

The economic impact of COVID-19 lockdowns in sub- Saharan Africa



- In brief**
- This brief quantifies the *direct* and *immediate* impact of COVID-19 lockdowns on people's livelihoods in sub-Saharan Africa.
 - Using new data on income streams under lockdowns in developing countries, researchers simulate the effects of containment measures implemented by 32 countries, focusing on school, public transport, and workplace closures. The impact of workplace closures creates the highest economic costs.
 - The simulations suggest an additional 9.1% of the population in sub-Saharan Africa have immediately fallen into extreme poverty as a result of COVID-19, with about 65% of this increase resulting from the lockdowns themselves. 31.8 million people (3.6% of population), including 3.9 million of children under 5, are very severely food deprived at the end of an 8-week lockdown.
 - The lockdowns in sub-Saharan African countries are likely to make the savings of about 30% of the population essentially vanish, removing all resilience capacity to future shocks. If the income shock suffered by urban workers in the informal sector persists beyond the end of the lockdowns, 18 million people could continue to be at risk of severe food deprivation.
 - The poor performance of pre-COVID-19 social protection programmes in developing countries suggests that simply expanding existing programmes will do very little to mitigate the economic impact of COVID-19 and the lockdown measures.

This brief is published as part of the IGC's ongoing response to the economic challenges of COVID-19

Summary

In response to the worldwide COVID-19 outbreak, many countries in sub-Saharan Africa followed the same strategy as high income countries and have implemented strict lockdown measures to contain the spread of the virus. Some countries have imposed business closures, others have severely restricted public and private transport or [have closed their borders](#). [55% of sub-Saharan countries](#) we could gather data for have ordered businesses to close, and a further 17% of them have advised workplaces to close.

While the impact of the global economic crisis on developing countries is the subject of a growing number of studies,¹ there is limited work on the direct and immediate economic effect of containment measures in developing countries. This paper is an attempt to quantify the impact of lockdowns on people's livelihoods.

Building on the results from recent surveys of income streams under lockdowns in developing countries, we make assumptions on the likely impact of containment measures on various sectors in sub-Saharan Africa. We hypothesise that workplace closures are likely to have a severe effect on urban services, manufacturing, and construction. Using household survey data from Rwanda as a benchmark, combined with data from the [International Labour Organization \(ILO\) sectoral employment estimates](#), the latest poverty rate estimates from the [World data lab](#) and the stringency of lockdown measures from the [Oxford COVID-19 government response tracker](#), we estimate the impact of the containment measures on household consumption across sub-Saharan Africa.

We estimate that containment measures in sub-Saharan Africa, in their current form, have pushed an additional 9.1% of the population into extreme poverty. Of the 873 million people living in the sub-Saharan African countries for which we can make a projection, 168 million (or 19.3% of the population) can no longer afford their pre-COVID-19 level of food consumption at the end of an 8-week lockdown. **31.8 million people (3.6%), including 3.9 million of children under 5 years old, are very severely food deprived.** If full lockdowns were extended to all sub-Saharan African countries, 77 million people and 10.9 million children could fall into extreme hunger.

While highly speculative by nature and subject to a large margin of error, this simulation exercise allows policymakers to better grasp the magnitude of the income and consumption shock the lockdowns are likely to impose in sub-Saharan Africa.

1. See for example <https://www.ifpri.org/blog/poverty-and-food-insecurity-could-grow-dramatically-covid-19-spreads> and <https://www.wider.unu.edu/publication/estimates-impact-covid-19-global-poverty>.

About the research

The mechanism driving our results is simple. About 45% of the population in sub-Saharan Africa works in sectors which are likely to be severely impacted by lockdowns. Most of them are in the neighbourhood of the poverty line and live a hand-to-mouth existence (i.e., have very limited savings). A significant income shock pushes them very rapidly into food deprivation.

Our poverty estimates are slightly smaller than the ones coming out of macro-based models issued in the past few weeks. However, three distinctive features of this exercise are worth noting.

