The cost of doing nothing:
The price of inaction in response to the COVID-19 crisis
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Introduction

The global crisis induced by the COVID-19 pandemic is unprecedented in nature. Starting out as a health crisis, the pandemic has become a threat to global prosperity and multilateralism. Keeping in mind the fundamental uncertainty about the trajectory of the pandemic and the economic forecasts, there is common consensus that the global economy will experience the deepest recession since the Great Depression and the broadest collapse in per capita income since 1870. As of 24 June, the IMF projects a -4.9 percent contraction in global GDP in 2020, followed by a protracted and uneven recovery due to the persistence of the shock.

The extent to which these downturns are synchronised and spill over across borders makes this crisis relatively unique. The OECD and the G20 countries have responded with a large stimulus package estimated at over $11 trillion (approximately 10% of world GDP). In comparison, the cost of protecting the most vulnerable 10 percent of the world from the worst impacts of COVID-19 today is an additional $90 billion – less than 1 percent of the current stimulus package. Relative to high-income countries, "whatever it takes" is a fundamentally different concept in low-income countries due to limited forex reserves, central bank dollar swap lines and fiscal space. Strong multilateral coordination is required to meet the shortfall in financing and support the strengthening of health, education and other social safety nets – now, rather than later.

It is better, cheaper and more dignified to frontload responses to the pandemic and the secondary impacts. Waiting and then reacting when the full impacts are already visible would be a more expensive proposition. Delaying action not only shifts the burden of payment to the future, but the price of the response will also exponentially increase. Acting now to mitigate the impact saves money in the long term.

The cost of acting now may seem high. However, there is reason to be optimistic that additional resources can be generated, even in the current circumstances. After the financial crisis of 2008-2009, fundraising for UN coordinated humanitarian appeals increased by more than 40 percent by 2010. In addition, the Heavily Indebted Poor Countries (HIPC) Initiative and related Multilateral Debt Relief Initiative (MDRI) programmes had relieved 37 participating countries of more than $100 billion in debt by 2018. These initiatives were in addition to Official Development Assistance (ODA), currently amounting to more than $150 billion per year. They were the result of human generosity and empathy, but also a calculation of national interest in the donor countries.

This note constructs a taxonomy and provides estimates of the direct and secondary costs arising from not acting now to effectively contain the virus and mitigate the secondary impacts. Where relevant, the analysis shines a spotlight on a subset of 32 low-income countries, where a high share of the world's most vulnerable populations is located.

The taxonomy of costs includes the following categories:

1. **The health cost of failing to contain COVID-19 domestically**

    1.1. **The human cost of uncontained COVID-19 infections:** Left unmitigated, the COVID-19 virus could infect up to 640 million people and kill 1.67 million of the world's most vulnerable populations in 32 low-income countries. The direct medical costs of hospitalising 2.2 million patients in critical care beds could amount to an estimated $16.28 billion.

    1.2. **The opportunity health cost of addressing the COVID-19 pandemic:** At least 2 million preventable deaths could occur as a result of disrupted healthcare and resource diversion without appropriate mitigation.

2. **The spill-over costs of failing to contain COVID-19 internationally**

    The world is fundamentally interconnected. An unmitigated COVID-19 outbreak in LMICs could lead to a second wave of infections in 2020, which would result in an additional output loss of $1.1 trillion in OECD countries. If a second outbreak were to occur in early 2021 instead, the OECD countries could experience output loss of approximately $5.6 trillion, relative to the alternative scenario of recovery. It in the national interest of high-income countries to invest in containing the virus in the rest of the world.

3. **The economic costs of protracted containment measures on education**

    A protracted school shutdown of five months could generate learning losses that have a present value of $10 trillion globally.

4. **The human and economic costs of increased poverty and hunger**

    4.1. **Loss of jobs and income:** 80 percent of approximately 2 billion informally employed workers worldwide are profoundly hit by containment measures; their earnings could decline by 82 percent in low and lower-middle income countries.

    4.2. **Increases in level and depth of poverty:** Inducing the first rise in poverty since 1990, the COVID-19 pandemic jeopardises gains in poverty reduction made over the past decade. At least 71 to 100 million could be pushed into extreme poverty under the $1.90 international poverty line. Moreover, approximately 230 million people could become newly poor under the $3.20 poverty line and a further 230 million under $5.50. If no action is taken, these poverty traps are likely to become permanent due to the aggregate nature and sheer size of the shock. The ongoing crisis is likely to erase the progress made on SDG goals in the last five years, amounting to $2.5 trillion in budget costs in terms of health, education and social protection.

    4.3. **Cost of increased food insecurity and hunger**: The number of acutely food insecure will increase by 82 percent (121 million people) by the end of 2020, if no action is taken.

5. **The cost of increased global instability and conflict**

    The COVID-19 pandemic presents one of the largest economic downturns since the Great Depression. The current economic downturn increases the likelihood of a civil war next year by 20 percentage points. The minimum cost incurred during an average civil war is $60 billion.

The real human cost of inaction is avoidable with action now, rather than later.

1. The health cost of failing to contain COVID-19 domestically

1.1 The human life cost of uncontained COVID-19 infections

Left unmitigated, the COVID-19 virus could infect up to 640 million people and kill 1.67 million of the world's most vulnerable populations in 32 low-income countries. The direct medical cost of hospitalising 2.2 million patients in critical care beds could amount to an estimated $16.28 billion.

The human cost of COVID-19 continues to mount, with more than 9.52 million cases confirmed worldwide and more than 478,500 deaths, as of 25 June 2020[1]. The virus has spread to all countries, but the epidemic trajectory varies substantially across regions, as global hotspots shifted from Asia to Europe to the USA to Latin America over time.

95,482 cases and 2,061 deaths attributed to COVID-19 have been reported in 32 low-income countries[2] with a total population of approximately 740 million[3]. While these figures likely contain substantial measurement error due to limited testing, it is clear that the virus has not yet exponentially spread among the most vulnerable within these countries. However, as Europe eases containment measures, cases have been accelerating in low- and middle-income countries (LMICs), particularly in Brazil, India and Russia. The COVID-19 death toll in Latin America currently offsets the decline in Europe and the USA. With increasing number of daily cases worldwide and 1 million new cases each week, the WHO Director-General warns that the "world is in a new and dangerous phase"[4].

In the absence of effective suppression techniques, the virus could infect up to 640 million, killing up to 1.67 million of the world's most vulnerable populations in 32 low-income countries, assuming a R0 of 2.4 and age-specific infection fatality rates[5,6,7]. In the absence of any intervention, COVID-19 would have resulted in 7 billion infections and 40 million deaths globally this year[8]. The stringency of lockdowns to date highlights the extent to which the unmitigated spread of the virus was initially deemed too costly for most countries. However, these strategies are likely to change as governments trade-off the spread of the virus and secondary costs of containment measures.

Mitigation strategies can reduce this burden by a half but would unlikely suffice to prevent health system failure, especially in low-income contexts. Peak demand for critical care beds could exceed supply by a factor of 25 in a typical low-income setting, even with the adoption of

[1] National-level case and deaths data comes from the European Centre for Disease Prevention and Control.

