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A PERSPECTIVE ON SECONDARY EFFECTS OF THE SPREAD OF COVID-19 IN SUB-SAHARAN AFRICA

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(1386 words)

The new coronavirus has put the world in unchartered territory. The virus and the associated disease has put citizens and decisions makers in states of panic. The number of confirmed cases and deaths continues to surge worldwide[1]. Even the best-resourced/endowed medical infrastructures in the globe are showing signs of being overwhelmed. While the evaluation of the health risks of COVID-19 is still fluid[2], numerous countries are adopting stringent suppressing measures, including lockdowns of cities and whole countries, self-isolation and mandatory quarantine to curtail the spread There seems to be a one-size-fits-all approach regarding these suppressing measures.

THE CASE OF SUB-SAHARAN AFRICA

The current trend of COVID-19-related mortality rates tends to suggest that for some countries, especially those in sub-Saharan African, complete lockdowns may not necessarily

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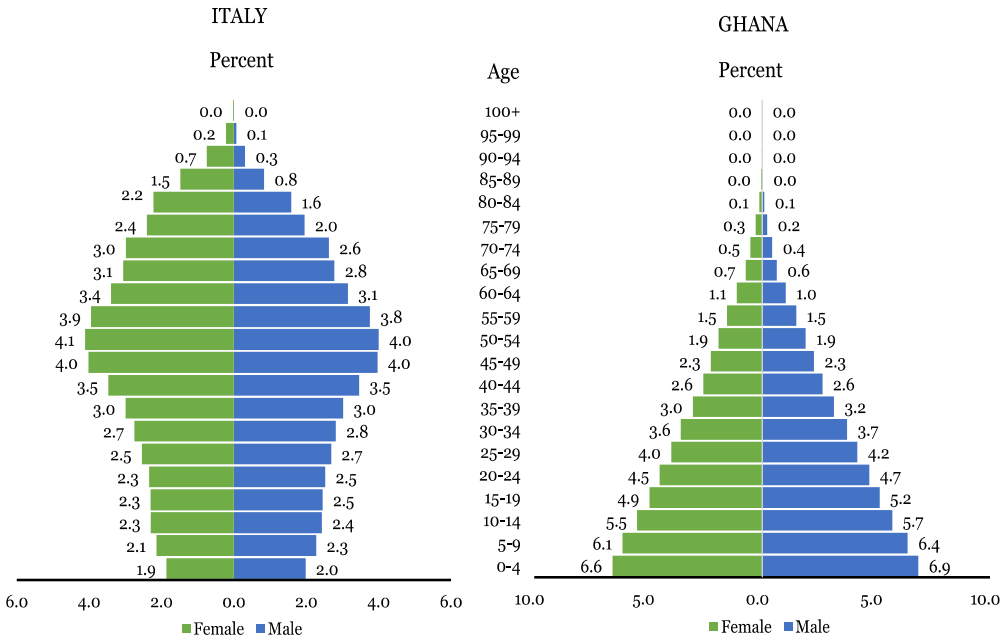
[1] See https://coronavirus.jhu.edu/map.html (accessed March 30, 2020)

[2] The unreported number of asymptomatic or minimally symptomatic cases may be several times higher (even up to a factor of 20 times higher) than the number of reported cases of infection according to the RobertKoch Institut in Germany, e.g. https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Steckbrief.html#doc13776792bodyText7, accessed March 25, 20). In this case the direct health consequences of Covid-19 would ultimately be similar to a severe seasonal influenza or a pandemic influenza. On March 19, 2020 the British Government declared COVID-19 no longer to be considered a high consequence infectious diseases in the UK (https://www.gov.uk/guidance/high-consequence-infectious-diseases-hcid, accessed March 20, 2020). An editorial by Fauci et al. (2020) in The New England Journal of Medicine also highlights the importance of uncertainties regarding the number of unreported cases (https://www.nejm.org/doi/full/10.1056/NEJMe2002387, accessed March 27, 2020).

be the optimal strategy to deal with the problem from a societal point of view. Available data from China and Italy, two of the most affected countries, suggests that older people and patients with pre-existing medical conditions are more susceptible to suffer and die from the disease[3] in comparison to healthy children and younger people. The age structure of sub-Saharan Africa suggests a silver lining for countries in the sub-region when considering the potential negative societal, economic and health impact on their people (see Figure 1 for the age distribution of Italy and a typical sub-Saharan African country, Ghana). About 95 per cent of sub-Saharan countries are considered youthful, with at least half of the population being younger than 25 years of age. We note that the virus also endangers younger persons, of course; however, children and younger adults have a lower *probability* of severe or lethal consequences in comparison to the elderly and very old.



Source: PopulationPyramid.net, 2020

Figure 1: Population Structure of Italy and Ghana

We also note that the hospitalization of infected younger age groups is significant and equally important, especially as pre-existing medical conditions may matter too. However, given the prevailing age structures in Sub-Saharan Africa, the force of the negative health consequences of COVID-19 on these societies could differ significantly from what Western

[3] The median age of the dead people in Italy is about 80.5 years as of March 17 (see https://www.epicentro.iss.it/coronavirus/bollettino/Report-COVID-2019_17_marzo-v2.pdf, accessed March 25, 2020).