- First, this work provides estimates of the likely *immediate* impact of containment strategies on people's livelihoods. The global economic crisis – the main source of the rise in poverty in other models – will probably add another layer of impact to the direct consequences of the lockdowns.
- Second, the simulations allow us to estimate the *additional* effect of the lockdowns on poverty and extreme deprivation relative to a scenario where the uncertainty around COVID-19 still threatens the livelihoods of some segments of the population (albeit to a much lower extent).
- Third, our simulations allow us to measure the depth of the impact on consumption and to quantify not just those who are falling into extreme poverty, but also those who are likely to be severely food deprived.

Long-term effects and the role of social protection

Most worryingly of all, our simulations indicate that an eight-week blanket lockdown in sub-Saharan countries makes the savings of about 30% of the population essentially vanish, effectively removing all resilience capacity to future shocks. If lockdowns were to be implemented in all sub-Saharan countries, about 45% of the population could be left without savings when the lockdowns end.

When markets reopen, the fear and stigma around the virus, as well as the drop in demand due to the lockdowns, will likely keep the income flow of urban dwellers in the informal sector significantly below its pre-COVID-19 value. And according to our simulations, **this more prolonged income shock could maintain about 18 million people at risk of severe food deprivation.**²

The outcome of the simulations presented so far assume that governments do not increase their support to the most vulnerable; but in many countries, governments have now expanded [cash transfers](#) or [food distribution programmes](#). However, the coverage and targeting of pre-COVID-19 social

2. The impact of the virus on individuals suffering from pre-existing diseases and health conditions prevalent in sub-Saharan Africa, such as chronic malnutrition, is still unknown.

protection programmes in developing countries are extremely low. Less than 16% of individuals receive social assistance from the state and only 24% of those who receive this support are in the bottom 20% of the income distribution.³ As such, these numbers suggest that simply expanding existing social assistance programmes will do very little to mitigate the economic impact of COVID-19 and the lockdown measures in sub-Saharan Africa.

Containment strategies for low income countries

The benefits of lockdowns as a containment strategy for COVID-19 are still unknown. In high income countries, they have significantly reduced the number of hospital admissions, patients in intensive care, and deaths from the virus. However, these benefits may be very different in sub-Saharan Africa, given the proximity in which [most poor urban households live](#). In Europe, lockdowns have also allowed policymakers to buy time and put in place strategies that would allow them to contain the spread of the virus while promoting the recovery of economic activity. These strategies often rely on a massive expansion of testing capacity, as well as tracking, tracing, and monitoring the rates of infection in different parts of the country. In countries with more limited resources, it is unlikely that similar strategies can be put in place in a matter of weeks. Thus, there is a need to develop a policy response that is adapted to the challenges faced by low income countries. The IGC has released [a policy guidance note](#) to highlight priority decisions to manage the health and economic crisis.

The exact mortality rate of COVID-19 is still unknown,⁴ as testing capacity worldwide is still limited and potential risk factors specific to sub-Saharan Africa, such as malnutrition, are yet to be documented.

However, even making conservative assumptions on the mortality rate, the magnitude of the results from this simulation exercise suggest that blanket lockdowns imposed in low income countries to contain the spread of the virus, if unmet by a massive national and international economic response, may put even more people at risk of dying than the unmitigated spread of the virus itself.⁵

This brief proceeds in four steps. We start by outlining our hypotheses mapping the different forms of lockdowns to income shocks, drawing on the findings from survey data collected in countries which have imposed full lockdowns. We then proceed to the main simulation exercise and consider

3. See ASPIRE data: <http://datatopics.worldbank.org/aspire/>

4. See [Barnett-Howell and Mushfiq Mobarak \(2020\)](#) for an attempt at estimating the mortality rate of COVID-19 in low income countries.