[2] These countries include: Afghanistan, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Congo DR, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Korea DPR, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Niger, Rwanda, Sierra Leone, Somalia, South Sudan, Syrian Arab Republic, Tajikistan, Tanzania, Togo, Uganda, Yemen, and Zimbabwe.

[3] European Centre for Disease Prevention and Control, 25 June 2020.

[4] World Health Organization, "WHO Directory-General's opening remarks at the media briefing on COVID-19," *WHO,* 19 June 2020, https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---19-june-2020.

[5] Patrick Walker *et al*., "Report 12: The global impact of COVID-19 and strategies for mitigation and suppression," *Imperial College London* (23 March 2020), https://doi.org/10.25561/77735.

[6] The age-specific infection fatality rate (IFR) was derived based on data from China. Adjusting for age increases the average IFR from 0.66 to 0.9 percent for the United Kingdom.

[7] Neil Ferguson *et al*., "Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand", *Imperial College London* (16 March 2020), https://doi.org/10.25561/77482.

[8] The burden of COVID-19 within a particular country depends on a host of underlying conditions, such as age, income status, co-morbidities and household composition. As such, these figures should be treated as rough estimates.

mitigation strategies. In sharp contrast, this factor is only 7 in a typical high-income setting. Low-income countries are estimated to have 1.24 beds per 1000 population on average, compared to 2.08 in lower-middle income countries, 3.41 in upper-middle countries and 4.82 beds in high-income countries[9]. Moreover, there are only approximately 3,634 number of ventilators available for a population of 740 million in the 32 low-income countries under consideration. A hefty price of $30,000 to $50,000 per ventilator on the global market means that many low-income countries cannot afford them. In the case that there is an unmitigated spread of the virus, an estimated 11.3 million will need to be hospitalised and 2.2 million will require critical care beds in these low-income countries – far exceeding the current capacity of hospital beds.

Assuming available capacity, the direct medical cost of hospitalising 2.2 million patients in critical care beds amounts to $16.28 billion alone for these 32 low-income countries. Caring for a hospitalised coronavirus patient has been estimated to cost $925 per day or a total of $7400 per patient[10,11], assuming an in-patient requires a hospital bed for eight days[12,13]. This cost includes the expense of using the critical care bed, a specialist team and additional services, such as pathology and radiology. Infected households are more likely to incur out-of-pocket health costs in low-income countries, compounding the risk of poverty. Coverage of social security and protection remains low in many settings. For instance, about a quarter of all households in Nigeria spend 10 percent or more of their total household expenditure on health[14].

Investments in effective suppression techniques (test, isolate and social distance) and preventative care in the form of community health workers are more affordable and worth doing for the long term. In the absence of a vaccine, healthcare demands are best managed with suppression techniques, such as testing and isolating cases and social distancing measures. Assuming a 75 percent reduction in social distancing, effective suppression techniques could reduce estimated infections from 640 million to between 72 and 287 million. Deaths are reduced from 1.67 million to between 200,000 and 780,000 in 32 low-income countries[15]. Multilateral coordination will be essential for the delivery of personal protective equipment and other health needs on an immediate basis before it becomes too late.

In contrast to the daily cost of $925 to treat COVID-19, it costs roughly $140 to educate a community health worker and $15 for hygiene kits[16]. In low-resource contexts, the health costs of the virus are best minimised by strengthening local health systems. Despite the emphasis on

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[9] Walker *et al*., "The global impact of COVID-19".

[10] The South African government agreed to pay a daily fee of R16,000 or $925 for COVID-19 patients that get treated in critical care beds in private hospitals.

[11] Alexander Winning, "South African government, private hospitals agree deal on COVID-19 patients," *Reuters*, 7 June 2020, https://uk.reuters.com/article/us-health-coronavirus-safrica-hospitals/south-africa-government-private-hospitals-agree-deal-on-covid-19-patients-idUSKBN23E0EQ.

[12] Walker *et al*., "The global impact of COVID-19".

[13] Alternatively, Bartsch et al. (2020) estimate that a single symptomatic COVID-19 case could incur a median direct medical cost of $3,045 in the US during the course of the infection alone. This amounts to roughly $349 billion in direct medical costs in these 32 countries over the course of the pandemic. See Sarah M. Bartsch *et al*., "The Potential Health Care Costs and Resource Use Associated with COVID-19 in the United States," *HealthAffairs* 49, no. 6 (April 2020): 927-935. https://doi.org/10.1377/hlthaff.2020.00426.

[14] Mariano Cortes *et al*., "Nigeria in times of COVID-19: Laying foundations for a strong recovery (English)," *Nigeria Economic Update* (Washington, D.C.: World Bank Group, 1 June 2020), https://documents.worldbank.org/en/publication/documents-reports/documentdetail/695491593024516552/nigeria-in-times-of-covid-19-laying-foundations-for-a-strong-recovery.

[15] Walker *et al*., "The global impact of COVID-19".

[16] Hajir Maalim, "Opinion: NGOs are withdrawing from Africa when surge capacity is needed most", *Devex*, 23 June 2020, https://www.devex.com/news/opinion-ngos-are-withdrawing-from-africa-when-surge-capacity-is-needed-most-97528.

treatment centres and number of hospital beds, Ebola was ultimately defeated with the use of community health workers who treated patients locally and fed back information to track the disease[17]. Similarly, in response to COVID-19, community health workers can provide information to shield vulnerable populations, collect data and maintain health interventions that may otherwise be crowded out, such as vaccinations. The maxim that prevention is cheaper than treatment remains relevant in this instance.

1.2 The opportunity health cost of addressing the COVID-19 pandemic

At least 2 million preventable deaths could occur as a result of disrupted healthcare and resource diversion without appropriate mitigation.

By restricting movement and diverting resources away from regular healthcare provision, the annual death toll from HIV, TB and Malaria could nearly double, if no action is taken. A Global Fund Survey covering 106 countries suggests that approximately three-quarters of current HIV, TB and malaria programmes have been disrupted[18]. As a result, AIDS-related and TB deaths would be set back close to 2008/2009 levels respectively, eliminating ten years of progress. Antiretroviral treatment disruption of six months could result in 534,000 additional AIDS-related deaths in a 12-month period over 2020 and 2021 relative to 2018[19]. A conservative lockdown period of three months and recovery period of ten months could induce 525,000 additional TB deaths owing to disruptions to TB services alone[20]. Lastly, a WHO modelling study predicts that 382,000 additional malaria deaths could arise due to cancellations of all planned and 75 percent of ongoing insecticide-treated net distribution and use of antimalarial treatments, jeopardising 20 years of progress[21]. This phenomenon is not new: during the 2014-16 Ebola crisis in West Africa, the breakdown in routine service delivery caused a surge in deaths from malaria, HIV/AIDS and tuberculosis[22], as well as an increase in maternal mortality and stillbirth[23].