European and Asian countries are experiencing. As experts begin to question the sustainability of current lockdown measures[4], it essential for countries to devise strategic responses that suit their specific contexts. In particular, given scarce resources in developing countries, a systematic and rational analysis of trade-offs and risk is vital there.

TAKING SECONDARY IMPACTS OF CURRENT PROPOSALS INTO ACCOUNT

Reliable estimates for the case mortality rate (and the infection rate) of COVID-19 is still scarce[5]. However, it is almost certainly lower than the estimated mortality rate of common known communicable diseases like SARS or MERS[6] and in particular Ebola. Sub-Saharan African countries should, therefore, be cautious in adopting lockdown measures which could, potentially, have a lasting long-term impact on their already fragile economies and institutions. The secondary effects of lockdowns and, other government measures against coronavirus on weak economies and institutions need to be taken into account when deciding on a policy. Already, experts have begun to raise issues of institutional risks and power-grabbing in some younger democracies in the global north such as Hungary[7].

Available models predict between 20 to 80% infection rates. It is, therefore, of little doubt that a significant part of the population, if not the majority will eventually be infected unless there is a vaccine or drastic public health measure. It may take some time before such long-lasting measure may be realized since they require economic resources to be widely distributed. It may take some time before such long-lasting measure may be realized since they require economic resources to be widely distributed. As we hope for a permanent solution, societies in Sub-Saharan must select the appropriate measures. Decision-makers, governments and, health officials, should seriously weigh the trade-offs of total lockdowns to minimize the total costs. A breakdown in the supply of essential services might plunge the already constrained health facilities of these countries into an even more severe crisis and worsen the human loss. Similarly, preventing people from working who directly depend on their daily wages without substantial savings is associated with high risks for their health and

[4] See http://www.crema-research.ch/papers/2020-03.pdf (accessed March 25, 2020)

[5] Employing data from the *Diamond Princess*, a cruise ship, to re-estimate the proportion of deaths among confirmed cases in China, the case fatality rate (CFR) was about 1.1%. This would be lower than the 3.8% estimated by the World Health Organization (see https://www.nature.com/articles/d41586-020-00885-w, accessed March 30).

[6] See https://www.nejm.org/doi/full/10.1056/NEJMe2002387 (accessed March 27, 2020).

[7] See https://euobserver.com/coronavirus/147834 (accessed March 25, 2020).

the stability of society. Panic reactions and the potential lack of international support structures might threaten the re-emergence of other local disease outbreaks.

Similarly, closure of public sanitation facilities, for instance, could encourage open defecation and roll back the gains which have already been made regarding this problem. Supply of potable water may be affected if lockdown measures continue in their current form. In 2017, poor sanitation accounted for nearly 5% of all deaths in low-income countries and as high as 11% in Chad[8]. We risk exacerbating these figures if we are not careful with the current COVID-19 outbreak and the suppression measures that are taken. Plans to shut down public markets threatens the food supply, which could create a nutrition crisis with significant longer-term human capital costs. Economists are warning of possible starvation due to the pandemic and, the subsequent lockdown in India, which has a population of over 1.3 billion[9].

As it stands, Sub-Saharan Africa's primary problem with the pandemic may not be the number of infected people, but weak health systems and the unintended secondary impacts of lockdowns and border closures. A healthy population is a *good* with a high value, but a strong economy has systematically been closely linked to the health of its citizens and their life expectancy[10]. Pandemics are not only a biological event and a public health disaster, but it is essential to understand and fight them from an economic, societal, and cultural perspective[11].

The events at this initial stage and the disruptions in the global markets, especially the Chinese markets, are having their effects on African economies. We are, therefore, not only dealing with only a health crisis but potential economic and political crises which could threaten peace and security in the sub-region.

A POTENTIAL WAY FORWARD

For now, the weak health systems in Sub-Saharan African countries are not yet overwhelmed; this is the chance to investigate and exploit medically and economically sustainable and robust solutions to the problem. Nations in the sub-region could follow the recommendations of Eichenberger et al. (2020)[12] in identifying people who have undergone COVID-19 and acquired immunity to the disease. This need not be an individual country effort, but the various regional bodies or the African Union itself could coordinate multiple

[8] See https://ourworldindata.org/sanitation (accessed March 26, 2020)
[9] See https://www.wienerzeitung.at/nachrichten/politik/welt/2055517-Wir-sterben-am-Virus-oder-verhungern.html (accessed March 29, 2020)
[10] See https://onlinelibrary.wiley.com/doi/abs/10.1111/ssqu.12638 (accessed March 30, 2020)
[11] See http://www.crema-research.ch/papers/2020-03.pdf (accessed March 25, 2020).
[12] See http://www.crema-research.ch/papers/2020-03.pdf (accessed March 25, 2020)

efforts. The current lockdowns may be inefficient since those who have been infected and recovered stand a little chance of re-infection as immunity to the disease is more likely. It will benefit economies to search and certify these immune individuals so that they can go back to their usual economic and social activities. It is, therefore, prudent management of the situation to channel some resources and attention in search of these people in society.

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