

COVID-19: SOCIO-ECONOMIC IMPACT IN GHANA



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Funding for Research & Development: COVID-19 & Beyond

Introduction

It has almost become a cliché to say COVID-19 is having negative socio-economic impacts on the world. As economists make projections and predictions about a looming [global economic recession because of this pandemic](#), one cannot help but wonder whether we could have been better prepared to handle this pandemic if we had done things differently in the past. Even before and after the outbreaks of the Severe Acute Respiratory Syndrome (SARS) and Ebola in 2002 and 2012 respectively, [scientists warned](#) about the links between ecosystem disturbances and the [spread of zoonotic diseases](#). In an online news article published by the Telegraph on 21 November 2019, the [Director-General of the World Health Organization \(WHO\) is quoted warning of the possibility of a flu pandemic](#), which could have not only health impacts but also social, economic and political impacts. Despite these warnings, most governments did not heed. Instead, we saw a stagnation or decrease in the [budgetary allocations of most countries into research and experimental development \(R&D\)](#).

As mentioned in the [2019 annual report on global preparedness for health emergencies, by the Global Preparedness Monitoring Board \(GPMB\)](#), national capacities are not well developed for R&D due to insufficient funding. The consequences of which are that countries will not be well prepared to handle disease outbreaks including deployment of vaccines, creating new vaccines' manufacturing methods and other medical countermeasures. The GPMB is an independent monitoring and advocacy body co-convened by WHO and the World Bank Group. The GPMB report also underscores the fact that although high-income countries have continued to lead with

Highlights

- Despite the projected financial downturn and its attending consequences such as budget cuts, those in the biomedical and other scientific research communities are currently immune to the financial cuts being experienced by other sectors due to the COVID-19 crises; instead, they are now inundated with funds and pledges of funding. Their main challenge now is the race against time.
- International organizations like UNESCO have been championing the call for global access to data, research, publications and technological innovations. This pandemic has given many decision makers from around the globe the impetus to support the agenda for “Open Science”.
- In Ghana, will government's support for Science and R&D, which we have seen within this period, be sustained even after we overcome this COVID-19 crisis?
- Government should be encouraged to implement plans of allocating 1% of the country's Gross Domestic Product (GDP) in funding for scientific and experimental research and development.
- However things turn out, sound science should lead and Ghana's scientific, technology and innovation community must be resourced to play its part.

regard to capital investments into R&D including research on neglected tropical diseases, research agendas in those countries may not always reflect low-income country needs. Insufficient funding for R&D could also result in areas such as social science research being neglected and may therefore not be properly integrated into national and international research portfolios, nor applied to preparedness measures against disease outbreaks.

Scientific research and technological innovations thrive

It is comforting to note that despite the projected financial downturn and its attending consequences such as budget cuts, those in the biomedical and other scientific research communities are currently immune to the financial cuts being experienced by other sectors due to the COVID-19 crises; instead, they are now inundated with [funds](#) and pledges of funding. Their main challenge now is the race against time. They need time to study the virus and to gain comprehensive understanding of it so as to find a treatment and develop a vaccine. Although it

is a welcome development that scientific research is seeing a boost because of this pandemic, this should not be the way to go. The world needs science and science needs the world with or without crisis. It is therefore imperative that there is sustainable financing for Science and R&D.

Another positive development for Science is the [solidarity and sharing of scientific information among scientists worldwide](#). International organizations like UNESCO have been championing the call for global access to data, research, publications and technological innovations. This pandemic has given many decision makers from around the globe the impetus to support the agenda for “[Open Science](#)”. Indeed, this is in line with the UN Secretary General’s call to world leaders to [strengthen multilateralism for effective responses to global challenges](#).

In Ghana, the Noguchi Memorial Institute of Medical Research (NMIMR) and the Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) are the two research institutes resourced by Government to undertake testing of COVID-19



Autopure Purification System is in operation to extract RNA samples (photo: UNOPS)



Health worker uses the PCR kit and RNA kit for COVID-19 test at the GHS Lab (photo: UNOPS)

suspected cases. In a recent development, scientists from the NMIMR and the West African Centre for Cell Biology of Infectious Pathogens (WACCBIP - College of Basic and Applied Sciences, University of Ghana) have [sequenced genomes of the COVID-19 virus](#) to obtain the genetic composition of the viral strains in 15 of the confirmed cases in Ghana. The information from the sequence data has been shared with scientists around the world through an open access platform known as the Global Initiative on Sharing All Influenza Data (GISAID) database, where other sequences from various countries are stored. This will contribute to gaining a comprehensive understanding of the variations of the virus that are present in the country and the world at large.

We have also seen innovative technological solutions from around the globe. These innovations provide health functions to address the impact of COVID-19. One can say, and rightly so, that the urgency to overcome COVID-19 has unearthed people's ingenuity and creativity especially among the youth here in Ghana. As has been widely reported on various local and international online news portals, the [solar powered hands-free hand washing machine by Mr. Richard Kwarteng](#); [electronic hand sanitizer dispensers by Assuah Robotics](#), a company based in Takoradi and prototypes of low-cost ventilators from two tertiary institutions – Kwame Nkrumah University of Science and Technology and Academic City College, are a few of the inventions developed here in Ghana to fight COVID-19. In a very recent development, researchers from the Kwame Nkrumah University of Science and Technology and a diagnostic company based in Kumasi, Incas Diagnostic have [developed a Rapid Based Diagnostic test kit for COVID-19](#).

This global scientific collaboration, sharing of data and medical information we have experienced in recent weeks must not be derailed. In Ghana, the government should aim to sustain the support for Science and R&D, which we have seen within this period, even after we overcome this COVID-19 crisis.

Recommendations

Ghana can sustain this momentum. Government should be encouraged to implement plans of [allocating 1% of the country's Gross Domestic Product \(GDP\) in funding for scientific and experimental research and development](#).

Similarly, it is recommended that the Government designs and rolls out competitive incentives for the scientific community in order to attract and sustain young graduates into science, technology and innovation fields.

Government should consider setting up a technology and innovation facilitation fund in partnership with the private sector and industry. In relation to this proposed fund, periodic calls for innovative technologies that are environmentally sustainable, could be launched. This would certainly encourage innovation among the population particularly youth.

To build the world that we want, a world where no one is left behind, the international community should not relent in its support for global collaboration on science, research and technology, including open access to information and data. This will go a long way to augment the R&D capacity gaps in developing countries.

Conclusion

Science is still pointing us to the signs that the world could face other threats in the future i.e. environment or climate change related disasters or another health pandemic. Is the world going to build on this momentum generated from our collective response to COVID-19 and move from the business as usual scenarios? However things turn out, sound science should lead and Ghana's scientific, technology and innovation community must be resourced to play its part.

By UNESCO