For every excess COVID-19 death attributable to an infection acquired during a child vaccination visit, 84 future deaths would be prevented from the time of vaccination to five years of age in LIMCs[24]. Sustaining routine childhood vaccination programmes is critical for mitigating entirely preventable diseases. For instance, more than 117 million children are at risk of missing out on

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[17] Innovations for Successful Societies, "Interview: Hans Rosling," *Princeton University,* 30 April 2016, https://successfulsocieties.princeton.edu/interviews/hans-rosling.

[18] The Global Fund, "Mitigating the impact of COVID-19 on countries affected by HIV, tuberculosis and malaria," (26 June 2020), https://www.theglobalfund.org/media/9819/covid19_mitigatingimpact_report_en.pdf?u=637285811880000000.

[19] "The cost of inaction: COVID-19-related service disruptions could cause hundreds of thousands of extra deaths from HIV", Press release, UNAIDS, 11 May 2020, accessed on 30 June 2020, https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2020/may/20200511_PR_HIV_modelling.

[20] Stop TB Partnership, "The potential impact of the COVID-19 response on tuberculosis in high-burden countries: A modelling analysis," (2020), http://www.stoptb.org/assets/documents/news/Modeling%20Report_1%20May%202020_FINAL.pdf.

[21] World Health Organization, "The potential impact of health service disruptions on the burden of malaria: A modelling analysis for countries in sub-Saharan Africa," (Geneva: World Health Organization, April 2020), https://www.who.int/publications/i/item/the-potential-impact-of-health-service-disruptions-on-the-burden-of-malaria.

[22] Alyssa et al., "Effects of response to 2014-2015 Ebola outbreak on deaths from malaria, HIV/AIDS and tuberculosis, West Africa," *Emerging Infectious Diseases* 22, no. 3 (March 2016), https://doi.org/10.3201/eid2203.150977.

[23] Susan Jones *et al.,* "'Women and babies are dying but not of Ebola': The effect of the Ebola virus epidemic on the availability, uptake and outcomes of maternal and new-born health services in Sierra Leone," *BMJ Global Health* 7, no. 1 (2016), https://doi.org/10.1136/bmjgh-2016-000065.

[24] The current routine childhood immunisation programme prevents approximately 702,000 deaths in children from the time of vaccination until they are five years old (see Kaja Abbas *et al*., "Benefit-risk analysis of health benefits of routine childhood immunisation against the excess risk of SARS-CoV-2 infections during the COVID-19 pandemic in Africa," *medRxiv* (June 2020), https://doi.org/10.1101/2020.05.19.20106278).

measles vaccines as COVID-19 continues to spread, to which about a third of deaths are usually averted[25]. In a similar vein, a study from John Hopkins University School of Medicine estimated that 15 percent reduction in the use of routine health services over a six-month period could lead to an additional 253,000 child deaths and 12,200 maternal deaths in LMICs in the least severe scenario[26].

2. The spill-over costs of failing to contain COVID-19 internationally

The world is fundamentally interconnected. An unmitigated COVID-19 outbreak in LMICs could lead to a second wave in 2020, which would result in an additional output loss of $1.1 trillion in OECD countries. If a second outbreak were to occur in early 2021 instead, the OECD countries could experience output loss of approximately $5.6 trillion, relative to the alternative scenario of recovery. It in the national interest of high-income countries to invest in containing the virus in the rest of the world.

As Europe and the USA emerge from the peak of the first outbreak and ease restrictions, the pandemic is accelerating in a number of LIMCs. The COVID-19 crisis is truly global: viruses do not respect borders, despite best efforts to contain it. Whether the virus returns for a second outbreak in these countries remains an open question. It rests on the effectiveness of containment measures and unknown assumptions about the proportion of the population who have already been infected and the duration of immunity. The fragility of the situation was highlighted by the recent resurgence of domestically transmitted cases in Beijing, the day after the last active COVID-19 case had been discharged, spurring neighbourhood lockdowns, school closures and flight cancellations.

In the current scenario with resurgence of cases in only some countries, global growth is projected at -4.9 percent in 2020, reaching a trough in the second quarter of 2020. This amounts to a loss of approximately $7 trillion. The recovery will likely be protracted and uneven, with growth is projected to strengthen to 5.4 percent in 2021[27].

A second waves of infections later in 2020 could reduce OECD GDP by an additional $1.14 trillion relative to a single-dip scenario. An unmitigated COVID-19 outbreak in LMICs could lead to a second wave of infections in high-income countries and the extension or reintroduction of containment measures, with devastating effects on economies. In response to a second outbreak and renewed lockdowns, the G20 and OECD countries could experience a real GDP contraction of -7.3 and -9.3 percent respectively in 2020, compared to -5.7 and -7.5 percent in the single-dip scenario with no second wave of infections[28]. Using these estimates, a second global outbreak could reduce the OECD GDP by an additional $1.1 trillion in 2020 relative to the current projected

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[25] "More than 117 million children at risk of missing out on measles vaccines, as COVID-19 surges: Statement by the Measles & Rubella Initiative (American Red Cross, U.S. CDC, UNICEF, UN Foundation and WHO," Press release, UNICEF, 13 April 2020, accessed on 1 July 2020, https://www.unicef.org/press-releases/more-117-million-children-risk-missing-out-measles-vaccines-covid-19-surges.

[26] Timothy Roberton *et al.,* "Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: A modelling study," *The Lancet Global Health* 8, no. 7 (July 2020), https://doi.org/10.1016/S2214-109X(20)30229-1.

[27] International Monetary Fund, "World Economic Outlook Update: A Crisis Like No Other, An Uncertain Recovery," (June 2020), https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020.

[28] OECD, "OECD Economic Outlook, Volume 2020 Issue 1: Preliminary Version", (Paris: OECD Publishing, June 2020), https://doi.org/10.1787/0d1d1e2e-en.

scenario. This is equivalent to an additional drop in GDP per capita of $840 relative to a single-dip scenario (from a baseline of $46,644 in 2019)[29].

If a second major global outbreak takes place early in 2021 instead, world output could contract by a further -4.9 percent, according to IMF simulations. This amounts to a global output loss of $13.9 trillion compared to the alternative scenario where the world experiences positive growth based on current projections. A crude estimate using estimates for advanced economies suggests that the OECD would experience output loss of $5.6 trillion. A second global outbreak and the resulting containment measures would be devastating for the protracted recovery to the first outbreak. The second outbreak is assumed to cause further scarring to the supply side of economies in the form of increased bankruptcies, (temporarily) slower productivity growth and increase in trend unemployment. The IMF assumes that the additional supply-side scarring will result in only partial correcting of activity in 2022, with global output 3.3 percent below the baseline scenario above.

It is important to stress that substantial uncertainty surround these scenarios. It remains to be ascertained whether a second global outbreak would occur and if so, its timing and the level of negative impact on future economic activity. For instance, the second outbreak could take place later in 2020 or early in 2021. Nevertheless, the OECD has termed a single- and double-dip scenario to be "two equally probable scenarios"[30]. Moreover, if there is an even greater tightening of financial conditions than assumed, the overall macroeconomic effect for emerging markets is likely to be amplified. Nevertheless, what is certain is the extent of our global interdependency and the need to end the health emergency in all countries in order to guarantee the end to the crisis in any given country.