5. A legitimate counterargument to this point is that social distancing would occur irrespective of the government-imposed lockdowns and would reduce income in urban services and manufacturing as well. However, in absence of strong government restrictions on closures, firms and sellers may find ways to adapt and limit the spread of the virus, reassuring workers to come to work and consumers to go to markets. In the simulations presented in this paper, we compare the impact of the lockdowns to a possible counterfactual with no containment strategy.

several counterfactuals that may guide policy decisions on which forms of lockdowns to impose. Next, we consider how lockdowns could still impact income and consumption when they end. Finally, we put the simulation results in perspective and compare the magnitude of the support needed to the current coverage of social protection programmes in sub-Saharan Africa.

Mapping different forms of containment strategies to income shocks

Income shocks under lockdowns

We group sectors according to how likely they are to be impacted by lockdown measures. Specifically, we consider three containment strategies: school, public transport, and workplace closures.⁶ We hypothesise that school closures affect mostly the income of teachers, but only in private schools for which salary payments depend on fees collected by the school. Public transport closures only impact those who commute to work using buses or trains. Workplace closures primarily impact those working in urban services such as retail, transportation of goods and people, accommodation and restaurant services, manufacturing, and construction. We posit that the lockdown measures do not have an impact on the income of farmers who own their land, but only affects daily laborers, which we estimate to be around 5% of those working in agriculture, based on survey data from several countries in sub-Saharan Africa.

Because the exact magnitude of the income shock for those working in these sectors is still unknown, we build on data collected so far, in particular a recent [phone survey collected by BIGD](#) in the early days of the lockdown in Bangladesh, to make assumptions for this simulation exercise. This survey, along with a few others,⁷ documents a 70% income drop for the urban poor on average. Table 1 below reports our hypotheses on the average income shock for each sector in the economy. Empty cells correspond to no impact on income. Most of the impact stems from workplace closures and is concentrated in the manufacturing and related sectors as well as urban services, both in terms of the number of people impacted and the magnitude of the shock. While the exact benefit in terms of containment of these different measures is unknown, workplace closures, because they affect the highest number of people, are likely to impose the highest economic cost.

6. Containment strategies typically also impact other forms of restrictions such as international travel bans or bans on public gatherings, but these are less likely to have an impact on the economic activities of the poor.

7. See also the [Hrishipara diaries](#) for concurring evidence in Bangladesh and this [report](#) for India. BRAC and FDS have also conducted surveys in Uganda over the past few weeks, with very similar outcomes.

“... blanket lockdowns imposed in low income countries to contain the spread of the virus, if unmet by a massive national and international economic response, may put even more people at risk of dying than the unmitigated spread of the virus itself”

Table 1: Mapping different forms of lockdowns to income shocks

	Agriculture	Manufacturing, construction, and utilities	Urban services	Education	Other sectors
ISIC rev4 codes	A	B, C, D, E, F	G, H, I, J, K, L, M, N, R, S	P	O, Q, T, U
ILO estimates employment share in sub-Saharan Africa	49%	12%	32%	3%	4%
School closures				50% of teachers working in private schools (around 15%) suffer a 50% drop in household income on average	
Public transport closures	50% of those commuting to work by public transport (28% in urban areas, 4% in rural areas) can no longer go to work. Their household income drops by 70% on average.				
Workplace closures	5% of households (daily laborers) suffer a 50% drop in household income on average	On average, 60% drop in household income (except those working in food manufacturing)	On average, 70% drop in household income (except those working in food retail)		

What is the counterfactual?

The table above summarises the income shock under lockdowns in different sectors. However, even in the absence of containment measures, the spread of the virus would likely impact people’s income flows. Developing assumptions for this scenario is even more challenging. Presumably, in the early weeks of the outbreak in each country, people would likely be frightened by proximity, might take their children out of school, hesitate to come to markets, etc. This would also affect the livelihoods of many people. We posit that without lockdowns, the income shock would be smaller for urban services. In other sectors, the income shock would be the same but affect a smaller fraction of households.

