



Science Systems, COVID-19, and Agenda 2063

By Chux Daniels and Rob Floyd

Summary

The COVID-19 pandemic has created one of the most extreme economic challenges for Africa in modern history.¹ And yet in addressing those challenges, national governments have a unique window of opportunity to redirect research, science systems, innovation and technology strategies, and funding towards addressing the Sustainable Development Goals (SDGs). In operationalizing recovery interventions, it is vital that Africa's leaders, policymakers, and decision-makers do not return to "business as usual"—unsustainable economic growth, environmental degradation, and high levels of inequality and exclusion. In rebuilding, leaders should take a long-term and system innovation² approach that focuses on people, crisis-resilience, and sustainable growth for transformative change, as articulated in Agenda 2063.

Thematic Context

Agenda 2063, the African Union's long-term development blueprint, which is in line with the UN's global SDGs framework, outlines seven aspirations. These aspirations cover inclusive growth and sustainable development, greater integration of the continent, good governance, peace and security, a strong cultural identity and common heritage, people-driven development, a focus on gender equality, and the realization of a strong, united, and resilient Africa. The agenda emphasizes science, technology and innovation (STI) and health as key goals, alongside other priorities essential to Africa's transformation.³

The COVID-19 crisis, however, has presented sudden and significant new roadblocks for the African Union (AU) and national governments, especially in economic and health sectors, to realize the aspirations of Agenda 2063 and achieve the SDGs. Good health and well-being, which is SDG 3, directly affects many other goals: no poverty (SDG 1), zero hunger (SDG 2), quality education (SDG 4), decent work (SDG 8), and industry, innovation and infrastructure (SDG 9). For example, the pandemic has led to reduced productivity, disrupted manufacturing and supply chains, exacerbated job losses, and adversely affected trade.

African countries have focused on protecting lives and economies as a way to combat the pandemic and stem losses. The initial focus on COVID-19 as a health challenge, however, meant that the AU's Joint Continental Strategy for COVID-19 Outbreak failed to expressly articulate the role of research and science systems as essential ingredients to long-term recovery. The AU has since attempted to address this gap by recognizing the central role of research and STI systems in addressing the socio-economic impacts of COVID-19 and building resilient economies.⁴

A System Innovation Approach

The interconnectedness among societies and sectors calls for a systems approach to research, science, and innovation in tackling the pandemic and mitigating its impacts. In this context, a

systems approach addresses key institutions, stakeholders, and processes holistically, recognizing the impact each can have on the other within a science and technology ecosystem. System innovation also recognizes the need for adjustments in policies and coordination. Science and innovation can target multiple sectors (health, economic, manufacturing, and others) simultaneously, and therefore should be deployed in this manner. For example, the COVID-19 pandemic has ushered in a new world of remote work, learning, and medicine, of which some aspects will remain post-pandemic. Yet, only 39% of Africa's entire population had access to the internet as of December 2019. Low access is not only an infrastructure problem; geographic disparities, urban-rural divides, and low digital literacy also contribute. These issues can be tackled by turning scientific research into internet connectivity and digital technologies.

Innovation's Contribution

The health and economic impacts from COVID-19 have been most severe on Africa's poor and informal sectors⁵, which account for nearly 90 percent of employment on the continent according to the International Labour Office. In the informal economy, many people rely on daily wages and complete shutdowns can be disastrous, especially as the majority of African countries do not yet have robust welfare systems and many are unable to afford private health care or private COVID-19 tests. Science and innovation, alongside appropriate policies and regulations can help ensure that the informal economy actors do not bear the worst effects from the pandemic.

One innovation in response to COVID-19 is the ground-breaking African Medical Supplies Platform (AMSP), involving both government and private sector actors. The AMSP was a truly African-driven effort with strong leadership from the AU, buy-in from member states, and strong private sector involvement. It provided a rapid and direct benefit to citizens in Africa by providing immediate access to vetted manufacturers and procurement agents that allowed governments to purchase certified medical equipment such as diagnostic kits, PPE and clinical management devices. This had the benefit of increased cost-effectiveness and transparency at a time of increased corruption and mismanagement.

How well Africa deals with the current COVID-19 pandemic and recovery interventions will depend on governance frameworks, as well as the effectiveness of policies and regulations put in place to drive the recovery efforts.⁶ For example, there have been many innovations by African entrepreneurs during the pandemic—from production of personal protective equipment to new e-commerce and e-learning platforms to mobile applications to improve value chains. But if government recovery interventions and expenditures seek a return to "normal" practices, this level of innovation will not be incentivized, and the development of ecosystems of researchers, innovators, and entrepreneurs will be hampered.

Recommendations

Government expenditures targeting COVID-19 recovery should focus on redirecting funding, research, and STI systems toward policies that are more compliant with the SDGs and Agenda 2063—and a future that is more inclusive, with reduced inequality, and economic growth that is friendlier to the environment. More specifically, they should:

- Invest in people (capabilities and skills development), innovation, science and research, and leverage digitalization for development and transformative change.

- Adopt a system innovation approach for the design and delivery of COVID-19 recovery interventions, STI policies and strategies. In doing so, governments must strengthen research and STI systems as core drivers of development and for achieving the SDGs.
- Map research and science infrastructure in Africa to (1) identify opportunities and gaps across the continent, and (2) address the gaps by enhancing digital science infrastructure and the resilience of science systems, thereby improving the prospects for innovation and competitiveness.
- Establish effective governance and policy frameworks that foster collaboration and partnership and support coordination of recovery responses and policy interventions.

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About the Series

Policy experts and researchers from the [African Center for Economic Transformation \(ACET\)](#) and the [Development and Economic Growth Research Programme \(DEGRP\)](#), in partnership with [ODI](#), explore the critical role of innovation in Africa's recovery from COVID-19. Essays identify areas in which innovation can contribute to effective responses and offer high-level policy recommendations.

Endnotes

1. Grace Gondwe, [Assessing the Impact of COVID-19 on Africa's Economic Development](#) (UNCTAD, July 2020); [Africa's Response to COVID-19: What roles for trade, manufacturing and intellectual property?](#) (OECD, June 2020); [COVID-19: An Unprecedented Threat to Development](#) (IMF, April 2020).
2. System innovation is a horizontal policy approach that focuses on tackling problems that are systemic in nature. (OECD, 2015).
3. [African Innovation Outlook III](#) (AUDA-NEPAD, 2019).
4. [Impact of the Coronavirus \(COVID-19\) on the African Economy](#) (African Union, April 2020).
5. Kudakwashe Dube and Christine Namirembe Katende, "[An inclusive response to COVID-19 for Africa's informal workers](#)" (World Bank, May 29, 2020).
6. "[For Sub-Saharan Africa, Coronavirus Crisis Calls for Policies for Greater Resilience](#)" (World Bank, April 2020); Daniel Gerszon Mahler et al., "[The impact of COVID-19 \(Coronavirus\) on global poverty: Why Sub-Saharan Africa might be the region hardest hit](#)" (World Bank, April 2020).

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