Containing the virus is a collective endeavour and a global public good. Limiting the outbreak in poorer countries is in the national interests of richer countries. However, tough lockdown measures have proven unjustifiably costly in low-income countries, with 80-90 percent of economies participating in the informal sector. In order to minimise the spread of the virus, low-income countries need the fiscal space to build up their health systems and capacities and improve their social safety nets. Multilateral collaboration is also essential for increasing the limited global supply and access to vital medical and testing equipment.

3. The economic costs of protracted containment measures on education

A protracted school shutdown of five months could generate learning losses that have a present value of $10 trillion globally.

Failing to contain the virus in LMICs may require the extension or reinstatement of extremely costly containment measures. These containment measures have immediate short-term effects on employment and access to health and education, with enormous spill overs on international trade. Even in the absence of formal restrictions, voluntary social distancing is likely to take place as people limit contact and interactions to avoid contamination. Failing to contain the virus could mean that the following temporary shocks are likely to have permanent long-term damage on the most vulnerable populations, making recovery further protracted and expensive.

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[29] "Gross domestic product (GDP) (indicator)", OECD, accessed on 30 June 2020, https://doi.org/10.1787/dc2f7aec-en.
[30] OECD, "OECD Economic Outlook"

In early April 2020, 194 countries had closed all schools and universities, affecting almost 1.6 billion learners[31]. Failing to contain the virus may require an extended period of school closures[32]. School closures carry high economic and social costs, even when temporary. School closures compound deficits in formal education with poor mental health, food insecurity and risk of dropouts. The following estimates highlight the need for swift policy responses to prevent the enormous and inequitable cost of lost learning.

The loss of education can have long-term damages on productivity and reduce lifetime earnings by 2 percent. There is a strong correlation between years of education and earnings. An additional year of school has been estimated to raise future lifetime earnings by 8-9 percent[33]. That means that for every three months of education lost, a generation may earn 2 percent less throughout their working life relative to their earnings absent the pandemic. Loss of learning during World War II of those who were at school during this period experienced sizeable earnings loss some 40 years later[34].

Without remediation, an average student could face a reduction of $1,408 in yearly earnings. If unmitigated, the COVID-19 crisis could result in a loss of between 0.3 and 0.9 years of school adjusted for quality, bringing down the effective years of basic schooling achieved during a student's lifetime from 7.9 years to between 7.6 and 7.0 years**.** Depending on whether school closures last for 3, 5 or 7 months, the average student could face a reduction of $355, $873 or $1,408 in yearly earnings. A reduction of $873 in yearly earnings is approximately equivalent to $16,000 in average lifecycle earnings at present value across the world. As the virus continues to spread in LMICs, the pessimistic scenario of protracted school closure is likely. With school closures lasting 7 months, per student average lifetime earning loss at present value can amount to $3,341 and $8,079 in low-income and lower middle-income countries respectively[35].

School closures also lead to significant work absenteeism and lost productivity of working parents who are main care givers for dependent children. The aggregate level of parental absenteeism due to school closures and caring responsibilities of dependent children (aged < 16 years) during a pandemic was estimated to be 16.1 percent in the United Kingdom. This number increases to 30 percent in health and social work sector, where there is a higher representation of women. This introduces unintended strain on health-care systems when human resources are most needed during a pandemic. The cost of lost productivity due to school closures in the UK

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[31] "COVID-19 impact on education," Education: From Disruption to Recovery, UNESCO, accessed 25 June 2020, https://en.unesco.org/covid19/educationresponse.

[32] School closures appear to be a policy response of choice, despite limited evidence about their effectiveness in reducing deaths caused by COVID-19 (see Viner *et al*., "School closure and management practices during coronavirus outbreaks including COVID-19: A rapid systematic review," *Lancet Child Adolescent Health* 4, no. 5 (April 2020): 397.404, https://doi.org/10.1016/S2352-4642(20)30095-X).

[33] George Psasharopoulos and Harry Anthony Patrinos, "Returns to investment in education: A decennial review of the global literature," *Education Economics* 26, no. 5 (7 June 2018): 445-458, https://doi.org/10.1080/09645292.2018.1484426.

[34] Andrea Ichino and Rudolf Winter-Ebmer, "The long-run educational cost of World War II," *Journal of Labor Economics* 22, no. 1 (January 2004): 57-86, https://doi.org/10.1086/380403.

[35] João Pedro Azevedo *et al*., "Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: A set of global estimates," (Washington D.C.: World Bank Group, Education, 18 June 2020), https://www.worldbank.org/en/topic/education/publication/simulating-potential-impacts-of-covid-19-school-closures-learning-outcomes-a-set-of-global-estimates.

ranges between £0.2 and £1.2 billion per week[36]. Extending school closures for an additional three months could generate between £2.4 and £14.4 lost productivity due to absenteeism of caregivers in the UK alone. Household structures and working conditions will differ across countries, altering these predictions. These estimates nevertheless highlight the extent to which school closures can have unintended consequences on multiple facets of society.

In the intermediate scenario that school closures last five months and mitigation is moderately effective, the global cost of lost future earnings on the world's economy is $10 trillion at present value in 2017 PPP. Lost future earnings for individual students aggregate to have large consequences for GDP. This estimate is driven by lost learning and potential for drop out. In other words, 16 percent of investments made in this cohort of students' basic education could go to waste. Low-income countries will suffer the highest relative losses – three times as much as high-income countries, when these losses are expressed as a percentage of public spending on education[37]. Schools closures will also undermine the quality of education, as the share of lower secondary students below the minimum level of proficiency drops by 25 percent. School closures will exacerbate the global learning crisis, which is differentially felt by LMICs. Using the World Bank's Learning Poverty index, 53 percent of children worldwide are unable to read and comprehend a simple text by age 10[38].

Moreover, school closures are likely to widen educational and broader inequalities within a given country through three channels. Firstly, low-income and marginalised households who are most likely to benefit from the educational boost to productivity are most affected by disruptions to learning. Low-income students and students with disabilities typically have fewer educational opportunities beyond schools. They will be less able to adapt to distance learning with limited resources, Internet access and limited substitution of teachers by parents[39].

Secondly, school closures contribute towards the increase in hunger and malnutrition. School closures not only threaten education, but also nutrition, as many children rely on school feeding programmes for food and healthy nutrition. For instance, school closures in Nigeria have reduced the food intake of almost 7 million children enrolled in the national school feeding programme[40]. See Section 3.2 for estimates on increased hunger.

Thirdly, dropouts are likely to increase to 7 million students in primary and secondary schools during school closures[41], differentially affecting girls. The severe economic downturn induced by COVID-19 also place greater pressure on children to work and generate income for financially distressed households. For instance, approximately 25 percent and 13 percent of students did not return to schools after reopening in Liberia[42] and Sierra Leone[43] respectively during the Ebola

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[36] Md Z Sadique, Elisabeth J Adams and William J Edmunds, "Estimating the costs of school closure for mitigating an influenza pandemic," *BMC Public Health* 8, no. 135 (April 2008), https://doi.org/10.1186/1471-2458-8-135.