Table 2: Income shocks in the absence of lockdowns

	Agriculture	Manufacturing, construction, and utilities	Urban services	Education	Other sectors
No containment strategy	1.5% of households (daily laborers) suffer a drop in household income of 50% on average	20% of households suffer a 60% drop in income (except those working in food manufacturing)	On average, 20% drop in household income (except those working in food retail)	15% of teachers working in private schools (around 15%) suffer a drop in household income of 50% on average	

In the simulations presented below, we compute both the total number of people affected by COVID-19 for countries that have or have not imposed the lockdown and the additional number of people affected by the lockdowns, i.e., the difference between the number of people affected by the actual lockdowns put in place by countries in sub-Saharan Africa and the number of people affected under the counterfactual scenario of no COVID-19 containment.

Estimating the impact of lockdowns on livelihoods

Household income

We use Rwanda's Fifth Integrated Household Living Survey (EICV5) from 2016-17⁸ to forecast the impact of the income shocks described above on households' income, categorising them according to the main occupation of the household head. Using Rwanda's income distribution as a benchmark, we extend these simulations to other sub-Saharan African countries. We adjust the relative importance of sectors in the economy using the most recent [ILO employment estimates](#) by ISIC codes and use the estimates of the [current poverty headcount ratio](#) from the World data lab to rescale the overall income and consumption distributions in each country.⁹ We then project the impact of the same income shocks according to the form of lockdowns put in place (school, public transport and workplace closures) by each country.

Impact on consumption

Income shocks do not necessarily translate into large expenditure shocks, at least in the short-run, as many people would rely on savings to smooth out their consumption. As such, a necessary first step to forecast the impact of lockdowns on consumption is to estimate the shape of the savings' or liquid assets' distribution. While data on cash savings is extremely rare, we use data on institutional savings to estimate the shape of the saving to weekly consumption ratio for the highest per capita consumption decile. We find that the ratio follows a power law,¹⁰ consistent with the observation on wealth observed in high income countries. We also find that the distribution of livestock assets is the same for the lowest consumption deciles in Kenya.

While the consumption function of a household is the solution of a dynamic problem which depends on their expectations about the length of the lockdown and their income post-lockdown, we make here very simple assumptions about the way consumption evolves over time during the lockdown. We hypothesise that households prioritise basic food and non-food consumption over the payment of rent when they need to cut consumption. We also make the hypothesis that consumption of other durables shrinks down to zero during the lockdown. Finally, we assume that households consume a slightly higher share of their savings per week at the

8. We use data from Rwanda as it is one of the most recent household surveys collected in sub-Saharan Africa which had all the variables required for this simulation exercise.

9. As such, the main assumption for extending to other countries is that the shape of the income distribution by sector is roughly the same in other countries as in Rwanda. For countries for which the poverty rate is in the neighbourhood of that in Rwanda, this is probably a correct first order approximation. For countries where the poverty rate is substantially lower than in Rwanda, the outcome of this exercise is likely to significantly underestimate the impact of the lockdown on people's consumption.

10. With a coefficient around 1.

beginning of the lockdown than at the end.¹¹

Results

In the table below, we can only forecast the impact of the lockdowns for the countries for which we could collect data from the [Oxford COVID-19 government response tracker](#) on the types of lockdowns put in place. The cumulative population of these countries is 885 million.¹²

Our estimates suggest that an additional 9.2% of the population in these sub-Saharan countries have immediately fallen into extreme poverty, with about 65% of this increase resulting from the lockdowns themselves. At the end of an 8-week lockdown, close to 20% of the population can no longer afford their pre-COVID-19 consumption, with more than half of that figure due to the containment measures. Most worrying of all, 3.6% of the population or 31.8 million people can no longer consume 50% of the food poverty line, our indicator for extreme hunger, with about 80% of that impact directly attributable to lockdown measures.

We also estimate the impact of COVID-19 containment strategies on two specific sub-populations: children under 5 years old and single mothers. Undernutrition typically has drastic and long-lasting effects on young children.¹³ Our simulations indicate that about 3.9 million children under 5 years old are at risk of extreme hunger. We consider single mother households to be particularly vulnerable to the economic consequences of COVID-19, as they are more likely to be living in poverty at baseline¹⁴ and typically live off a less diversified income stream which should make them less resilient to shocks. According to our simulations, 280,000 single mother households are at risk of extreme hunger in sub-Saharan Africa.

