter scenario, whereby Government uses a more balanced approach in its response – using the external resources for both health and economic stimulus – provides an optimal result for SDG progress.

Through this analysis, it is thus evident that Uganda thus has a potential opportunity to cushion the blow of this unprecedented health emergency and prevent progress towards the achievement of SDGs from being derailed.

4.1 Policy Recommendations

Importantly, as of March 20, 2020, the Government of Uganda has engaged with International Financial Institutions (IFIs) to actively use the fiscal policy adjustments identified in the three scenarios above, including the mobilization of 5.7% of GDP. This action by the Government is not only important to save lives, but also to address the impending decline in economic output and subsequent loss of GDP growth. **To maintain this momentum and strengthen the Government response to COVID-19, the following policy recommendations are given:**

- A. Control the spread of the virus in the shortest time possible to reduce the negative impact of the pandemic on the lives of Ugandans and the economy. Effective, swift measures will help to contain the pandemic impact, in terms of both loss of lives and morbidity but also to reduce the time it takes to re-establish normalcy in economic and social development activities.** Furthermore, **acting now and effectively** will help reduce the impact on medium- and long-term on SDGs, particularly poverty, hunger, health, and inequality.

Specific actions include:

- Government should **increase spending for immediate health-related expenditures such as supplies including masks**, gloves, other personal productive equipment, in addition to ICU beds (as Uganda currently has only 55 functional ICU beds, resulting in approximately 1.3 ICU beds per million Ugandans³⁰) and ventilators.
- Large-scale testing is necessary to address the pandemic and treat the sick. Without this, the economic and social impact is likely to be prolonged and compound the problem. Innovative approaches could be used such as applications of artificial intelligence in high risk/high traffic sites to enhance COVID-19 detection efficiency, while protecting medical staff and general public from cross-infections.
- Ensure that some of this health sector budget reallocation is also earmarked to support non-coronavirus health concerns, from basic to emergency healthcare.

B. Scale up existing social protection programmes and re-purpose them to protect the most vulnerable such as the elderly, youth, poor, women, people with HIV/AIDS. These protection measures should be guided by existing protocols to enable rapid scaling and re-purposing. In order to finalise a rapid targeting approach, immediate mapping of existing social protection programmes and their scaling up potential is critical. This should be complemented with rapid assessment by Local Government to identify the most vulnerable. For the poorest Ugandans, who rely on public transportation and economic activity in markets, and who do not have savings, temporary safety nets are critical.

Social protection measures which could be implemented for the COVID-19 response to support vulnerable Ugandans include:

- Social Protection Task Force as part of the OPM coordinated platform should work closely with Ministry of Gender, Labour, and Social Development to identify a **costed rapid Social Protection plan**, working with CSOs, LGs and other players.
- **Scale up the ongoing food and necessities** support for most vulnerable. The number currently supported.
- **Establish a physical and automated platform for coordination and resource mobilization for support to the poor** and the most vulnerable groups affected by COVID-19-related lockdown.

³⁰ Atumanya et al., 2020.

- Household income support **using mobile money transfer**. Close to 78% of the Ugandan population has mobile money access.
- **Paid leave support** households who are working on formal sector.
- **Decreasing interest rates** and increasing access to loans and financial services. Bank of Uganda effort to reduce interest rates is a step in the right direction, and this should be complemented by commercial banks offerings to reduce interest rates for businesses.
- Enact measures to **prevent price gauging** for food and necessities.

C. Digitalize food supply chains and work with the private sector on food supply. This should start with the staple foods to avoid increase in food prices arising from disruption in movement. Food security in Uganda and east Africa countries has already being negatively affected due to the outbreak of the locus what has impacted the East African region food security situation. Complementing the social protection measures, government should explore potential of digitalising supply chains as physical markets are increasingly under pressure due to the lockdown measures that are institutionalized to combat the spread of the virus. While there are no indications regarding the timeline for the lockdown, which largely depends on success in controlling the spread of the virus, the lockdown period could be prolonged.

Specific actions include:

- Work with the private sector to ensure the country has an adequate food supply. **A rapid assessment of food supply in the country is necessary, and a coordinated effort between public and private actors is needed to protect the food supply chain.**
- Specifically, mapping of the supply chain actors within specific areas should be done and it will be necessary to link these actors via digital platforms such as mobile.
- Work with East African Ministry and commission to ensure smooth flow of goods and services – especially food.

D. Protect basic service delivery. Support the respective ministries, agencies and private sector to ensure Ugandans have access to **basic social services, including water, electricity and health services** in this difficult time. Utility companies providing services should work together to accommodate the provision of service in this period.

- Government should work with **utility companies to reduce the burden of the households in paying bills while getting to work is increasingly difficult, particularly for those in the informal sector. A long-term payment scheme**

should be identified for households that could utilize mobile systems as advance credit for households to continue have access to basic social services.

- Prioritize the most important government agencies and ministries to provide electricity, water, etc., to benefit from e-governance platforms.
- Work with the private sector on innovative ways to ensure basic services to cater for the most poor and vulnerable, for example as a public-private partnership (PPP).

E. Work with International Financial Institutions to avoid spill over effects of the COVID-19 response to the wider economy, through the financial sector as well as other transmission channels. The COVID-19 crisis is truly unprecedented and requires unprecedented action. The response, as described in this brief, has the potential to create complex challenges into the medium and long terms. It is important to note that maintaining macroeconomic and financial sector stability is key while fiscal policy could play a major role in stimulating the economy. In this regard, **immediate support both technical and financial to the authorities is needed to design appropriate fiscal and monetary policy response taking into account Uganda's debt sustainability.**

Specifically, the following are key activities to take forward:

- Work with National Planning Authority (NPA) and Ministry of Finance (MoFPED) on how COVID-19 will affect NDPIII assumptions for the next five years and take appropriate action in building the resilience of the economy;
- Develop comprehensive and coordinated response on both fiscal and monetary policy to avoid uncoordinated and ineffective response. The Bank of Uganda and MoFPED should synchronize and hasten their actions to ensure macroeconomic stability, and financial sector soundness. Central bank has already begun interventions to avoid further undesired depression of the Uganda shilling. While MoFPED also provided for supplementary budget and other interventions.
- To help ensure that the fiscal response plan is effective, a multisectoral team led by OPM should be established and work with the whole of government to respond to direct and indirect but severe economic impacts that could inform next year budget process.
- In addition to the health sector, the most directly affected sectors such as tourism, logistics, and manufacturing should be provided priority to receive fiscal stimulus to protect employment within those sectors. The supply chains should be mapped to link with the appropriate Government response plan.



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