[37] João Pedro Azevedo *et al.*, "Simulating the potential impacts of COVID-19 school closures"

[38] "Brief: Learning Poverty", Understanding Poverty, The World Bank, accessed on 1 July 2020, https://www.worldbank.org/en/topic/education/brief/learning-poverty

[39] "Adverse consequences of school closures," UNESCO, accessed 30 June 2020, https://en.unesco.org/covid19/educationresponse/consequences

[40] Cortes *et al.*, "Nigeria in times of COVID-19"

[41] João Pedro Azevedo *et al.*, "Simulating the potential impacts of COVID-19 school closures"

[42] Kristen Himelein Kastelic and Jonathan Kastelic, "The socio-economic impacts of Ebola in Liberia: Results from a high frequency cell phone survey round five," *Working Paper* no. 96196 (Washington D.C.: World Bank Group, 13 March 2015)

[43] Kristen Himelein Kastelic et al., "The socio-economic impacts of Ebola in Sierra Leone: Results from a high frequency cell phone survey round 3", *Working paper* (Washington D.C.: World Bank Group, 15 June 2015)

epidemic. The main reasons given for dropouts were financial in nature, such as the inability to pay school fees or generate income. Girls are more likely to drop out during school closures. During school closures during the 2014-2016 Ebola epidemic, there was a rise in teenage pregnancies, early marriages and sexual harassment[44]. For instance, closure of all primary and secondary schools during the Ebola crisis was shown to increase teenage pregnancies in some communities by 10.7 percentage points and a persistent 16 percentage point drop in their school enrolment in post-crisis Sierra Leone[45].

4. The human and economic costs of increased poverty and hunger

4.1 Loss of jobs and income

80 percent of approximately 2 billion informally employed workers worldwide are profoundly hit by containment measures; their earnings could decline by 82 percent in low and lower-middle income countries.

Compared to pre-crisis levels (Q4 2019), a 10.7 percent deterioration in working hours is already expected by mid-2020, equivalent to the loss of 305 million full-time jobs[46]. Containment measures severely restricts economic activity, impacting low-skilled workers most. Unemployment will continue to rise in response to weaker external demand and -11.9 percent contraction in international trade, affecting tourism, global supply chains and remittance flows. For instance, foreign tourists dropped sharply to 34,025 in March 2020 relative to 101,400 in February and 79,686 in January 2020 in Nepal[47]. Up to 2.27 million jobs in Nepal are at stake as result[48].

Earnings of informal workers could decline by 82 percent in low and lower-middle income countries[49]. 80 percent of approximately 2 billion informally employed workers worldwide have been profoundly hit by these measures. By region, the expected earnings decline is largest for low and lower-middle countries in Africa (81%), Northern America (82%) and Latin America and the Caribbean (80%).

Women and young people have been differentially affected by income losses. When the crisis began, 77 percent of young workers were in informal jobs and more than four in ten young

[44] Irish Aid and UNDP, "Assessing sexual and gender-based violence during the Ebola crisis in Sierra Leone," (26 October 2015), https://www.sl.undp.org/content/sierraleone/en/home/library/crisis_prevention_and_recovery/assessing-sexual-and-gender-based-violence-during-the-ebola-cris.html.

[45] Oriana Bandiera *et al.*, "The Economic Lives of Young Women in the Time of Ebola: Lessons from an Empowerment Program" *World Bank Policy Research Working Paper,* no. 8760 (Washington D.C.: World Bank Group, 28 February 2019), http://documents.worldbank.org/curated/en/452451551361923106/The-Economic-Lives-of-Young-Women-in-the-Time-of-Ebola-Lessons-from-an-Empowerment-Program

[46] International Labour Organization, "ILO Monitor: COVID-19 and the world of work. Fourth edition," (Geneva: International Labour Office, 27 May 2020), https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_745963.pdf.

[47] Nam News Network, "Foreign Tourists to Nepal Down Sharply In March Amid COVID-19 Outbreak," *Nam News Network* (28 April 2020), http://www.namnewsnetwork.org/?p=71995.

[48] United Nations Economic and Social Commission for Asia and the Pacific, "COVID-19 and South Asia: National strategies and sub-regional cooperation for accelerating inclusive, sustainable and resilient recovery," *United nations ESCAP* (25 June 2020), https://www.unescap.org/resources/covid-19-and-south-asia-national-strategies-and-subregional-cooperation-accelerating.

[49] International Labour Organization, "ILO Monitor: COVID-19 and the world of work. Third edition," (Geneva: International Labour Office, April 2020), https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_743146.pdf.

employed workers were in hard-hit sectors. Similarly, almost 91 percent of women are employed in the informal sector in South Asia[50]. Among these informal workers, 42 percent of women are in sectors most impacted by the pandemic[51].

Global remittances are projected to fall by about 20 percent to $445 billion in 2020[52]. Some LICs and LMICs are particularly reliant on remittances: personal remittances were over 25% of GDP in 2017 for Tonga, South Sudan, Kyrgyz Republic, Haiti, Tajikistan, and Nepal.

The extension or reinstatement of containment measures in response to a failure to contain the virus in LMICs threatens critical – and often only – income sources of the most vulnerable people.

4.2 Increases in level and depth of poverty

Inducing the first rise in poverty since 1990, the COVID-19 pandemic jeopardises gains in poverty reduction made over the past decade. At least 71 to 100 million could be pushed into extreme poverty under the $1.90 international poverty line. Moreover, approximately 230 million people could become newly poor under the $3.20 poverty line and a further 230 million under the $5.50 poverty line. If no action is taken, these poverty traps are likely to become permanent due to the aggregate nature and sheer size of the shock. The ongoing crisis is likely to erase the progress made on SDG goals in the last five years, amounting to $2.5 trillion in budget costs in terms of health, education and social protection.

The global economy is projected to experience the deepest recession since the Great Depression with a projected global contraction of -4.9 percent, due to stringent containment measures and the collapse of international trade. All regions are subject to subject negative growth projections in 2020, although there is significant heterogeneity across regions. Sub-Saharan Africa is predicted to contract by -3.2 percent; Middle East and Central Asia by -4.7; Latin America and the Caribbean by -9.4; and low and middle countries in Asia by -0.8 percent, largely swayed by China's growth projection of 1 percent.

These projections reflect the broadest collapse in per capita income since 1870. Nevertheless, these annualised GDP projections fail to capture the extent to which millions of people will experience transient poverty in response to COVID-19. In the absence of social security to smooth this shock, income losses of these magnitudes will have severe consequences for the livelihoods and wellbeing of people.

A persistent COVID-19 outbreak is expected to push at least 71 to 100 million into extreme poverty, defined as living below the US$1.90 international poverty line, under current GDP projections. Under the baseline scenario, the COVID-19 crisis will push an estimated 71 million people into extreme poverty. The downside scenario estimates that 100 million will fall into extreme poverty, if the outbreak persists longer than expect and containment measures are

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[50] International Labour Organization, "Women and men in the informal economy: a statistical picture (third edition)," (Geneva: International Labour Office, April 2018), https://www.ilo.org/global/publications/books/WCMS_626831/lang--en/index.htm.