11. Specifically, we assume that if households cannot afford buying the usual amount of food, they use 1/6 of their savings in the first week of the lockdown and 1/12 of their savings by week 8 of the lockdown.

12. The countries included are: Angola, Botswana, Burkina Faso, Cameroon, Cape Verde, Chad, Djibouti, Ethiopia, Gabon, Gambia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sierra Leone, South Africa, South Sudan, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

13. See this [WHO Fact Sheet](#) and this [UN policy brief](#). Several studies also document the impacts of aggregate income shocks on infant mortality rates. The 2008-2009 financial crisis, for instance, is estimated to have led to 28,000-50,000 excess infant deaths in sub-Saharan Africa. (Friedman, J., & Schady, N. (2013). [How many infants likely died in Africa as a result of the 2008-2009 global financial crisis?](#) Health Economics, 22(5), 611-622.)

14. According to analysis of household survey data from 89 countries summarised in this [UN Women blogpost](#).

Table 3: Impact of containment measures in sub-Saharan Africa¹⁵

Population in sample: 873 million	Due to lockdowns and the impact of COVID-19	Due to lockdowns alone
Additional % of the population falling below the poverty line	9.1% (80.0 million)	6.1% (53.3 million)
% of the population reducing food consumption	19.3% (168.2 million)	11.0% (96.0 million)
Additional % of population consuming less than the food poverty line	4.4% (38.4 million)	3.3% (28.8 million)
Additional % of population consuming less than 50% of the food poverty line	3.6% (31.8 million)	2.9% (25.3 million)
Number of children below 5 years old consuming less than 50% of the food poverty line	3.9 million	3.4 million
Number of single mother households consuming less than 50% of the food poverty line.	280,000	240,000

Alternative scenarios

We extend the simulation exercise presented above to estimate the income and consumption outcomes of people if all countries in sub-Saharan Africa imposed an eight-week lockdown (Column A), with school, public transport and workplace closures. As stated in the introduction, only 55% of countries in sub-Saharan Africa have imposed workplace closures, which create the highest economic costs in our simulations. Under a full lockdown imposed on all sub-Saharan Africa, an additional 17% of the population would be pushed into extreme poverty. Between 7-8% of the population (70-

80 million people) would not be able to consume food worth more than 50% of the food poverty line.

The simulations so far have assumed that the agricultural sector is mostly unaffected. In column B, we report the results of a simulation where 60% of farmers see their income (i.e., not their production for their own consumption) drop by 30% due to the lockdown. This case scenario is implicitly assuming that lockdowns could prevent farmers from selling a fraction of their products to markets, due to disrupted trading and value chains. To date, we are unaware of any study documenting the impact of COVID-19 on farmers' income, so we just formulate this case as a possible scenario and run a simulation to document the impact these disruptions could have on people's livelihoods. For simplicity, we do not assume that these disruptions increase food prices for urbanites, as some farmers sell their cash crops to exporters rather than in local markets and coming up with estimates of how these disruptions would impact food prices would be even more speculative. As such, the numbers reported in column B are probably a lower bound on the number of people who would be food deprived should the agricultural sector be disrupted. Under this scenario, we estimate that almost 25% of the sub-Saharan population would be pushed into extreme poverty and 9.4% into extreme hunger, with, by assumption, most of this impact coming directly from the lockdown itself.

In column C, we simulate a scenario where schools and public transport are closed in all sub-Saharan Africa, but we assume workplace closures are geographically delimited and only applied to 20% of the population. This is to reflect a containment strategy that is limited to the areas in the country where COVID-19 is most present. In this scenario, we revert to the case where the lockdown has a limited impact on agriculture. As these simulations demonstrate, the impact of a geographically delimited lockdown is clear. In our simulations, workplace closures are the component of the lockdowns that are hurting livelihoods the most. As such, limiting them to 20% of the country has a much smaller impact on extreme poverty and extreme hunger.