[51] International Labour Organization, "ILO Monitor: COVID-19 and the world of work. Third edition"

[52] World Bank, "COVID-19 Crisis Through a Migration Lens. Migration and Development Brief," no. 32 (Washington, D.C.: World Bank, April 2020), https://openknowledge.worldbank.org/handle/10986/33634.

extended or reintroduced[53]. The largest shares of the new poor are likely to be located in the poorest regions of the world: Sub-Saharan Africa and South Asia. Despite forecasts that the global economy will recover somewhat in 2021 in the absence of a second outbreak, poverty forecasts suggest that the number of extreme poor will remain broadly unchanged. The third of the world's poor are projected to be located in India, Nigeria and the Democratic Republic of Congo. These countries are unlikely to have sufficiently high growth rates relative to population growth to sustain poverty reduction[54].

Approximately 230 million people are expected to be pushed into poverty at both the $3.20 and $5.50 poverty line[55,56]. Millions of people are precariously situated at the margin of this poverty line. Two-thirds of the newly poor falling under the $3.20 poverty line are predicted to be located in South Asia, whereas many of the newly poor under the $5.50 are located in East Asia and the Pacific. The changes in the regional distribution of the newly poor highlight the need to account for different poverty lines in understanding the impact of COVID-19 on poverty headcounts.

These multi-level poverty estimates also underscore the extent to which the depth of poverty will increase if no action is taken. As households sink deeper into poverty, it will become far more challenging to bring these households back out of poverty and create a sustainable livelihood. For instance, emerging evidence in India shows that the average Below Poverty Line (BPL) household will lose 61 percent of their regular income in April, while 45 percent of BPL households were expecting to lose 75 percent or more of their income[57]. In Bangladesh, a BRAC survey with 2,675 respondents found that household incomes had declined an average of 75 percent in April. Four in ten respondents had three days' worth of food at home or less[58].

These global estimates are very likely to be a lower bound. They are typically based on annualised GDP growth figures, neglect to take into account government interventions and fail to reflect transient poverty and the increases in depth of poverty. IFPRI indicates that transient poverty in the second quarter of 2020 could be three times higher than estimates based on annual figures suggest. Moreover, these methodologies assume that the COVID-19 shock leave the income distribution unchanged. Poorer segments of the population have already been profoundly hit. Expected earnings decline of 82 percent of an informal worker in low- and lower-middle income countries would have disastrous effects. Coping strategies that involve selling off assets lowers households' future income prospects, entrenching what was a temporary shock into permanence. Lastly, increases in inequality have been shown to affect the estimated increase in poverty headcounts in an alternative set of simulations. If the Gini indices of all countries

[53] Daniel Gerszon Mahler *et al.*, "Updated estimates of the impact of COVID-19 on global poverty," *World Bank Blog* (18 June 2020), https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty.

[54] Mahler *et al.*, "Updated estimates of the impact of COVID-19 on global poverty"

[55] Mahler *et al.*, "Updated estimates of the impact of COVID-19 on global poverty"

[56] These estimates are fairly consistent with an earlier paper by Sumner et al. (2020) that predicted a 5 percent contraction in per capita income would see approximately 85 million falling into extreme poverty, all else equal. 135 million and $124 million people would fall into poverty using the alternative poverty lines of $3.20 and $5.50 per day (see Andy Sumner, Chris Hoy and Eduardo Ortiz-Juarez, "Estimates of the impact of COVID-19 on global poverty," *WIDER Working Paper* 2020/43 (April 2020)).

[57] Daniel Pfister, Dirk-Jan Omtzigt and Ruth Hill, "Anticipating the impact of COVID-19: Pathways and timing of household welfare shocks," *Centre for Disaster Proection Working Paper* no. 2 (June 2020), https://www.disasterprotection.org/publications

[58] BRAC Bangladesh, "Rapid perception survey on COVID-19 awareness and economic impact," (9 April 2020), https://reliefweb.int/report/bangladesh/rapid-perception-survey-covid19-awareness-and-economic-impact-final-draft-april-9.

increased by 2 percent in 2020 due to the pandemic, 94 million people will be driven into poverty relative to a baseline scenario of 60 million where there is no increase in inequality[59].

In contrast, country-level simulations suggest that up to 132 million people may be pushed into extreme poverty in five South Asian countries alone due to the COVID-19 crisis. In South Asia, India accounts for the highest share of the new poor with 108 million, followed by Bangladesh (11.73 million), Pakistan (10 million), Nepal (2.15 million) and Sri Lanka (0.26 million)[60]. The COVID-19 pandemic is predicted to push up Nigeria's poverty headcount by almost 6 million by 2022, adding to 83 million (4 in 10 Nigerians) already living below the national poverty line in 2019. About 1 in 2 households reported having to reduce food consumption almost as soon as the pandemic broke out due to significant losses in employment and income, highlighting the precarity of millions living near the poverty margin[61].

The cost of lifting people out of permanent poverty traps far exceeds the cost of smoothing the income shock. If no action is taken, these poverty traps are likely to become permanent due to the aggregate nature and sheer size of the shock. Irreversible losses start to occur when households cope to income losses and/or higher prices by reducing consumption or selling productive assets. People living at the margin are already susceptible to fall back into poverty traps: households with incomes between 1 and 1.5 times the $1.90 poverty line have a 10 percent chance of falling back into poverty every year[62]. Poverty breeds poverty, insofar that the experience of poverty itself reduces cognitive capacity, resulting in sub-optimal long-term investments in health and education[63]. Simulations by the International Growth Centre estimate that an eight-week blanket lockdown in Sub-Saharan Africa reduces the savings of the population by about 30 percent, 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[64]. With buffer strategies effectively depleted after the first round of lockdown, a second round of restrictions could push households towards damaging coping mechanisms that lower future earnings potential. If not mitigated, transient poverty may result in permanent poverty traps, which are typically multidimensional in nature. Immediate social protection schemes, such as cash transfers, can mitigate transient shocks and smooth income – and much cheaper than the alternative.

The first rise in poverty since 1990, the COVID-19 pandemic jeopardises gains in poverty reduction made over the past decade. The number of people in extreme poverty fell from nearly 1.9 billion in 1990 to 734 million in 2015 and to about 650 million in 2018, although the rate of poverty reduction has been declining in recent years. The total annual cost for social protection in support of UN Sustainable Development Goals was estimated to be $93.4 billion in Low-Income

[59] Christoph Lakner *et al*., "How much does reducing inequality matter for global poverty? (English)", Global Poverty Monitoring Technical Note 13 (Washington, D.C: World Bank Group, June 2020), http://documents.worldbank.org/curated/en/765601591733806023/How-Much-Does-Reducing-Inequality-Matter-for-Global-Poverty.

[60] United Nations ESCAP, "COVID-19 and South Asia"

[61] Cortes *et al*., "Nigeria in times of COVID-19"

[62] World Bank, "Aspiring Indonesia: Expanding the Middle Class", (September 2019), *World Bank,* https://www.worldbank.org/en/country/indonesia/publication/aspiring-indonesia-expanding-the-middle-class

[63] Anandi Mani, Sendhil Mullainathan, Eldar Shafir and Jiaying Zhao, "Poverty impedes cognitive function", *Science* 341 (August 2013): 976-980, https://doi.org/10.1126/science.1238041.

[64] Matthieu Teachout and Céline Zipfel, "The economic impact of COVID-19 lockdowns in sub-Saharan Africa", *International Growth Centre Policy Brief* (May 2020), https://www.theigc.org/wp-content/uploads/2020/05/Teachout-and-Zipfel-2020-policy-brief-.pdf

Developing Countries[65] (LIDCs) in 2019. Total investment in SDG goals was estimated to be approximately $753 billion. In order to meet SDGs by 2030, an additional $400 billion per year was required to meet the financing gap for all 59 LIDCs in the pre-COVID world[66]. Even just one year of lost progress on the SDG goals in terms of health, education and social protection amounts to almost $500 billion in total annual costs. The ongoing crisis is likely to erase the progress made in the last five years[67], amounting to $2.5 trillion in budget costs. If we fail to act now, we lose not only the opportunity to continue the upward trend of poverty reduction, but also the progress made in the past.

Pre-existing inequalities will widen, as women and marginalised groups are most adversely affected. The COVID-19 crisis has been shown to impact differential people living in informal settlements, women, older persons and persons with disabilities differentially. People living in rural areas or urban informal settlements have limited access to basic services, such as water, sanitation and healthcare, and thus less able to contain the spread of the virus. For instance, close to 90 percent of the poorest people in Nepal and Afghanistan do not have soap and safe water available for handwashing[68]. Women and girls are also disproportionately vulnerable to income losses, increased burden of unpaid care work, contracting COVID-19 due to over-representation in health and social services, food insecurity and gender-based violence. At the same time, women may be at a disadvantage in accessing targeted support: 64 percent of women had a bank account compared to 73 percent of men in 2017 in South Asia[69], while 218 million women do not use mobile phones[70].

4.3 Cost of increased food insecurity and hunger

If no action is taken, the number of acutely food insecure will increase by 82 percent, or 121 million people, to 270 million people by the end of 2020.

The COVID-19 crisis is placing significant stress on food security by undermining physical and economic access, especially in conflict-affected LMICs. Global food stocks are in amply supply, unlike during the Great Recession. However, the pandemic has caused job and income losses, a decline in remittances, disrupted food supply chains and driven up prices of imported food[71]. For instance, Sub-Saharan Africa imports about 400 million tons of cereals each year from around the world to meet the gaps in local food production.

If no action is taken, the number of acutely food insecure will increase by 82 percent to 270 million people by the end of 2020. Nearly a billion people already suffer from either chronic or acute hunger today. In the past four years, the number of people who suddenly find themselves

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[65] LIDCs include most, but not all countries with GDP per capita at or below $2,700.
[66] Jeffrey Sachs *et al.*, "SDG costing and financing for low-income developing countries", *UN Sustainable Development Solutions Network* (September 2019), https://resources.unsdsn.org/sdg-costing-financing-for-low-income-developing-countries.
[67] "Poverty: Overview", The World Bank, 16 April 2020, accessed on 1 July 2020, https://www.worldbank.org/en/topic/poverty/overview.
[68] World Bank, "The cursed blessing of public banks," *South Asia Economic Focus* (Washington D.C.: World Bank, April 2020), https://openknowledge.worldbank.org/handle/10986/33478.
[69] World Bank, "The global Findex database", (Washington D.C.: World Bank, 2017), https://globalfindex.worldbank.org/.
[70] GSMA, "The state of mobile internet connectivity 2019," *GSM Association* (2019), https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/GSMA-State-of-Mobile-Internet-Connectivity-Report-2019.pdf.
[71] Josef Schmidhuber and Bing Qiao, "Comparing crises: Great Lockdown vs Great Recession," (Rome: Food and Agriculture Organization, 2020), https://doi.org/10.4060/ca8833en.

on the brink of starvation after generally having enough food (i.e. acute hunger) increased from 80 to 149 million people due to conflict, climate change and economic downturns. The pandemic could increase this number by 121 million to a total of 270 million by the end of 2020[72,73]. The effects of COVID-19 are further compounded by a host of other factors this year, such as poor rainfall, the upsurge of locusts, wet season, armed conflict and socio-economic grievances.

Food insecurity can have devastating long-term effects on health and socio-economic development. Maternal and child undernutrition is the underlying cause of 3.5 million deaths or 35 percent of child deaths under the age of five. Moreover, undernutrition accounts for 11 percent of total global disability-adjusted life years[74]. In a study on undernutrition in Egypt, Ethiopia, Swaziland and Uganda, stunted children achieved 0.2 to 1.2 years less in school education. Child mortality associated with undernutrition has reduced national workforces by 1 to 8 percent. As a result, undernutrition has severe long-term effects on productivity and output. The annual costs associated with child undernutrition reach values equivalent to 1.9 percent of GDP in Egypt ($3.7 billion), 3.1 percent in Swaziland ($92 million), 5.6 percent in Uganda ($899 million) and 16.5 percent of GDP in Ethiopia ($4.7 billion)[75].

5. The cost of increased global instability and conflict

The COVID-19 pandemic presents one of the largest economic downturns since the Great Depression. The current economic downturn increases the likelihood of a civil war next year by 20 percentage points. The minimum cost incurred during an average civil war is $60 billion.

If left unaddressed, the large economic shocks induced by the COVID-19 pandemic are likely to fuel conflict in the medium term and generate even larger welfare losses as a result. The outbreak of conflict is strongly correlated with poor economic conditions and severe downturns, with some evidence to suggest that the cause direction runs from economic conditions to conflict. A rich literature also highlights the impact dependence on natural resources and horizontal inequality on increased risk of conflict[76], with the latter likely to increase during the COVID-19 pandemic. Fragility, conflict and violence are critical development challenges that reduce GDP by two to three percent[77]. Conflict disproportionately affects vulnerable groups and drive 80 percent of all humanitarian needs. A surge in conflict and violence would further undermine the response to COVID-19 and its worst effects on vulnerable populations. Conflict is likely to undermine the

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[72] World Food Programme, "WFP Global Response to COVID-19: June 2020" (June 2020).

[73] In March 2020, the World Food Programme (WFP) released initial estimates that as many as 265 million across all LMICs could be acutely food insecure by the end of 2020. These estimates included a baseline estimate of 135 million already in acute food insecurity in 2019 in 55 countries and an additional 130 million at risk of acute hunger by the end of 2020 in all LMICs. In June 2020, the WFP revised the baseline estimate to 149 million to include all countries where WFP is operating (covering 79 countries). WFP also fine-tuned country-level assessments and now predict 121 million additional people at risk of acute hunger.