15. The simulations country by country can be made available by the authors upon request.

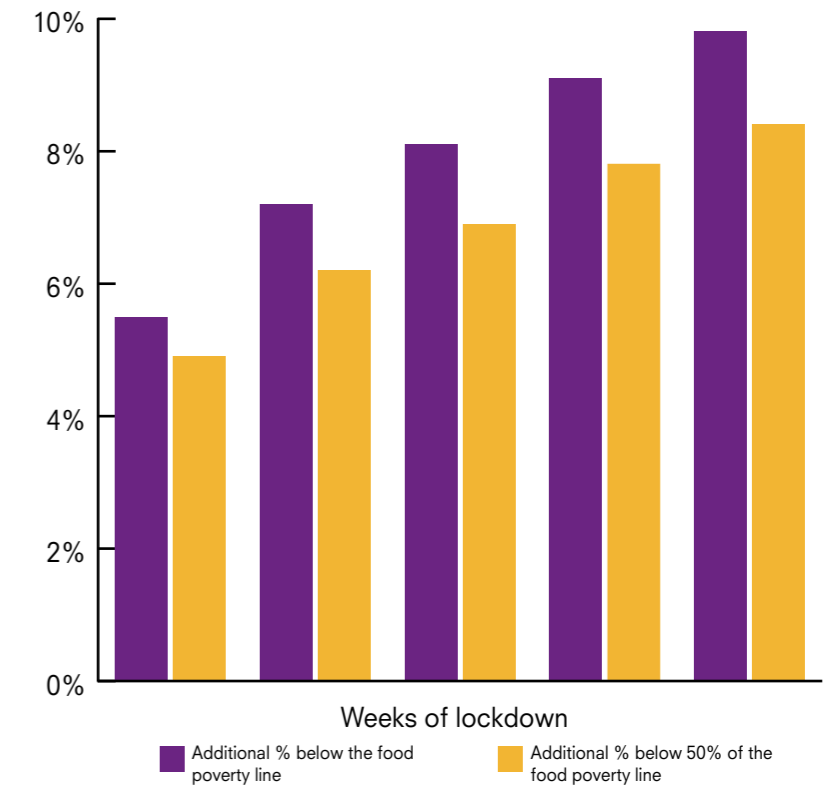
Table 4: Alternative scenarios for all sub-Saharan Africa

Total population in sample: 993 million	All countries in sub-Saharan Africa impose full lockdown (A)		All countries in sub-Saharan Africa impose a full lockdown which also affects agriculture (B)		All countries in sub-Saharan Africa had or were to impose a lockdown geographically delimited to 20% of the country (C)	
	Due to lockdowns and the impact of COVID-19	Due to lockdowns alone	Due to lockdowns and the impact of COVID-19	Due to lockdowns alone	Due to lockdowns and the impact of COVID-19	Due to lockdowns alone
Additional % of the population falling below the poverty line	17.5% (173.8 million)	14.4% (143.0 million)	24.8% (246.3 million)	21.2% (210.5 million)	5.4% (53.6 million)	2.4% (23.8 million)
Additional % of population consuming less than the food poverty line	9.1% (90.4 million)	8.2% (81.4 million)	11.6% (115.2 million)	10.5% (104.3 million)	2.4% (23.8 million)	1.3% (12.9 million)
Additional % of population consuming less than 50% of the food poverty line	7.8% (77.5 million)	7.0% (69.5 million)	9.4% (93.3 million)	8.7% (86.4 million)	1.8% (17.9 million)	1.1% (10.9 million)
Number of children below 5 years old consuming less than 50% of the food poverty line	10.9 million	10.1 million	15.3 million	14.6 million	2.43 million	1.65 million
Number of single mother households consuming less than 50% of the food poverty line	970,000	930,000	1.9 million	1.8 million	150,000	100,000

Length of lockdowns

In this final round of simulations, we estimate the number of people falling below the food poverty line or below 50% of the poverty line as a function of the length of the lockdown in weeks. For simplicity, we run these simulations under the scenario where all countries in sub-Saharan Africa were to impose a full lockdown. Figure 1 below presents estimates of the fraction of people impacted by COVID-19 and the lockdown.

Figure 1: Lockdown impact as a function of its duration



“Thus, extending lockdowns by two weeks translates into two additional weeks of extreme hunger for millions of people who have been severely food deprived since the beginning of the lockdown”

We show that a two-week lockdown would already push 5.5% of under the food poverty line and 4.9% of the population into extreme hunger. However, one should not read from these results that increasing a lockdown from eight to ten weeks has very little effect. These simulations show that even under a very short lockdown, the number of people who immediately fall under extreme food deprivation is quite large. Thus, extending lockdowns by two weeks translates into two additional weeks of extreme hunger for millions of people who have been severely food deprived since the beginning of the lockdown.

In all the simulations done so far, we have assumed that the duration of the lockdown is known to households ex ante. If a lockdown is first announced for four weeks and then extended for another four weeks, the impact on household consumption is going to be much higher than if an eight-week lockdown is unannounced from the start. The intuition is simple, if

households expect their income to increase in four weeks' time when the lockdown is supposed to be lifted, in a situation of extreme deprivation, they will use a lot more of their savings in these four weeks than if the lockdown is expected to last eight weeks in total. As such, a succession of lockdowns constantly extended for short periods of time will have a more drastic impact than a longer but known ex ante lockdown.

Post-lockdown estimates

Full lockdowns to contain the spread of COVID-19 cannot last forever. In fact, at the time of writing, many countries in sub-Saharan Africa have already announced a date at which the lockdowns will end or have already eased the stringency of the containment measures.

The direct impact of the lockdown presented above is already dramatic, but its short length may allow affected households to support basic livelihoods with help from family and friends or through borrowing. Additionally, governments and NGOs have been distributing food to the population during strong containment measures.

However, the worst may be yet to come in the months following the lockdowns. Our simulations show that across sub-Saharan Africa, following the containment measures that have been put in place, about 30% of the population would have no savings at all (45% if lockdowns were to be imposed in all sub-Saharan African countries), essentially inhibiting any resilience capacity to future income or other unexpected shocks (including health-related issues).

Fuelled by the very strong containment measures implemented by their governments and news reports worldwide, many people may still fear being infected by the virus and may reduce their consumption of non-food items or non-essential services that require face-to-face interactions, even when the lockdown ends. Additionally, the income drop due to the strong containment measures will likely cause a significant drop in demand. Firms which have not been able to operate for several weeks might also not be able to bring all their workers back on payroll immediately. We thus assume that in the medium-run, the income drop will be larger in countries that have imposed lockdowns than in those that have not imposed containment measures.

Based on these assumptions, we simulate the number of people that would remain in severe deprivation when lockdowns end in sub-Saharan Africa. For the countries for which we have data on containment strategies, we estimate that at least 18 million people will remain under severe food deprivation after the lockdown ends, including 2.1 million of children under five years old. If lockdowns were to be imposed in all sub-Saharan African countries, 48.4 million people across the continent would be at risk of extreme hunger.

Table 5: Income shocks post lockdowns

	Agriculture	Manufacturing, construction, and utilities	Urban services	Education	Other sectors
If no containment measure was imposed	1.5% of households (daily laborers) suffer an income drop of 50% on average	20% of households suffer an income drop of 60% (except those working in food manufacturing)	On average, 20% drop in household income (except those working in food retail)	15% of teachers working in private schools (around 15%) suffer an income drop of 50% on average	No impact
If lockdown was imposed	3% of households (daily laborers) suffer an income drop of 50% on average	40% of households suffer an income drop of 60% (except those working in food manufacturing)	On average, 40% drop in household income (except those working in food retail)	15% of teachers working in private schools (around 15%) suffer an income drop of 50% on average.	No impact