[74] Robert Black, Lindsay H Allen, Zulfiqar A Bhutta, Laura E Caulfield, Mercedes de Onis, Majid Ezzati, Colin Mathers and Juan Riviera, "Maternal and child undernutrition: global and regional exposures and health consequences", *The Lancet* 371, no. 9608 (January 2008): 243-260, https://doi.org/10.1016/S0140-6736(07)61690-0.

[75] African Union Commission, NEPAD Planning and Coordinating Agency, UN Economic Commission for Africa, and UN World Food Programme, "The Cost of Hunger in Africa: Social and Economic Impact of Child Undernutrition in Egypt, Ethiopia, Swaziland and Uganda", Abridged Report (Addis Ababa: UNECA, 2014).

[76] Paul Collier and Anke Hoeffler, "Greed and grievance in civil war", *Oxford Economic Papers* 56 (2014): 563-595, doi:10.1093/oep/gpf064.

[77] World Bank, "World Development Report 2011: Conflict, Security and Development", *World Bank* (2011), https://openknowledge.worldbank.org/handle/10986/4389.

state's ability to contain the COVID-19 virus through test, trace, treat and isolate measures and thus intensify the severity of the pandemic.

The economic effects of the COVID-19 crisis and containment measures would likely be strong drivers of unrest. School closures no longer offer a protection against the recruitment of children into military or criminal activity[78]. In addition, a statistically significant relationship exists between secondary school enrolment and reduced conflict risk.[79] Similarly, unemployment and idleness are significant risk factors for recruitment into violence[80]. At present, surveys generally indicate broad support for lockdown measures, even among those with large income losses. However, this support will likely wane as households' ability to cope weakens. As fears of hunger trump fears of the virus, protests against restrictions have emerged in Mali, Senegal, Burkina Faso, Lebanon, Sudan, Tunisia, Palestine, Malawi, Zimbabwe, Kenya, Bolivia, Haiti, Colombia, Guatemala and Ecuador. In the rest of the world, geopolitical tensions are rising, and conflict hotpots are intensifying. While ISIL and Al-Qaeda monthly attacks decreased worldwide in the first quarter of 2020, they started to increase in April amidst Ramadan and COVID-19 cases rising.

In the absence of appropriate remediation, a civil conflict is roughly 20 percentage points more likely next year. A negative growth shock of five percentage points increases the likelihood of a civil conflict by over 12 percentage points the following year, particularly in Sub-Saharan Africa countries. This is equivalent to an increase of more than 50 percent in the likelihood of civil wars across the 41 countries in Sub-Saharan Africa[81]. In response to the COVID-19 crisis, the IMF has downgraded growth projections from 3.3 percent in January 2020[82] to -4.9 percent in June 2020[83] – a decrease of 8.2 percentage points, making a civil conflict roughly 20 percentage points more likely next year. This is equivalent to an increase of more than 80 percent in the likelihood of civil wars across the 41 countries in Sub-Saharan Africa.

The minimum cost incurred in an average civil war to both host and neighbouring countries is approximately $60 billion, including the cost of human casualties, with a median length of seven years[84]. The costs of civil wars range from 1.6 to 2.3 percentage of GDP per year of violence. For the average country, these costs that compound over time can be equivalent to up to 30 years of missing GDP growth. Moreover, the damage spills over onto neighbours and the rest of the world. More than half of the total economic cost is borne by neighbouring countries in a typical civil war, rather than by the country itself. However, the indirect costs of conflict are likely to be substantially larger, such as those incurred due to stress, trauma and injury[85].

Consider the Syrian civil war as an expensive example to illustrate the types of costs incurred. The prolonged conflict that erupted in March 2011 had already cost Syria alone at least $388 billion

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[78] Susan Nicolai and Carl Triplehorn, "The role of education in protecting children in conflict," *ODI Humanitarian Practice Network* (March 2003), https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/520.pdf.

[79] Paul Collier and Anke Hoeffler, Greed and Grievance in Civil War, *Oxford Economic Papers* Vol. 56, No. 4 (Oct., 2004), pp. 563-595

[80] World Bank, "World Development Report 2011"

[81] Edward Miguel, Shanker Satyanath and Ernest Sergenti, "Economic shocks and civil conflict: An instrumental variables approach," *Journal of Political Economy* 112, no. 4 (2004): 725-753.

[82] International Monetary Fund, "World Economic Outlook Update: Tentative stabilization, sluggish recovery?" (January 2020), https://www.imf.org/en/Publications/WEO/Issues/2020/01/20/weo-update-january2020.

[83] International Monetary Fund, "World Economic Outlook Update June 2020"

[84] Paul Collier, Lisa Chauvet and Haavard Hegre, "The security challenge in conflict-prone countries", prepared for the Copenhagen Consensus 2008 Challenge Conference (April 2008).

[85] Stergios Skaperdas, "The costs of organized violence: A review of the evidence," *Economics of Governance* 12 (2011): 1-23.

by 2018 due to destruction in physical capital and sectoral distribution, not including human losses due to deaths or human capital depreciation[86]. Estimates of the total number of Syrian casualties vary between 384,000 and 586,100, as of March 2020[87]. The conflict spilled over to neighbouring countries and further abreast. For instance, 5.6 million Syrians have fled abroad since 2011, of which about 94 percent are in neighbouring Lebanon, Jordan and Turkey. At least 6.6 million remain internally displaced[88]. Foreign intervention itself costs billions of dollars. For the USA alone, the cost of military operations in Syria and the overall cost of counter-IS campaign in Syria and Iraq reached $40.5 billion by December 2019[89].

Conflict is one of the key drivers of acute hunger and migration by disrupting food supply chains. Based on current forecasts, refugee outflows could increase by 95 percent. For each one percentage increase in acute hunger, refugee outflows have increased by 1.9 percent, according to the World Food Programme[90]. Even without accounting for the compounding effects of conflict, acute hunger is predicted to rise by nearly 50 percent in the absence of an appropriate response to COVID-19. This increase highlights the scale of global movement that could occur as a result – roughly a 95 percent increase using the current estimation.

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[86] UN Economic and Social Commission for Western Asia, "Experts discuss post-conflict reconstruction policies after political agreement in Syria," (7 August 2018), https://www.unescwa.org/news/syrian-experts-discuss-post-conflict-reconstruction-policies-after-political-agreement-syria.

[87] "Syrian Revolution Nine years on: 586,100 persons killed and millions of Syrians displaced and injured," Syrian Observatory for Human Rights (March 2020), accessed on 30 June 2020, https://www.syriahr.com/en/157193/

[88] These are based on statistics provided by UNHCR, the UN Refugee Agency, last updated on 19 April 2018.

[89] Carla E. Humud and Christopher M Blanchard, "Armed Conflict in Syria: Overview and U.S. Response" *Congressional Research Service*, no. RL33487 (February 2020), https://fas.org/sgp/crs/mideast/RL33487.pdf.

[90] World Food Programme, "At the root of exodus: Food security, conflict and international migration," (2 May 2017), https://www.wfp.org/publications/2017-root-exodus-food-security-conflict-and-international-migration.