Table 6: Post lockdown impact

	Medium-run post-lockdown impact from the current containment strategies put in place in sub-Saharan Africa		Medium-run post-lockdown impact if all countries in sub-Saharan Africa implement a full lockdown	
	Due to lockdowns and the impact of COVID-19	Due to lockdowns alone	Due to lockdowns and the impact of COVID-19	Due to lockdowns alone
Total population in sample	873 million		993 million	
% of population consuming less than 50% of the food poverty line.	2.1% (18.3 million)	1.2% (10.6 million)	4.82% (48.4 million)	3.93% (39.5 million)
Number of children below 5 years old consuming less than 50% of the food poverty line	2.1 million	1.3 million	7.03 million	5.98 million

These numbers highlight the importance of the post-lockdown strategy in sub-Saharan Africa. Support for the poor will still be critically needed, as it is very unlikely that income streams will go back to their pre-COVID-19 levels. In Eastern Africa, where most cash crops will be harvested in the coming months, keeping food value chains alive should remain a priority for all governments to prevent millions more from risking starvation.

Putting these numbers in perspective

The outcome of the simulations presented above are staggering. However, they assume no government intervention in response. Many countries, whether or not under lockdown, have started extending their [social protection programmes](#) or cash transfers. Some have even distributed food under lockdowns. All these interventions could reduce the number of people affected by the lockdowns.

But the current performance of social protection programmes in sub-Saharan Africa is not particularly reassuring in that respect. The World Bank recently assembled data from household surveys to compute the performance of social protection programmes around the world.¹⁶

First, the coverage of existing programmes is extremely low. Less than 16% of the population in sub-Saharan Africa receives social assistance from the state. Second, these programmes seriously under-perform when it comes to targeting the poor. Only 24% of those who receive a transfer from the state are in the bottom 20% in the income distribution. In other words, an individual in the lowest income quintile in sub-Saharan Africa only has a 4% chance of receiving social assistance from the government in normal times. Even if governments were able to significantly improve the targeting of the poor under COVID-19, we can reasonably expect that a large fraction of those in extreme deprivation will not receive the support they need. Reflecting on the results of the simulations presented above, taking a conservative estimate that about half of those below 50% of the food poverty line could receive support from the state, a minimum of 9 million people would be at risk of starvation across sub-Saharan Africa. This figure is more than the cumulative number of [famine victims from the past 40 years](#).

The economic impact of COVID-19 and the lockdowns implemented in response will be long lasting. A growing literature on the impact of individual-level income shocks (even if still scarce for sub-Saharan Africa) is largely consensual that infant and child health can severely suffer from

16. See ASPIRE data: <http://datatopics.worldbank.org/aspire/>. The data covers the 1998-2014 period but is useful to get a sense of the economic mitigation we can reasonably expect from existing social protection programmes in Africa.

negative shocks to parental income.¹⁷ Economic conditions in early childhood have also been identified to influence adult life expectancy.¹⁸ While evidence from high income countries suggests that young children are at low risk of severe health impacts from COVID-19, we are unable to extrapolate these numbers to sub-Saharan Africa - as we do not know whether children are more likely to die from the virus when they suffer from chronic undernutrition or other health conditions specific to sub-Saharan Africa. However, what comes out of this study is that the economic crisis caused by the virus and the associated containment measures will likely put all generations at risk, including the youngest.

17. See for example Maccini, S., & Yang, D. (2009). Under the weather: Health, schooling, and economic consequences of early-life rainfall. *American Economic Review*, 99(3), 1006-26; Banerjee, A., Duflo, E., Postel-Vinay, G., & Watts, T. (2010). [Long-run health impacts of income shocks: Wine and phylloxera in nineteenth-century France](#). *The Review of Economics and Statistics*, 92(4), 714-728; and Lindo, J. M. (2011). Parental job loss and infant health. *Journal of Health Economics*, 30(5), 869-879.

18. Van den Berg, G. J., Lindeboom, M., & Portrait, F. (2006). Economic conditions early in life and individual mortality. *American Economic Review*, 96(1), 290-302.

“Even if governments were able to significantly improve the targeting of the poor under COVID-19, we can reasonably expect that a large fraction of those in extreme deprivation will not receive the support they need”